# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION
**WASHINGTON, D.C. 20549**

# FORM 10-Q

**QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
**For the quarterly period ended June 30, 2019**

**Commission file number: 1-3285**

# 3M COMPANY
(Exact name of registrant as specified in its charter)

| | |
|---|---|
| **Delaware** | **41-0417775** |
| (State or other jurisdiction of incorporation) | (IRS Employer Identification No.) |
| **3M Center, St. Paul, Minnesota** | **55144-1000** |
| (Address of Principal Executive Offices) | (Zip Code) |

(Registrant's Telephone Number, Including Area Code) **(651) 733-1110**

**Not Applicable**
(Former Name or Former Address, if Changed Since Last Report)

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. |
| 1.500% Notes due 2026 | MMM26 | New York Stock Exchange, Inc. |
| Floating Rate Notes due 2020 | | New York 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. |
| 1.750% 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.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

| | |
|---|---|
| Large accelerated filer ☒ | Accelerated filer ☐ |
| Non-accelerated filer ☐ | Smaller reporting company ☐ |
| | Emerging growth company ☐ |

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

| Class | Outstanding at June 30, 2019 |
|---|---|
| Common Stock, $0.01 par value per share | 575,279,050 shares |

**3M COMPANY**
**Form 10-Q for the Quarterly Period Ended June 30, 2019**

**TABLE OF CONTENTS**


| | | BEGINNING PAGE |
|---|---|---|
| PART I | FINANCIAL INFORMATION | |
| ITEM 1. | Financial Statements | |
| | **Index to Financial Statements:** | |
| | Consolidated Statement of Income | 3 |
| | Consolidated Statement of Comprehensive Income | 4 |
| | Consolidated Balance Sheet | 5 |
| | Consolidated Statement of Cash Flows | 6 |
| | Notes to Consolidated Financial Statements | |
| | Note 1. Significant Accounting Policies | 7 |
| | Note 2. Revenue | 11 |
| | Note 3. Acquisitions and Divestitures | 13 |
| | Note 4. Goodwill and Intangible Assets | 15 |
| | Note 5. Restructuring Actions and Exit Activities | 16 |
| | Note 6. Supplemental Income Statement Information | 18 |
| | Note 7. Supplemental Equity and Comprehensive Income Information | 18 |
| | Note 8. Income Taxes | 22 |
| | Note 9. Marketable Securities | 23 |
| | Note 10. Long-Term Debt and Short-Term Borrowings | 24 |
| | Note 11. Pension and Postretirement Benefit Plans | 24 |
| | Note 12. Derivatives | 25 |
| | Note 13. Fair Value Measurements | 32 |
| | Note 14. Commitments and Contingencies | 35 |
| | Note 15. Leases | 47 |
| | Note 16. Stock-Based Compensation | 51 |
| | Note 17. Business Segments | 54 |
| ITEM 2. | Management’s Discussion and Analysis of Financial Condition and Results of Operations | |
| | **Index to Management’s Discussion and Analysis:** | |
| | Overview | 57 |
| | Results of Operations | 65 |
| | Performance by Business Segment | 69 |
| | Financial Condition and Liquidity | 76 |
| | Cautionary Note Concerning Factors That May Affect Future Results | 82 |
| ITEM 3. | Quantitative and Qualitative Disclosures About Market Risk | 82 |
| ITEM 4. | Controls and Procedures | 83 |
| PART II | OTHER INFORMATION | |
| ITEM 1. | Legal Proceedings | 84 |
| ITEM 1A. | Risk Factors | 84 |
| ITEM 2. | Unregistered Sales of Equity Securities and Use of Proceeds | 86 |
| ITEM 3. | Defaults Upon Senior Securities | 87 |
| ITEM 4. | Mine Safety Disclosures | 87 |
| ITEM 5. | Other Information | 87 |
| ITEM 6. | Exhibits | 87 |

**3M COMPANY**
**FORM 10-Q**
**For the Quarterly Period Ended June 30, 2019**
**PART I. Financial Information**

**Item 1. Financial Statements.**

**3M Company and Subsidiaries**
**Consolidated Statement of Income**
**(Unaudited)**

| (Millions, except per share amounts) | Three months ended June 30, 2019 | Three months ended June 30, 2018 | Six months ended June 30, 2019 | Six months ended June 30, 2018 |
|---|---|---|---|---|
| Net sales | **$ 8,171** | $ 8,390 | **$ 16,034** | $ 16,668 |
| Operating expenses | | | | |
| Cost of sales | **4,313** | 4,227 | **8,623** | 8,463 |
| Selling, general and administrative expenses | **1,686** | 1,800 | **3,634** | 4,373 |
| Research, development and related expenses | **470** | 468 | **947** | 954 |
| Gain on sale of businesses | **—** | (506) | **(8)** | (530) |
| Total operating expenses | **6,469** | 5,989 | **13,196** | 13,260 |
| Operating income | **1,702** | 2,401 | **2,838** | 3,408 |
| | | | | |
| Other expense (income), net | **256** | 51 | **304** | 93 |
| | | | | |
| Income before income taxes | **1,446** | 2,350 | **2,534** | 3,315 |
| Provision for income taxes | **315** | 488 | **510** | 847 |
| Net income including noncontrolling interest | **$ 1,131** | $ 1,862 | **$ 2,024** | $ 2,468 |
| | | | | |
| Less: Net income attributable to noncontrolling interest | **4** | 5 | **6** | 9 |
| | | | | |
| Net income attributable to 3M | **$ 1,127** | $ 1,857 | **$ 2,018** | $ 2,459 |
| | | | | |
| Weighted average 3M common shares outstanding — basic | **577.7** | 591.4 | **577.6** | 593.8 |
| Earnings per share attributable to 3M common shareholders — basic | **$ 1.95** | $ 3.14 | **$ 3.49** | $ 4.14 |
| | | | | |
| Weighted average 3M common shares outstanding — diluted | **586.1** | 604.2 | **587.3** | 608.5 |
| Earnings per share attributable to 3M common shareholders — diluted | **$ 1.92** | $ 3.07 | **$ 3.44** | $ 4.04 |

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

**3M Company and Subsidiaries**
**Consolidated Statement of Comprehensive Income**
**(Unaudited)**

| | Three months ended June 30, | | Six months ended June 30, | |
|---|---|---|---|---|
| **(Millions)** | **2019** | **2018** | **2019** | **2018** |
| Net income including noncontrolling interest | **$ 1,131** | $ 1,862 | **$ 2,024** | $ 2,468 |
| Other comprehensive income (loss), net of tax: | | | | |
| Cumulative translation adjustment | **123** | (496) | **200** | (329) |
| Defined benefit pension and postretirement plans adjustment | **196** | 114 | **280** | 230 |
| Cash flow hedging instruments | **(38)** | 162 | **(32)** | 101 |
| Total other comprehensive income (loss), net of tax | **281** | (220) | **448** | 2 |
| Comprehensive income (loss) including noncontrolling interest | **1,412** | 1,642 | **2,472** | 2,470 |
| Comprehensive (income) loss attributable to noncontrolling interest | **(5)** | (1) | **(7)** | (4) |
| Comprehensive income (loss) attributable to 3M | **$ 1,407** | $ 1,641 | **$ 2,465** | $ 2,466 |

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

**3M Company and Subsidiaries**
**Consolidated Balance Sheet**
**(Unaudited)**

| (Dollars in millions, except per share amount) | June 30, 2019 | December 31, 2018 |
|---|---|---|
| **Assets** | | |
| Current assets | | |
| Cash and cash equivalents | $ 2,849 | $ 2,853 |
| Marketable securities — current | 139 | 380 |
| Accounts receivable — net | 5,374 | 5,020 |
| Inventories | | |
| Finished goods | 1,980 | 2,120 |
| Work in process | 1,348 | 1,292 |
| Raw materials and supplies | 972 | 954 |
| Total inventories | 4,300 | 4,366 |
| Prepaids | 949 | 741 |
| Other current assets | 440 | 349 |
| Total current assets | 14,051 | 13,709 |
| Property, plant and equipment | 25,565 | 24,873 |
| Less: Accumulated depreciation | (16,567) | (16,135) |
| Property, plant and equipment — net | 8,998 | 8,738 |
| Operating lease right of use assets | 879 | — |
| Goodwill | 10,574 | 10,051 |
| Intangible assets — net | 2,964 | 2,657 |
| Other assets | 1,503 | 1,345 |
| Total assets | $ 38,969 | $ 36,500 |
| **Liabilities** | | |
| Current liabilities | | |
| Short-term borrowings and current portion of long-term debt | $ 892 | $ 1,211 |
| Accounts payable | 2,130 | 2,266 |
| Accrued payroll | 604 | 749 |
| Accrued income taxes | 223 | 243 |
| Operating lease liabilities — current | 247 | — |
| Other current liabilities | 3,169 | 2,775 |
| Total current liabilities | 7,265 | 7,244 |
| | | |
| Long-term debt | 14,914 | 13,411 |
| Pension and postretirement benefits | 2,761 | 2,987 |
| Operating lease liabilities | 619 | — |
| Other liabilities | 3,268 | 3,010 |
| Total liabilities | $ 28,827 | $ 26,652 |
| Commitments and contingencies (Note 14) | | |
| **Equity** | | |
| 3M Company shareholders' equity: | | |
| Common stock par value, $.01 par value; 944,033,056 shares issued | $ 9 | $ 9 |
| Additional paid-in capital | 5,812 | 5,643 |
| Retained earnings | 41,362 | 40,636 |
| Treasury stock, at cost: 368,754,006 shares at June 30, 2019; 367,457,888 shares at December 31, 2018 | (29,828) | (29,626) |
| Accumulated other comprehensive income (loss) | (7,272) | (6,866) |
| Total 3M Company shareholders' equity | 10,083 | 9,796 |
| Noncontrolling interest | 59 | 52 |
| Total equity | $ 10,142 | $ 9,848 |
| Total liabilities and equity | $ 38,969 | $ 36,500 |

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

**3M Company and Subsidiaries**
**Consolidated Statement of Cash Flows**
**(Unaudited)**

| (Millions) | Six months ended June 30, 2019 | 2018 |
|---|---|---|
| **Cash Flows from Operating Activities** | | |
| Net income including noncontrolling interest | **$ 2,024** | $ 2,468 |
| Adjustments to reconcile net income including noncontrolling interest to net cash provided by operating activities | | |
| Depreciation and amortization | **751** | 762 |
| Company pension and postretirement contributions | **(88)** | (261) |
| Company pension and postretirement expense | **176** | 204 |
| Stock-based compensation expense | **182** | 208 |
| Gain on sale of businesses | **(5)** | (530) |
| Deferred income taxes | **(74)** | (1) |
| Loss on deconsolidation of Venezuelan subsidiary | **162** | — |
| Changes in assets and liabilities | | |
| Accounts receivable | **(258)** | (606) |
| Inventories | **75** | (337) |
| Accounts payable | **(173)** | (12) |
| Accrued income taxes (current and long-term) | **(163)** | 234 |
| Other — net | **101** | (87) |
| Net cash provided by (used in) operating activities | **2,710** | 2,042 |
| | | |
| **Cash Flows from Investing Activities** | | |
| Purchases of property, plant and equipment (PP&E) | **(812)** | (669) |
| Proceeds from sale of PP&E and other assets | **3** | 96 |
| Acquisitions, net of cash acquired | **(704)** | 13 |
| Purchases of marketable securities and investments | **(751)** | (964) |
| Proceeds from maturities and sale of marketable securities and investments | **1,005** | 1,636 |
| Proceeds from sale of businesses, net of cash sold | **6** | 806 |
| Other — net | **18** | (11) |
| Net cash provided by (used in) investing activities | **(1,235)** | 907 |
| | | |
| **Cash Flows from Financing Activities** | | |
| Change in short-term debt — net | **(441)** | 774 |
| Repayment of debt (maturities greater than 90 days) | **(871)** | (6) |
| Proceeds from debt (maturities greater than 90 days) | **2,265** | 6 |
| Purchases of treasury stock | **(1,101)** | (2,537) |
| Proceeds from issuance of treasury stock pursuant to stock option and benefit plans | **365** | 305 |
| Dividends paid to shareholders | **(1,660)** | (1,612) |
| Other — net | **(34)** | (26) |
| Net cash provided by (used in) financing activities | **(1,477)** | (3,096) |
| | | |
| Effect of exchange rate changes on cash and cash equivalents | **(2)** | (105) |
| | | |
| Net increase (decrease) in cash and cash equivalents | **(4)** | (252) |
| Cash and cash equivalents at beginning of year | **2,853** | 3,053 |
| Cash and cash equivalents at end of period | **$ 2,849** | $ 2,801 |

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

**3M Company and Subsidiaries**
**Notes to Consolidated Financial Statements**
**(Unaudited)**

**NOTE 1. Significant Accounting Policies**

**Basis of Presentation**

The interim consolidated financial statements are unaudited but, in the opinion of management, reflect all adjustments necessary for a fair statement of the Company's consolidated financial position, results of operations and cash flows for the periods presented. These adjustments consist of normal, recurring items. The results of operations for any interim period are not necessarily indicative of results for the full year. The interim consolidated financial statements and notes are presented as permitted by the requirements for Quarterly Reports on Form 10-Q. This Quarterly Report on Form 10-Q should be read in conjunction with the Company's consolidated financial statements and notes included in its Annual Report on Form 10-K.

As described in Note 17, effective in the second quarter of 2019, the Company realigned its former five business segments into four to enable the Company to better serve global customers and markets. In addition, certain product lines were moved to better align with their respective end customers. Earlier in the first quarter of 2019, the Company changed its business segment reporting in its continuing effort to improve the alignment of businesses around markets and customers. These changes included the realignment of certain customer account activity in various countries (affecting dual credit reporting), creation of the Closure and Masking Systems and Medical Solutions divisions, and certain other actions that impacted segment reporting. Segment information presented herein reflects the impact of these changes for all periods presented.

**Changes to Significant Accounting Policies**

The following significant accounting policies have been added or changed since the Company's 2018 Annual Report on Form 10-K.

*Leases:* As described in the "New Accounting Pronouncements" section, 3M adopted Accounting Standards Update (ASU) No. 2016-02, *Leases*, and other related ASUs (collectively, Accounting Standards Codification (ASC) 842) on January 1, 2019, using the modified retrospective method of adoption. This ASU replaced previous lease accounting guidance. The Company's accounting policy with respect to leases and additional disclosure relative to ASC 842 are included in Note 15.

*Income Taxes*: As described in the "New Accounting Pronouncements" section, 3M adopted ASU No. 2018-02, *Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*. The Company's accounting policy for income taxes has been updated to indicate the uses of the portfolio approach for releasing income tax effects from accumulated other comprehensive loss.

**Foreign Currency Translation**

Local currencies generally are considered the functional currencies outside the United States. 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 month-end exchange rates of each applicable month. Cumulative translation adjustments are recorded as a component of accumulated other comprehensive income (loss) in shareholders' equity.

3M has a 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 2018. The Venezuelan government sets official rates of exchange and conditions precedent to purchase foreign currency at these rates with local currency. The government has also operated various expanded secondary currency exchange mechanisms that have been eliminated and replaced from time to time. Such rates and conditions have been and continue to be subject to change. During the third quarter of 2018, the Venezuelan government effected a conversion of its currency to the Sovereign Bolivar (VES), essentially equating to its previous Venezuelan Bolivar divided by 100,000. For the periods presented through May 2019, the financial statements of 3M's Venezuelan subsidiary were remeasured utilizing the rate associated with the secondary auction mechanism, Tipo de Cambio Complementario (DICOM), or its predecessor.

Note 1 in 3M's 2018 Annual Report on Form 10-K provides additional information the Company considers in determining the exchange rate used relative to its Venezuelan subsidiary as well as factors which could lead to its deconsolidation. As described therein, a need to deconsolidate the Company's Venezuelan subsidiary's operations results from a lack of exchangeability of VES-denominated cash coupled with an acute degradation in the ability to make key operational decisions due to government regulations in Venezuela. 3M continued to review changes in these underlying factors such as the ability to access various exchange mechanisms; the impact of government regulations on the Company's ability to manage its Venezuelan subsidiary's capital structure, purchasing, product pricing, and labor relations; and the current political and economic situation within Venezuela. 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.

3M has subsidiaries in Argentina, the operating income of which was less than one half of one percent of 3M's consolidated operating income for 2018. Based on various indices, Argentina's cumulative three-year inflation rate exceeded 100 percent in the second quarter of 2018, thus being considered highly inflationary. As a result, beginning in the third quarter of 2018, the financial statements of the Argentine subsidiaries were remeasured as if their functional currency were that of their parent. As of June 30, 2019, the Company had a balance of net monetary assets denominated in Argentine pesos (ARS) of approximately 200 million ARS and the exchange rate was approximately 43 ARS per U.S. dollar.

**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 a result of the dilution associated with the Company's stock-based compensation plans. Certain options outstanding under these stock-based compensation plans 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 (6.7 million average options for the three months ended June 30, 2019; 6.0 million average options for the six months ended June 30, 2019; 3.5 million average options for the three months ended June 30, 2018; 2.7 million average options for the six months ended June 30, 2018). The computations for basic and diluted earnings per share follow:

**Earnings Per Share Computations**

| | Three months ended June 30, | | Six months ended June 30, | |
|---|---|---|---|---|
| **(Amounts in millions, except per share amounts)** | **2019** | **2018** | **2019** | **2018** |
| Numerator: | | | | |
| Net income attributable to 3M | **$ 1,127** | $ 1,857 | **$ 2,018** | $ 2,459 |
| Denominator: | | | | |
| Denominator for weighted average 3M common shares outstanding – basic | **577.7** | 591.4 | **577.6** | 593.8 |
| Dilution associated with the Company's stock-based compensation plans | **8.4** | 12.8 | **9.7** | 14.7 |
| Denominator for weighted average 3M common shares outstanding – diluted | **586.1** | 604.2 | **587.3** | 608.5 |
| Earnings per share attributable to 3M common shareholders – basic | **$ 1.95** | $ 3.14 | **$ 3.49** | $ 4.14 |
| Earnings per share attributable to 3M common shareholders – diluted | **$ 1.92** | $ 3.07 | **$ 3.44** | $ 4.04 |

**New Accounting Pronouncements**

See the Company's 2018 Annual Report on Form 10-K for a more detailed discussion of the standards in the tables that follow, except for those pronouncements issued subsequent to the most recent Form 10-K filing date for which separate, more detailed discussion is provided below as applicable.

| **Standards Adopted During the Current Fiscal Year** | | | |
|---|---|---|---|
| **Standard** | **Relevant Description** | **Effective Date for 3M** | **Impact and Other Matters** |
| ASU No. 2016-02, *Leases* (as amended by ASU Nos. 2018-10, 2018-11, 2018-20, and 2019-01) | Provides a lessee model that requires entities to recognize assets and liabilities for most leases, but recognize expenses on their income statements in a manner similar to previous accounting. This ASU does not make fundamental changes to previous lessor accounting. | January 1, 2019 | See Note 15 for detailed discussion and disclosures.<br><br>Adopted using the modified retrospective approach<br><br>Impact on January 1, 2019 includes a $14 million increase in the balance of retained earnings and recording of additional lease assets and liabilities of $0.8 billion each |
| ASU No. 2017-08, *Premium Amortization on Purchased Callable Debt Securities* | Shortens the amortization period to the earliest call date for the premium related to certain callable debt securities that have explicit, noncontingent call features and are callable at a fixed price and preset date. | January 1, 2019 | 3M's marketable security portfolio includes limited instances of callable debt securities held at a premium.<br><br>The adoption of this ASU did not have a material impact. |
| ASU No. 2017-11, *(Part I) Accounting for Certain Financial Instruments with Down Round Features, (Part II) Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interests with a Scope Exception* | Amends (1) the classification of financial instruments with down-round features as liabilities or equity by revising certain guidance relative to evaluating if they must be accounted for as derivative instruments and (2) the guidance on recognition and measurement of freestanding equity-classified instruments. | January 1, 2019 | No financial instruments with down-round features have been issued.<br><br>The adoption of this ASU did not have a material impact. |
| ASU No. 2017-12, *Targeted Improvements to Accounting for Hedging Activities*, and related ASU No. 2018-16 | Amends previous guidance to simplify application of hedge accounting in certain situations and allow companies to better align their hedge accounting with risk management activities.<br><br>Simplifies related accounting by eliminating requirement to separately measure and report hedge ineffectiveness.<br><br>Expands an entity's ability to hedge nonfinancial and financial risk components. | January 1, 2019 | See Note 12 for additional details.<br><br>The adoption of this ASU did not have a material impact |
| ASU No. 2018-02, *Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income* | Permits entities to reclassify, to retained earnings, the one-time income tax effects stranded in accumulated other comprehensive income arising from the change in the U.S. federal corporate tax rate as a result of the Tax Cuts and Jobs Act of 2017. | January 1, 2019 | See Note 8 for additional discussion.<br><br>Impact on January 1, 2019 includes increases of $0.9 billion in each of retained earnings and accumulated other comprehensive loss.<br><br>See also the preceding "Changes to Significant Accounting Policies" section. |
| ASU No. 2018-07, *Improvements to Nonemployee Share-Based Payment Accounting* | Aligns the measurement and classification guidance for share-based payments to nonemployees with the guidance for share-based payments to employees.<br><br>Clarifies that any share-based payment issued to a customer should be evaluated under ASC 606, *Revenue from Contracts with Customers* | January 1, 2019 | The adoption of this ASU did not have a material impact as 3M does not issue share-based payments to nonemployees or customers |

| Standards Adopted During the Current Fiscal Year (continued) | | | |
|---|---|---|---|
| **Standard** | **Relevant Description** | **Effective Date for 3M** | **Impact and Other Matters** |
| ASU No. 2018-08, *Clarifying the Scope and the Accounting Guidance for Contributions Received and Contributions Made* | Clarifies that a contribution is conditional if the arrangement includes both a barrier for the recipient to be entitled to the assets transferred and a right of return for the assets transferred.<br><br>Recognition of contribution expense is deferred for conditional arrangements and is immediate for unconditional arrangements. | January 1, 2019 | Adopted prospectively with no immediate impact. |
| ASU No. 2018-17, *Targeted Improvements to Related Party Guidance for Variable Interest Entities* | Changes how entities evaluate decision-making fees under the variable interest guidance.<br><br>Indirect interests held through related parties under common control will be considered on a proportionate basis rather than in their entirety. | January 1, 2019 | Adoption of this ASU did not have a material impact as 3M does not have significant involvement with entities subject to consolidation considerations impacted by variable interest entity model factors. |
| ASU No. 2018-18, *Clarifying the Interaction between Topic 808 and Topic 606* | Clarifies that certain transactions between participants in a collaborative arrangement should be accounted for under ASC 606, *Revenue from Contracts with Customers*, when the counterparty is a customer.<br><br>Precludes an entity from presenting consideration from a transaction in a collaborative arrangement as revenue from contracts with customers if the counterparty is not a customer for that transaction. | January 1, 2019 | Adoption of this ASU did not have a material impact as 3M has limited collaborative arrangements. |

| Standards Issued and Not Yet Adopted | | | |
|---|---|---|---|
| **Standard** | **Relevant Description** | **Effective Date for 3M** | **Impact and Other Matters** |
| ASU No. 2016-13, *Measurement of Credit Losses on Financial Instruments* (in conjunction with ASU No. 2018-19, 2019-04 and 2019-05) | Introduces an approach, based on expected losses, to estimate credit losses on certain types of financial instruments and modifies the impairment model for available-for-sale debt securities.<br><br>Amends the current other-than-temporary impairment model for available-for-sale debt securities. For such securities with unrealized losses, entities will still consider if a portion of any impairment is related only to credit losses and therefore recognized as a reduction in income. | January 1, 2020 | Required to make a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is adopted.<br><br>3M is currently assessing this ASU's impact.<br><br>See the "Relevant New Standards Issued Subsequent to Most Recent Annual Report" below for further discussion on ASU No. 2019-04 and 2019-05 issued in April 2019 and May 2019, respectively. |
| ASU No. 2018-13, *Changes to the Disclosure Requirements for Fair Value Measurement* | Eliminates, amends, and adds disclosure requirements for fair value measurements, primarily related to Level 3 fair value measurements. | January 1, 2020 | As this ASU relates to disclosures only, there will be no impact to 3M's consolidated results of operations and financial condition. |
| ASU No. 2018-15, *Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* | Aligns 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* | January 1, 2020 | ASU permits either prospective or retrospective transition.<br><br>As 3M utilizes limited cloud-computing services where significant implementation costs are incurred, the Company does not expect this ASU to have a material impact. |

*Relevant New Standards Issued Subsequent to Most Recent Annual Report*

In April 2019, the FASB issued ASU No. 2019-04, *Codification Improvements to Topic 326, Financial Instruments – Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825 – Financial Instruments* and in May 2019, the FASB issued ASU No. 2019-05, *Targeted Transition Relief to Topic 326, Financial Instruments – Credit Losses.* ASU No. 2019-04 provides narrow-scope amendments to help apply these recent standards, while ASU No. 2019-05 provides the option to make a one-time fair value election regarding certain assets which is not applicable for 3M as the Company does not have any assets carried under the fair value option.

The effective date for 3M is January 1, 2020 with early adoption permitted for certain amendments. The Company is currently assessing ASU No. 2019-04's impact on 3M's consolidated result of operations and financial condition.

**NOTE 2. Revenue**

*Contract Balances:*
Deferred revenue (current portion) as of June 30, 2019 and December 31, 2018 was $603 million and $617 million, respectively, and primarily relates to revenue that is recognized over time for one-year software license contracts, the changes in balance of which are related to the satisfaction or partial satisfaction of these contracts. The balance also contains a deferral for goods that are in-transit at period end for which control transfers to the customer upon delivery. Approximately $110 million and $480 million of the December 31, 2018 balance was recognized as revenue during the three and six months ended June 30, 2019, respectively, while approximately $110 million and $390 million of the December 31, 2017 balance was recognized as revenue during the three and six months ended June 30, 2018, respectively. The amount of noncurrent deferred revenue is not significant.

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

| | Three months ended June 30, | | Six months ended June 30, | |
|---|---|---|---|---|
| **Net Sales (Millions)** | **2019** | **2018** | **2019** | **2018** |
| Abrasives | **$ 365** | $ 400 | **$ 734** | $ 809 |
| Adhesives and Tapes | **685** | 726 | **1,379** | 1,457 |
| Automotive Aftermarket | **309** | 355 | **619** | 704 |
| Closure and Masking Systems | **275** | 313 | **553** | 620 |
| Communication Markets | **—** | 67 | **—** | 161 |
| Electrical Markets | **302** | 325 | **613** | 634 |
| Personal Safety | **917** | 936 | **1,843** | 1,881 |
| Roofing Granules | **100** | 99 | **192** | 200 |
| Other Safety and Industrial | **8** | 32 | **14** | 55 |
| Total Safety and Industrial Business Segment | **$ 2,961** | $ 3,253 | **$ 5,947** | $ 6,521 |
| | | | | |
| Advanced Materials | **$ 331** | $ 316 | **$ 642** | $ 619 |
| Automotive and Aerospace | **487** | 530 | **1,001** | 1,101 |
| Commercial Solutions | **469** | 498 | **924** | 979 |
| Electronics | **897** | 923 | **1,758** | 1,850 |
| Transportation Safety | **266** | 260 | **484** | 498 |
| Other Transportation and Electronics | **2** | — | **—** | (1) |
| Total Transportation and Electronics Business Segment | **$ 2,452** | $ 2,527 | **$ 4,809** | $ 5,046 |
| | | | | |
| Drug Delivery | **$ 110** | $ 119 | **$ 202** | $ 238 |
| Food Safety | **85** | 83 | **168** | 164 |
| Health Information Systems | **297** | 205 | **557** | 410 |
| Medical Solutions | **793** | 768 | **1,557** | 1,541 |
| Oral Care | **338** | 342 | **679** | 696 |
| Separation and Purification Sciences | **208** | 214 | **411** | 428 |
| Other Health Care | **—** | (1) | **(5)** | (2) |
| Total Health Care Business Group | **$ 1,831** | $ 1,730 | **$ 3,569** | $ 3,475 |
| | | | | |
| Consumer Health Care | **$ 102** | $ 101 | **$ 200** | $ 203 |
| Home Care | **248** | 255 | **505** | 524 |
| Home Improvement | **592** | 593 | **1,127** | 1,115 |
| Stationery and Office | **351** | 352 | **645** | 655 |
| Other Consumer | **10** | 8 | **20** | 20 |
| Total Consumer Business Group | **$ 1,303** | $ 1,309 | **$ 2,497** | $ 2,517 |
| | | | | |
| Corporate and Unallocated | **$ 48** | $ 12 | **$ 70** | $ 12 |
| Elimination of Dual Credit | **(424)** | (441) | **(858)** | (903) |
| Total Company | **$ 8,171** | $ 8,390 | **$ 16,034** | $ 16,668 |

| Net Sales (Millions) | Three months ended June 30, 2019<br>United States | Asia Pacific | Europe, Middle East and Africa | Latin America and Canada | Other Unallocated | Worldwide |
|---|---|---|---|---|---|---|
| Safety and Industrial | $ 1,195 | $ 709 | $ 689 | $ 369 | $ (1) | $ 2,961 |
| Transportation and Electronics | 641 | 1,269 | 389 | 154 | (1) | 2,452 |
| Health Care | 869 | 383 | 427 | 152 | — | 1,831 |
| Consumer | 812 | 242 | 140 | 109 | — | 1,303 |
| Corporate and Unallocated | 47 | (2) | (1) | 3 | 1 | 48 |
| Elimination of Dual Credit | (160) | (186) | (51) | (28) | 1 | (424) |
| Total Company | $ 3,404 | $ 2,415 | $ 1,593 | $ 759 | $ — | $ 8,171 |

| Net Sales (Millions) | Six months ended June 30, 2019<br>United States | Asia Pacific | Europe, Middle East and Africa | Latin America and Canada | Other Unallocated | Worldwide |
|---|---|---|---|---|---|---|
| Safety and Industrial | $ 2,345 | $ 1,477 | $ 1,409 | $ 717 | $ (1) | $ 5,947 |
| Transportation and Electronics | 1,202 | 2,527 | 775 | 306 | (1) | 4,809 |
| Health Care | 1,650 | 761 | 865 | 293 | — | 3,569 |
| Consumer | 1,499 | 512 | 277 | 209 | — | 2,497 |
| Corporate and Unallocated | 66 | — | — | 5 | (1) | 70 |
| Elimination of Dual Credit | (312) | (384) | (109) | (54) | 1 | (858) |
| Total Company | $ 6,450 | $ 4,893 | $ 3,217 | $ 1,476 | $ (2) | $ 16,034 |

| Net Sales (Millions) | Three months ended June 30, 2018<br>United States | Asia Pacific | Europe, Middle East and Africa | Latin America and Canada | Other Unallocated | Worldwide |
|---|---|---|---|---|---|---|
| Safety and Industrial | $ 1,302 | $ 770 | $ 798 | $ 384 | $ (1) | $ 3,253 |
| Transportation and Electronics | 642 | 1,303 | 424 | 158 | — | 2,527 |
| Health Care | 760 | 372 | 445 | 154 | (1) | 1,730 |
| Consumer | 797 | 251 | 152 | 110 | (1) | 1,309 |
| Corporate and Unallocated | 7 | (1) | — | 3 | 3 | 12 |
| Elimination of Dual Credit | (160) | (191) | (61) | (28) | (1) | (441) |
| Total Company | $ 3,348 | $ 2,504 | $ 1,758 | $ 781 | $ (1) | $ 8,390 |

| Net Sales (Millions) | Six months ended June 30, 2018<br>United States | Asia Pacific | Europe, Middle East and Africa | Latin America and Canada | Other Unallocated | Worldwide |
|---|---|---|---|---|---|---|
| Safety and Industrial | $ 2,518 | $ 1,609 | $ 1,631 | $ 765 | $ (2) | $ 6,521 |
| Transportation and Electronics | 1,211 | 2,687 | 840 | 309 | (1) | 5,046 |
| Health Care | 1,508 | 757 | 904 | 307 | (1) | 3,475 |
| Consumer | 1,455 | 541 | 301 | 220 | — | 2,517 |
| Corporate and Unallocated | 7 | — | — | 3 | 2 | 12 |
| Elimination of Dual Credit | (307) | (414) | (126) | (56) | — | (903) |
| Total Company | $ 6,392 | $ 5,180 | $ 3,550 | $ 1,548 | $ (2) | $ 16,668 |

**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.

| | 2019 Acquisition Activity | |
|---|---|---|
| (Millions)<br>Asset (Liability) | M*Modal | Finite-Lived Intangible-Asset Weighted-Average Lives (Years) |
| Accounts receivable | $ 77 | |
| Other current assets | 2 | |
| Property, plant, and equipment | 8 | |
| Purchased finite-lived intangible assets: | | |
| Customer related intangible assets | 275 | 14 |
| Other technology-based intangible assets | 160 | 6 |
| Definite-lived tradenames | 11 | 6 |
| Purchased goodwill | 517 | |
| Other assets | 59 | |
| Accounts payable and other liabilities | (124) | |
| Interest bearing debt | (251) | |
| Deferred tax asset/(liability) | (30) | |
| | | |
| Net assets acquired | $ 704 | |
| | | |
| Supplemental information: | | |
| Cash paid | $ 708 | |
| Less: Cash acquired | 4 | |
| Cash paid, net of cash acquired | $ 704 | |

Purchased identifiable finite-lived intangible assets related to acquisitions which closed in the six months ended June 30, 2019 totaled $446 million. 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 11 years (lives ranging from 6 to 14 years).

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 is considered preliminary with provisional amounts primarily related to intangible assets, working capital, certain tax-related and contingent liability amounts. 3M expects to finalize the allocation of purchase price within the one-year measurement-period following the acquisition. Net sales and operating loss (inclusive of transaction and integration costs) of this business included in 3M's consolidated results of operations for the second quarter of 2019 were approximately $75 million and $15 million, respectively. Net sales and operating loss (inclusive of transaction and integration costs) of this business included in 3M's consolidated results of operations for the first six months of 2019 were approximately $125 million and $35 million, respectively. Proforma information related to the acquisition has not been included as the impact on the Company's consolidated results of operations was not considered material.

In May 2019, 3M entered into an agreement to acquire Acelity Inc. and its KCI subsidiaries for a price plus an amount based on the number of days through closing, which together, are estimated at approximately $4.6 billion, subject to closing and other adjustments. The entities to be acquired also have outstanding debt and related items estimated at approximately $2.5 billion. Acelity is a leading global medical technology company focused on advanced wound care and specialty surgical applications marketed under the KCI brand. This transaction is expected to close in the fourth quarter of 2019 and will be reflected within the Company's Health Care business, subject to customary closing conditions, regulatory approvals, and information or consultation requirements with relevant works councils.

There were no acquisitions that closed during the six months ended June 30, 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.

*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 June 2019, 3M received a binding offer from Teledyne Technologies Incorporated to purchase 3M's gas and flame detection business for $230 million, subject to closing and other adjustments. This business, with annual sales of approximately $120 million, is a leader in fixed and portable gas and flame detection. The transaction is expected to close in the second half of 2019, subject to customary closing conditions, regulatory approvals and consultation or information requirements with relevant works councils. The Company expects a pre-tax gain of approximately $110 million as a result of this divestiture that will be reported within the Company's Safety and Industrial business.

*2018 divestitures:*
During 2018, as described in Note 3 in 3M's 2018 Annual Report on Form 10-K, the Company divested a number of businesses including: certain personal safety product offerings primarily focused on noise, environmental and heat stress monitoring; a polymer additives compounding business; an abrasives glass products business; and substantially all of its Communication Markets Division.

*Operating income and held for sale amounts:*
The aggregate operating income of these businesses was approximately $25 million and immaterial in the first six months of 2018 and 2019, respectively. The approximate amounts of major assets and liabilities associated with disposal groups classified as held-for-sale as of December 31, 2018 were not material and as of June 30, 2019 included the following:

| (Millions) | June 30, 2019 |
|---|---|
| Accounts receivable | $ 25 |
| Inventory | 25 |
| Intangible assets | 25 |

In addition, approximately $50 million of goodwill was estimated to be attributable to disposal groups classified as held-for-sale as of June 30, 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.

Refer to Note 3 in 3M's 2018 Annual Report on Form 10-K for more information on 3M's acquisitions and divestitures.

**NOTE 4. Goodwill and Intangible Assets**

Goodwill from acquisitions totaled $517 million during the first six months of 2019. The amounts in the “Translation and other” row in the following table primarily relate to changes in foreign currency exchange rates. The goodwill balance by business segment as of December 31, 2018 and June 30, 2019, follow:

**Goodwill**

| (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 | — | — | **517** | — | **517** |
| Translation and other | **(9)** | **(8)** | **(11)** | **34** | **6** |
| Balance as of June 30, 2019 | $ **4,707** | $ **1,849** | $ **3,754** | $ **264** | $ **10,574** |

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 17, effective in the second quarter of 2019, the Company realigned its former five business segments into four to enable the Company to better serve global customers and markets. In addition, effective in the first quarter of 2019, the Company changed its business segment reporting in its continuing effort to improve the alignment of its businesses around markets and customers. 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. During the first and second quarters of 2019, the Company completed its assessment of any potential goodwill impairment for reporting units impacted by this new structure and determined that no impairment existed.

**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 June 30, 2019, and December 31, 2018, follow:

| (Millions) | June 30, 2019 | December 31, 2018 |
|---|---|---|
| Customer related intangible assets | **$ 2,565** | $ 2,291 |
| Patents | **540** | 542 |
| Other technology-based intangible assets | **738** | 576 |
| Definite-lived tradenames | **674** | 664 |
| Other amortizable intangible assets | **125** | 125 |
| Total gross carrying amount | **$ 4,642** | $ 4,198 |
| | | |
| Accumulated amortization — customer related | **(1,075)** | (998) |
| Accumulated amortization — patents | **(494)** | (487) |
| Accumulated amortization — other technology-based | **(368)** | (333) |
| Accumulated amortization — definite-lived tradenames | **(293)** | (276) |
| Accumulated amortization — other | **(89)** | (88) |
| Total accumulated amortization | **$ (2,319)** | $ (2,182) |
| | | |
| Total finite-lived intangible assets — net | **$ 2,323** | $ 2,016 |
| | | |
| Non-amortizable intangible assets (primarily tradenames) | **641** | 641 |
| Total intangible assets — net | **$ 2,964** | $ 2,657 |

Certain tradenames acquired by 3M are not amortized because they have been in existence for over 55 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.

Amortization expense for the three and six months ended June 30, 2019 and 2018 follows:

| | Three months ended June 30, | | Six months ended June 30, | |
|---|---|---|---|---|
| (Millions) | 2019 | 2018 | 2019 | 2018 |
| Amortization expense | **$ 70** | $ 63 | **$ 139** | $ 127 |

Expected amortization expense for acquired amortizable intangible assets recorded as of June 30, 2019:

| (Millions) | Remainder of 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | After 2024 |
|---|---|---|---|---|---|---|---|
| Amortization expense | $ 145 | $ 276 | $ 267 | $ 253 | $ 222 | $ 191 | $ 969 |

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 and Exit Activities**

***2019 Restructuring Actions:***

During the second quarter of 2019, in light of a slower than expected 2019, management approved and committed to undertake certain restructuring actions. These actions impacted approximately 2,000 positions worldwide, including attrition. The Company recorded a second quarter 2019 pre-tax charge of $148 million. The restructuring charges were recorded in the income statement as follows:

| (Millions) | Second Quarter 2019 |
|---|---|
| Cost of sales | $ 18 |
| Selling, general and administrative expenses | 89 |
| Research, development and related expenses | 5 |
| Total operating income impact | 112 |
| Other expense (income), net | 36 |
| Total income before taxes impact | $ 148 |

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

| | Second Quarter 2019 | | |
|---|---|---|---|
| (Millions) | Employee-Related | Asset-Related | Total |
| Safety and Industrial | $ 11 | $ — | $ 11 |
| Transportation and Electronics | 8 | — | 8 |
| Health Care | 6 | — | 6 |
| Consumer | 5 | — | 5 |
| Corporate and Unallocated | 42 | 40 | 82 |
| Total Operating Expense | $ 72 | $ 40 | $ 112 |

The 2019 actions included a voluntary early retirement incentive (further discussed in Note 11), the charge for which is included in other expense (income) net above.

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

| (Millions) | Employee-Related | Asset-Related | Total |
|---|---|---|---|
| Expense incurred in the second quarter of 2019 | $ 108 | $ 40 | $ 148 |
| Non-cash changes | (36) | (40) | (76) |
| Cash payments | (6) | — | (6) |
| Accrued restructuring action balances as of June 30, 2019 | $ 66 | $ — | $ 66 |

Remaining activities related to this restructuring are expected to be completed largely through the first quarter of 2020.

***2018 Restructuring Actions:***

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 Quarter 2018 | Fourth Quarter 2018 |
|---|---|---|
| Cost of sales | $ 12 | $ 15 |
| Selling, general and administrative expenses | 89 | 16 |
| Research, development and related expenses | 4 | 1 |
| Total | $ 105 | $ 32 |

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 | (57) | — | (57) |
| Adjustments | (2) | — | (2) |
| Accrued restructuring action balances as of June 30, 2019 | $ 25 | $ — | $ 25 |

Remaining activities related to this restructuring are expected to be largely completed through 2019.

**NOTE 6. Supplemental Income Statement Information**

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

| (Millions) | Three months ended June 30, 2019 | Three months ended June 30, 2018 | Six months ended June 30, 2019 | Six months ended June 30, 2018 |
|---|---|---|---|---|
| Interest expense | **$ 111** | $ 88 | **$ 215** | $ 170 |
| Interest income | **(18)** | (16) | **(38)** | (37) |
| Pension and postretirement net periodic benefit cost (benefit) | **1** | (21) | **(35)** | (40) |
| Loss on deconsolidation of Venezuelan subsidiary | **162** | — | **162** | — |
| Total | **$ 256** | $ 51 | **$ 304** | $ 93 |

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 increased due to the charge related to the voluntary early retirement incentive program announced in May 2019. Refer to Note 11 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 Equity and Comprehensive Income Information**

Cash dividends declared and paid totaled $1.44 and $1.36 per share for the first and second quarters 2019 and 2018, respectively, or $2.88 and $2.72 per share for the first six months of 2019 and 2018, respectively.

**Consolidated Changes in Equity**

**Three months ended June 30, 2019**

| | | 3M Company Shareholders | | | | |
|---|---|---|---|---|---|---|
| (Millions) | Total | Common Stock and Additional Paid-in Capital | Retained Earnings | Treasury Stock | Accumulated Other Comprehensive Income (Loss) | Non-controlling Interest |
| **Balance at March 31, 2019** | $ 9,757 | $ 5,764 | $ 41,159 | $ (29,668) | $ (7,552) | $ 54 |
| Net income | 1,131 | | 1,127 | | | 4 |
| Other comprehensive income (loss), net of tax: | | | | | | |
| Cumulative translation adjustment | 123 | | | | 122 | 1 |
| Defined benefit pension and post-retirement plans adjustment | 196 | | | | 196 | — |
| Cash flow hedging instruments | (38) | | | | (38) | — |
| Total other comprehensive income (loss), net of tax | 281 | | | | | |
| Dividends declared | (830) | | (830) | | | |
| Stock-based compensation | 57 | 57 | | | | |
| Reacquired stock | (404) | | | (404) | | |
| Issuances pursuant to stock option and benefit plans | 150 | | (94) | 244 | | |
| **Balance at June 30, 2019** | $ 10,142 | $ 5,821 | $ 41,362 | $ (29,828) | $ (7,272) | $ 59 |

**Six months ended June 30, 2019**

| | | 3M Company Shareholders | | | | |
|---|---|---|---|---|---|---|
| (Millions) | Total | Common Stock and Additional Paid-in Capital | Retained Earnings | Treasury Stock | Accumulated Other Comprehensive Income (Loss) | Non-controlling Interest |
| **Balance at December 31, 2018** | $ 9,848 | $ 5,652 | $ 40,636 | $ (29,626) | $ (6,866) | $ 52 |
| Impact of adoption of ASU No. 2018-02 (See Note 1) | — | | 853 | | (853) | |
| Impact of adoption of ASU No. 2016-02 (See Note 1) | 14 | | 14 | | | |
| Net income | 2,024 | | 2,018 | | | 6 |
| Other comprehensive income (loss), net of tax: | | | | | | |
| Cumulative translation adjustment | 200 | | | | 199 | 1 |
| Defined benefit pension and post-retirement plans adjustment | 280 | | | | 280 | — |
| Cash flow hedging instruments | (32) | | | | (32) | — |
| Total other comprehensive income (loss), net of tax | 448 | | | | | |
| Dividends declared | (1,660) | | (1,660) | | | |
| Stock-based compensation | 169 | 169 | | | | |
| Reacquired stock | (1,070) | | | (1,070) | | |
| Issuances pursuant to stock option and benefit plans | 369 | | (499) | 868 | | |
| **Balance at June 30, 2019** | $ 10,142 | $ 5,821 | $ 41,362 | $ (29,828) | $ (7,272) | $ 59 |

**Three months ended June 30, 2018**

| | | 3M Company Shareholders | | | | |
|---|---|---|---|---|---|---|
| (Millions) | Total | Common Stock and Additional Paid-in Capital | Retained Earnings | Treasury Stock | Accumulated Other Comprehensive Income (Loss) | Non-controlling Interest |
| **Balance at March 31, 2018** | $ 11,039 | $ 5,505 | $ 38,453 | $ (26,178) | $ (6,803) | $ 62 |
| Net income | 1,862 | | 1,857 | | | 5 |
| Other comprehensive income (loss), net of tax: | | | | | | |
| Cumulative translation adjustment | (496) | | | | (492) | (4) |
| Defined benefit pension and post-retirement plans adjustment | 114 | | | | 114 | — |
| Cash flow hedging instruments | 162 | | | | 162 | — |
| Total other comprehensive income (loss), net of tax | (220) | | | | | |
| Dividends declared | (802) | | (802) | | | |
| Stock-based compensation | 54 | 54 | | | | |
| Reacquired stock | (1,591) | | | (1,591) | | |
| Issuances pursuant to stock option and benefit plans | 86 | | (66) | 152 | | |
| **Balance at June 30, 2018** | $ 10,428 | $ 5,559 | $ 39,442 | $ (27,617) | $ (7,019) | $ 63 |

**Six months ended June 30, 2018**

| | | 3M Company Shareholders | | | | |
|---|---|---|---|---|---|---|
| (Millions) | 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 | 2,468 | | 2,459 | | | 9 |
| Other comprehensive income (loss), net of tax: | | | | | | |
| Cumulative translation adjustment | (329) | | | | (324) | (5) |
| Defined benefit pension and post-retirement plans adjustment | 230 | | | | 230 | — |
| Cash flow hedging instruments | 101 | | | | 101 | — |
| Total other comprehensive income (loss), net of tax | 2 | | | | | |
| Dividends declared | (1,612) | | (1,612) | | | |
| Stock-based compensation | 198 | 198 | | | | |
| Reacquired stock | (2,563) | | | (2,563) | | |
| Issuances pursuant to stock option and benefit plans | 313 | | (520) | 833 | | |
| **Balance at June 30, 2018** | $ 10,428 | $ 5,559 | $ 39,442 | $ (27,617) | $ (7,019) | $ 63 |

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

**Three months ended June 30, 2019**

| (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 March 31, 2019, net of tax:** | $ (2,034) | $ (5,565) | $ 47 | $ (7,552) |
| Other comprehensive income (loss), before tax: | | | | |
| Amounts before reclassifications | (40) | 153 | (30) | 83 |
| Amounts reclassified out | 142 | 105 | (20) | 227 |
| Total other comprehensive income (loss), before tax | 102 | 258 | (50) | 310 |
| Tax effect | 20 | (62) | 12 | (30) |
| Total other comprehensive income (loss), net of tax | 122 | 196 | (38) | 280 |
| **Balance at June 30, 2019, net of tax:** | $ (1,912) | $ (5,369) | $ 9 | $ (7,272) |

**Six months ended June 30, 2019**

| (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, 2018, net of tax:** | $ (2,098) | $ (4,832) | $ 64 | $ (6,866) |
| Impact of adoption of ASU No. 2018-02 (See Note 1) | (13) | (817) | (23) | (853) |
| Other comprehensive income (loss), before tax: | | | | |
| Amounts before reclassifications | 63 | 153 | (17) | 199 |
| Amounts reclassified out | 142 | 209 | (27) | 324 |
| Total other comprehensive income (loss), before tax | 205 | 362 | (44) | 523 |
| Tax effect | (6) | (82) | 12 | (76) |
| Total other comprehensive income (loss), net of tax | 199 | 280 | (32) | 447 |
| **Balance at June 30, 2019, net of tax:** | $ (1,912) | $ (5,369) | $ 9 | $ (7,272) |

**Three months ended June 30, 2018**

| (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 March 31, 2018, net of tax:** | $ (1,470) | $ (5,160) | $ (173) | $ (6,803) |
| Other comprehensive income (loss), before tax: | | | | |
| Amounts before reclassifications | (411) | — | 182 | (229) |
| Amounts reclassified out | — | 151 | 28 | 179 |
| Total other comprehensive income (loss), before tax | (411) | 151 | 210 | (50) |
| Tax effect | (81) | (37) | (48) | (166) |
| Total other comprehensive income (loss), net of tax | (492) | 114 | 162 | (216) |
| **Balance at June 30, 2018, net of tax:** | $ (1,962) | $ (5,046) | $ (11) | $ (7,019) |

**Six months ended June 30, 2018**

| (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 | (282) | — | 100 | (182) |
| Amounts reclassified out | — | 302 | 62 | 364 |
| Total other comprehensive income (loss), before tax | (282) | 302 | 162 | 182 |
| Tax effect | (42) | (72) | (61) | (175) |
| Total other comprehensive income (loss), net of tax | (324) | 230 | 101 | 7 |
| **Balance at June 30, 2018, net of tax** | $ (1,962) | $ (5,046) | $ (11) | $ (7,019) |

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 also recorded as part of net income.

**Reclassifications out of Accumulated Other Comprehensive Income Attributable to 3M**

| Details about Accumulated Other Comprehensive Income Components (Millions) | Amount Reclassified from Accumulated Other Comprehensive Income: Three months ended June 30, 2019 | Three months ended June 30, 2018 | Six months ended June 30, 2019 | Six months ended June 30, 2018 | Location on Income Statement |
|---|---|---|---|---|---|
| Cumulative translation adjustment | | | | | |
| Deconsolidation of Venezuelan subsidiary | **$ (142)** | $ — | **$ (142)** | $ — | Other income (expense), net |
| Total before tax | **(142)** | — | **(142)** | — | |
| Tax effect | **—** | — | **—** | — | Provision for income taxes |
| Net of tax | **$ (142)** | $ — | **$ (142)** | $ — | |
| | | | | | |
| Defined benefit pension and postretirement plans adjustments | | | | | |
| Gains (losses) associated with defined benefit pension and postretirement plans amortization | | | | | |
| Prior service benefit | **$ 16** | $ 19 | **$ 32** | $ 38 | See Note 11 |
| Net actuarial loss | **(119)** | (170) | **(239)** | (340) | See Note 11 |
| Deconsolidation of Venezuelan subsidiary | **(2)** | — | **(2)** | — | Other income (expense), net |
| Total before tax | **(105)** | (151) | **(209)** | (302) | |
| Tax effect | **25** | 37 | **45** | 72 | Provision for income taxes |
| Net of tax | **$ (80)** | $ (114) | **$ (164)** | $ (230) | |
| | | | | | |
| Cash flow hedging instruments gains (losses) | | | | | |
| Foreign currency forward/option contracts | **$ 21** | $ (27) | **$ 28** | $ (61) | Cost of sales |
| Interest rate swap contracts | **(1)** | (1) | **(1)** | (1) | Interest expense |
| Total before tax | **20** | (28) | **27** | (62) | |
| Tax effect | **(4)** | 7 | **(5)** | 15 | Provision for income taxes |
| Net of tax | **$ 16** | $ (21) | **$ 22** | $ (47) | |
| Total reclassifications for the period, net of tax | **$ (206)** | $ (135) | **$ (284)** | $ (277) | |

**NOTE 8. Income Taxes**

The IRS has completed its field examination of the Company's U.S. federal income tax returns for the years 2005 to 2014, and 2016, but the years have not closed as the Company is in the process of resolving open issues. The Company remains under examination by the IRS for its U.S. federal income tax returns for the years 2015, 2017 and 2018. In addition to the U.S. federal examination, there is also audit activity in several U.S. state and foreign jurisdictions. As of June 30, 2019, 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. At this time, the Company is not able to estimate the range by which these potential events could impact 3M's unrecognized tax benefits in the next 12 months. The total amounts of unrecognized tax benefits that, if recognized, would affect the effective tax rate as of June 30, 2019 and December 31, 2018 are $718 million and $655 million, respectively.

As of June 30, 2019 and December 31, 2018, the Company had valuation allowances of $97 million and $67 million on its deferred tax assets, respectively.

The effective tax rate for the second quarter of 2019 was 21.8 percent, compared to 20.8 percent in the second quarter of 2018, an increase of 1.0 percentage points. Primary factors that increased the Company's effective tax rate included significant events such as the deconsolidation of the Venezuelan subsidiary, adjustments to uncertain tax positions and the effects of the international tax provisions from U.S. tax reform. These increases were partially offset by the tax benefit related to the "held-for-sale" status of legal entities associated with the pending divestiture of the gas and flame detection business, prior year divestitures net of related actions, and increased benefit from stock options.

The effective tax rate for the first six months of 2019 was 20.1 percent, compared to 25.6 percent in the first six months of 2018, a decrease of 5.5 percentage points. Primary factors that decreased the Company's effective tax rate included significant events such as prior year measurement period adjustments related to 2017 Tax Cuts and Jobs Act (TCJA), the tax benefit related to the "held-for-sale" status of legal entities associated with the pending divestiture of the gas and flame detection business, and prior year resolution of the NRD lawsuit (as described in Note 14). These decreases were partially offset by the deconsolidation of the Venezuelan subsidiary, adjustments to uncertain tax positions and the effects of the international tax provisions from U.S. tax reform.

The Tax Cuts and Jobs Act (TCJA) was enacted in December 2017, after which the SEC staff issued Staff Accounting Bulletin 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. During the first quarter of 2018, 3M recognized a measurement period adjustment resulting in an additional tax expense of $217 million to its provisional accounting. Refer to Note 10 in 3M's 2018 Annual Report on Form 10-K for more information on the impact of TCJA.

The Company adopted ASU No. 2018-02, *Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*, as described in Note 1, on January 1, 2019. The purpose of this ASU was to allow a reclassification to retained earnings of one-time income tax effects stranded in accumulated other comprehensive income (AOCI) arising from the change in the U.S. federal corporate tax rate as a result of TCJA. The effect of this adoption resulted in a reclassification between retained earnings and AOCI, which increased retained earnings by approximately $0.9 billion, with an offsetting increase to accumulated other comprehensive loss for the same amount.

**NOTE 9. 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) | June 30, 2019 | December 31, 2018 |
|---|---|---|
| Commercial paper | **$ 102** | $ 366 |
| Certificates of deposit/time deposits | **34** | 10 |
| U.S. municipal securities | **3** | 3 |
| Asset-backed securities | **—** | 1 |
| **Current marketable securities** | **$ 139** | $ 380 |
| | | |
| U.S. municipal securities | **$ 46** | $ 37 |
| **Non-current marketable securities** | **$ 46** | $ 37 |
| | | |
| **Total marketable securities** | **$ 185** | $ 417 |

At June 30, 2019 and December 31, 2018, gross unrealized, gross realized, and net realized gains and/or losses (pre-tax) were not material.

The balances at June 30, 2019 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) | June 30, 2019 |
|---|---|
| Due in one year or less | $ 139 |
| Due after one year through five years | 13 |
| Due after five years through ten years | 24 |
| Due after ten years | 9 |
| Total marketable securities | $ 185 |

3M does not currently expect risk related to its holding in asset-backed securities to materially impact its financial condition or liquidity.

**NOTE 10. Long-Term Debt and Short-Term Borrowings**

In February 2019, 3M issued $450 million aggregate principal amount of 3-year fixed rate medium-term notes due 2022 with a coupon rate of 2.75%, $500 million aggregate principal amount of remaining 5-year fixed rate medium-term notes due 2024 with a coupon rate of 3.25%, $800 million aggregate principal amount of 10-year fixed rate medium-term notes due 2029 with a coupon rate of 3.375%, and $500 million aggregate principal amount of remaining 29.5-year fixed rate medium-term 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.

As of June 30, 2019, the Company had no commercial paper outstanding, compared to $435 million in commercial paper outstanding as of December 31, 2018.

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

**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 June 30, 2019. The maturities of long-term debt for the periods subsequent to June 30, 2019 are as follows (in millions):

| Remainder of 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | After 2024 | Total |
|---|---|---|---|---|---|---|---|
| $ 124 | $ 1,332 | $ 1,698 | $ 1,612 | $ 1,324 | $ 1,101 | $ 8,586 | $ 15,777 |

**NOTE 11. Pension and Postretirement Benefit Plans**

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. 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 three and six months ended June 30, 2019 and 2018 follow:

**Benefit Plan Information**

| | Three months ended June 30, | | | | | |
|---|---|---|---|---|---|---|
| | Qualified and Non-qualified Pension Benefits | | | | Postretirement Benefits | |
| | United States | | International | | | |
| (Millions) | 2019 | 2018 | 2019 | 2018 | 2019 | 2018 |
| **Net periodic benefit cost (benefit)** | | | | | | |
| **Operating expense** | | | | | | |
| Service cost | **$ 63** | $ 72 | **$ 33** | $ 37 | **$ 11** | $ 13 |
| **Non-operating expense** | | | | | | |
| Interest cost | **$ 156** | $ 141 | **$ 39** | $ 40 | **$ 21** | $ 20 |
| Expected return on plan assets | **(260)** | (272) | **(75)** | (79) | **(21)** | (21) |
| Amortization of prior service benefit | **(6)** | (6) | **(3)** | (3) | **(7)** | (10) |
| Amortization of net actuarial loss | **92** | 126 | **19** | 29 | **8** | 15 |
| Settlements, curtailments, special termination benefits and other | **35** | — | **1** | — | **—** | — |
| Total non-operating expense (benefit) | **17** | (11) | **(19)** | (13) | **1** | 4 |
| Total net periodic benefit cost (benefit) | **$ 80** | $ 61 | **$ 14** | $ 24 | **$ 12** | $ 17 |

| (Millions) | Six months ended June 30, | | | | | |
|---|---|---|---|---|---|---|
| | Qualified and Non-qualified Pension Benefits | | | | Postretirement Benefits | |
| | United States | | International | | | |
| | 2019 | 2018 | 2019 | 2018 | 2019 | 2018 |
| **Net periodic benefit cost (benefit)** | | | | | | |
| **Operating expense** | | | | | | |
| Service cost | **$ 125** | $ 144 | **$ 66** | $ 73 | **$ 22** | $ 26 |
| **Non-operating expense** | | | | | | |
| Interest cost | **$ 311** | $ 282 | **$ 78** | $ 80 | **$ 42** | $ 40 |
| Expected return on plan assets | **(520)** | (544) | **(150)** | (157) | **(41)** | (42) |
| Amortization of prior service benefit | **(12)** | (12) | **(6)** | (6) | **(14)** | (20) |
| Amortization of net actuarial loss | **183** | 252 | **39** | 58 | **17** | 30 |
| Settlements, curtailments, special termination benefits and other | **35** | — | **1** | — | **—** | — |
| Total non-operating expense (benefit) | **(3)** | (22) | **(38)** | (25) | **4** | 8 |
| Total net periodic benefit cost (benefit) | **$ 122** | $ 122 | **$ 28** | $ 48 | **$ 26** | $ 34 |

For the six months ended June 30, 2019, contributions totaling $86 million were made to the Company's U.S. and international pension plans and $2 million to its postretirement plans. For total year 2019, the Company expects to contribute approximately $200 million of cash to its global defined benefit pension and postretirement plans. The Company does not have a required minimum cash pension contribution obligation for its U.S. plans in 2019. Future contributions will depend on market conditions, interest rates and other factors. 3M's annual measurement date for pension and postretirement assets and liabilities is December 31 each year, which is also the date used for the related annual measurement assumptions.

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 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.

**NOTE 12. Derivatives**

The Company uses interest rate swaps, currency swaps, commodity price 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 7.
- Fair value of derivative instruments is included in Note 13.
- Derivatives and/or hedging instruments associated with the Company's long-term debt are described in Note 12 in 3M's 2018 Annual Report on Form 10-K.

*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 to hedge exposure to variability in cash flows from interest payments on forecasted debt issuances. The amortization of gains and losses on forward starting interest rate swaps is included in the tables below as part of the gain/(loss) recognized in income as a result of reclassification from accumulated other comprehensive income. Additional information regarding previously issued but terminated interest rate contracts, which have related balances within accumulated other comprehensive income being amortized over the underlying life of related debt, can be found in Note 14 in 3M's 2018 Annual Report on Form 10-K.

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 the first six months of 2019, the Company entered into additional forward starting interest rate swaps with a notional amount of $551 million. Concurrent with the issuance of the medium-term notes in February 2019, 3M terminated $550 million of outstanding interest rate swaps. The termination resulted in an immaterial net loss within accumulated other comprehensive income that will be amortized over the respective lives of the debt.

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

As of June 30, 2019, the Company had a balance of $9 million associated with the after-tax net unrealized gain associated with cash flow hedging instruments recorded in accumulated other comprehensive income. This includes a remaining balance of $14 million (after-tax loss) related to the forward starting interest rate swaps, which will be amortized over the respective lives of the notes. Based on exchange rates as of June 30, 2019, 3M expects to reclassify approximately $36 million, $24 million, $22 million of the after-tax net unrealized foreign exchange cash flow hedging gains to earnings over the next 12 months, over the remainder of 2019, in 2020, respectively, in addition to reclassifying approximately $37 million of the after-tax net unrealized foreign exchange cash flow hedging losses to earnings after 2020 (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 transactions.

| Three months ended June 30, 2019 (Millions) | Pretax Gain (Loss) Recognized in Other Comprehensive Income on Derivative Amount | Pretax Gain (Loss) Reclassified from Accumulated Other Comprehensive Income into Income Location | Amount |
|---|---|---|---|
| Foreign currency forward/option contracts | $ 2 | Cost of sales | $ 21 |
| Interest rate swap contracts | (32) | Interest expense | (1) |
| Total | $ (30) | | $ 20 |

| Six months ended June 30, 2019 (Millions) | Amount | Location | Amount |
|---|---|---|---|
| Foreign currency forward/option contracts | $ 32 | Cost of sales | $ 28 |
| Interest rate swap contracts | (49) | Interest expense | (1) |
| Total | $ (17) | | $ 27 |

| Three months ended June 30, 2018 (Millions) | Pretax Gain (Loss) Recognized in Other Comprehensive Income on Effective Portion of Derivative Amount | Pretax Gain (Loss) Recognized in Income on Effective Portion of Derivative as a Result of Reclassification from Accumulated Other Comprehensive Income Location | Amount | Ineffective Portion of Gain (Loss) on Derivative and Amount Excluded from Effectiveness Testing Recognized in Income Location | Amount |
|---|---|---|---|---|---|
| Foreign currency forward/option contracts | $ 179 | Cost of sales | $ (27) | Cost of sales | $ — |
| Interest rate swap contracts | 3 | Interest expense | (1) | Interest expense | — |
| Total | $ 182 | | $ (28) | | $ — |

| Six months ended June 30, 2018 (Millions) | Amount | Location | Amount | Location | Amount |
|---|---|---|---|---|---|
| Foreign currency forward/option contracts | $ 100 | Cost of sales | $ (61) | Cost of sales | $ — |
| Interest rate swap contracts | — | Interest expense | (1) | Interest expense | — |
| Total | $ 100 | | $ (62) | | $ — |

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. Additional information regarding designated interest rate swaps can be found in Note 14 in 3M's 2018 Annual Report on Form 10-K.

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 three and six months ended June 30, 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:

| Three months ended June 30, 2018 (Millions) | Gain (Loss) on Derivative Recognized in Income Location | Amount | Gain (Loss) on Hedged Item Recognized in Income Location | Amount |
|---|---|---|---|---|
| Interest rate swap contracts | Interest expense | $ (1) | Interest expense | $ 1 |
| Total | | $ (1) | | $ 1 |

| Six months ended June 30, 2018 (Millions) | Location | Amount | Location | Amount |
|---|---|---|---|---|
| Interest rate swap contracts | Interest expense | $ (12) | Interest expense | $ 12 |
| Total | | $ (12) | | $ 12 |

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

| Location on the Consolidated Balance Sheet | Carrying Value of the Hedged Liabilities (in millions) June 30, 2019 | Carrying Value of the Hedged Liabilities (in millions) December 31, 2018 | Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Value of the Hedged Liabilities (in millions) June 30, 2019 | Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Value of the Hedged Liabilities (in millions) December 31, 2018 |
|---|---|---|---|---|
| Short-term borrowings and current portion of long-term debt | $ — | $ 596 | $ — | $ (4) |
| Long-term debt | 1,284 | 1,276 | 26 | 18 |
| Total | $ 1,284 | $ 1,872 | $ 26 | $ 14 |

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. 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. 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.

At June 30, 2019, the total notional amount of foreign exchange forward contracts designated in net investment hedges was approximately 830 million Euros and approximately 248 billion South Korean Won, along with a principal amount of long-term debt instruments designated in net investment hedges totaling 4.1 billion Euros. The maturity dates of these derivative and nonderivative instruments designated in net investment hedges range from 2019 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.

| Three months ended June 30, 2019 (Millions) | Pretax Gain (Loss) Recognized as Cumulative Translation within Other Comprehensive Income Amount | Amount Excluded from Effectiveness Testing Recognized in Income Location | Amount Excluded from Effectiveness Testing Recognized in Income Amount |
|---|---|---|---|
| Foreign currency denominated debt | $ (64) | Cost of sales | $ — |
| Foreign currency forward contracts | (10) | Cost of sales | 7 |
| Total | $ (74) | | $ 7 |

| Six months ended June 30, 2019 (Millions) | Amount | Location | Amount |
|---|---|---|---|
| Foreign currency denominated debt | $ 28 | Cost of sales | $ — |
| Foreign currency forward contracts | 5 | Cost of sales | 12 |
| Total | $ 33 | | $ 12 |

| Three months ended June 30, 2018 (Millions) | Pretax Gain (Loss) Recognized as Cumulative Translation within Other Comprehensive Income on Effective Portion of Instrument Amount | Ineffective Portion of Gain (Loss) on Instrument and Amount Excluded from Effectiveness Testing Recognized in Income Location | Amount |
|---|---|---|---|
| Foreign currency denominated debt | $ 299 | Cost of sales | $ — |
| Foreign currency forward contracts | 23 | Cost of sales | 1 |
| Total | $ 322 | | $ 1 |

| Six months ended June 30, 2018 (Millions) | Amount | Location | Amount |
|---|---|---|---|
| Foreign currency denominated debt | $ 171 | N/A | $ (2) |
| Foreign currency forward contracts | 17 | Cost of sales | — |
| Total | $ 188 | | $ (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 forward contracts to offset, in part, the impacts of certain intercompany activities and enters into commodity price swaps to offset, in part, fluctuations in costs associated with the use of certain commodities and precious metals. 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 statement of income and amounts of gains and losses related to derivative instruments not designated as hedging instruments are as follows:

| | Three months ended June 30, 2019 Gain (Loss) on Derivative Recognized in Income | | Six months ended June 30, 2019 Gain (Loss) on Derivative Recognized in Income | |
|---|---|---|---|---|
| (Millions) | Location | Amount | Location | Amount |
| Foreign currency forward/option contracts | Cost of sales | $ — | Cost of sales | $ (2) |
| Foreign currency forward contracts | Interest expense | (10) | Interest expense | (18) |
| Total | | $ (10) | | $ (20) |

| | Three months ended June 30, 2018 Gain (Loss) on Derivative Recognized in Income | | Six months ended June 30, 2018 Gain (Loss) on Derivative Recognized in Income | |
|---|---|---|---|---|
| (Millions) | Location | Amount | Location | Amount |
| Foreign currency forward/option contracts | Cost of sales | $ 3 | Cost of sales | $ — |
| Foreign currency forward contracts | Interest expense | (114) | Interest expense | (91) |
| Total | | $ (111) | | $ (91) |

*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 | | Location and Amount of Gain (Loss) Recognized in Income | |
|---|---|---|---|---|
| | Three months ended June 30, 2019 | | Six months ended June 30, 2019 | |
| **(Millions)** | **Cost of sales** | **Other expense (income), net** | **Cost of Goods Sold** | **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 | $ 4,313 | $ 256 | $ 8,623 | $ 304 |
| | | | | |
| **The effects of fair value and cash flow 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 | $ 21 | $ — | $ 28 | $ — |
| **Interest rate swap contracts:** | | | | |
| Amount of gain or (loss) reclassified from accumulated other comprehensive income into income | — | (1) | — | (1) |
| | | | | |
| **Gain or (loss) on fair value hedging relationships:** | | | | |
| **Interest rate swap contracts:** | | | | |
| Hedged items | $ — | $ (7) | $ — | $ (12) |
| Derivatives designated as hedging instruments | — | 7 | — | 12 |

*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 13.

| | | Assets | | Liabilities | |
|---|---|---|---|---|---|
| **June 30, 2019 (Millions)** | **Gross Notional Amount** | **Location** | **Fair Value Amount** | **Location** | **Fair Value Amount** |
| **Derivatives designated as hedging instruments** | | | | | |
| Foreign currency forward/option contracts | $ 3,072 | Other current assets | $ 67 | Other current liabilities | $ 14 |
| Foreign currency forward/option contracts | 1,092 | Other assets | 46 | Other liabilities | 3 |
| Interest rate swap contracts | 1,804 | Other assets | 21 | Other liabilities | 59 |
| **Total derivatives designated as hedging instruments** | | | $ 134 | | $ 76 |
| | | | | | |
| **Derivatives not designated as hedging instruments** | | | | | |
| Foreign currency forward/option contracts | $ 2,166 | Other current assets | $ 6 | Other current liabilities | $ 9 |
| **Total derivatives not designated as hedging instruments** | | | $ 6 | | $ 9 |
| | | | | | |
| **Total derivative instruments** | | | $ 140 | | $ 85 |

| December 31, 2018<br>(Millions) | Gross<br>Notional<br>Amount | Assets<br>Location | Assets<br>Fair<br>Value Amount | Liabilities<br>Location | Liabilities<br>Fair<br>Value Amount |
|---|---|---|---|---|---|
| **Derivatives designated as hedging instruments** | | | | | |
| Foreign currency forward/option contracts | $ 2,277 | Other current assets | $ 74 | Other current liabilities | $ 12 |
| Foreign currency forward/option contracts | 1,099 | Other assets | 39 | Other liabilities | 4 |
| Interest rate swap contracts | 1,000 | Other current assets | — | Other current liabilities | 14 |
| Interest rate swap contracts | 1,403 | Other assets | 19 | Other liabilities | 17 |
| **Total derivatives designated as hedging instruments** | | | $ 132 | | $ 47 |
| **Derivatives not designated as hedging instruments** | | | | | |
| Foreign currency forward/option contracts | $ 2,484 | Other current assets | $ 14 | Other current liabilities | $ 6 |
| **Total derivatives not designated as hedging instruments** | | | $ 14 | | $ 6 |
| **Total derivative instruments** | | | $ 146 | | $ 53 |

*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, commodity price 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 June 30, 2019, 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**

| June 30, 2019 (Millions) | Gross Amount of Derivative Assets Presented in the Consolidated Balance Sheet | Gross Amounts not Offset in the Consolidated Balance Sheet that are Subject to Master Netting Agreements: Gross Amount of Eligible Offsetting Recognized Derivative Liabilities | Cash Collateral Received | Net Amount of Derivative Assets |
|---|---|---|---|---|
| Derivatives subject to master netting agreements | $ 140 | $ 42 | $ — | $ 98 |
| Derivatives not subject to master netting agreements | — | | | — |
| **Total** | $ 140 | | | $ 98 |

| December 31, 2018 (Millions) | | | | |
|---|---|---|---|---|
| Derivatives subject to master netting agreements | $ 146 | $ 38 | $ — | $ 108 |
| Derivatives not subject to master netting agreements | — | | | — |
| **Total** | $ 146 | | | $ 108 |

**Offsetting of Financial Liabilities under Master Netting Agreements with Derivative Counterparties**

| June 30, 2019 (Millions) | Gross Amount of Derivative Liabilities Presented in the Consolidated Balance Sheet | Gross Amounts not Offset in the Consolidated Balance Sheet that are Subject to Master Netting Agreements: Gross Amount of Eligible Offsetting Recognized Derivative Assets | Cash Collateral Pledged | Net Amount of Derivative Liabilities |
|---|---|---|---|---|
| Derivatives subject to master netting agreements | $ 85 | $ 42 | $ — | $ 43 |
| Derivatives not subject to master netting agreements | — | | | — |
| **Total** | $ 85 | | | $ 43 |

| December 31, 2018 (Millions) | | | | |
|---|---|---|---|---|
| Derivatives subject to master netting agreements | $ 53 | $ 38 | $ — | $ 15 |
| Derivatives not subject to master netting agreements | — | | | — |
| **Total** | $ 53 | | | $ 15 |

*Currency Effects*

3M estimates that year-on-year foreign currency transaction effects, including hedging impacts, increased pre-tax income by approximately $55 million and $121 million for the three and six months ended June 30, 2019. These estimates include transaction gains and losses, including derivative instruments designed to reduce foreign currency exchange rate risks.

**NOTE 13. 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.

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

Refer to Note 15 in 3M's 2018 Annual Report on Form 10-K for a qualitative discussion of the assets and liabilities that are measured at fair value on a recurring and nonrecurring basis, a description of the valuation methodologies used by 3M, and categorization within the valuation framework of ASC 820.

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 June 30, 2019 | Fair Value Measurements Using Inputs Considered as Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|
| Assets: | | | | |
| Available-for-sale: | | | | |
| Marketable securities: | | | | |
| Commercial paper | $ 102 | $ — | $ 102 | $ — |
| Certificates of deposit/time deposits | 34 | — | 34 | — |
| U.S. municipal securities | 49 | — | — | 49 |
| Derivative instruments — assets: | | | | |
| Foreign currency forward/option contracts | 119 | — | 119 | — |
| Interest rate swap contracts | 21 | — | 21 | — |
| | | | | |
| Liabilities: | | | | |
| Derivative instruments — liabilities: | | | | |
| Foreign currency forward/option contracts | 26 | — | 26 | — |
| Interest rate swap contracts | 59 | — | 59 | — |

| Description (Millions) | Fair Value at December 31, 2018 | Fair Value Measurements Using Inputs Considered as Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|
| Assets: | | | | |
| Available-for-sale: | | | | |
| Marketable securities: | | | | |
| Commercial paper | $ 366 | $ — | $ 366 | $ — |
| Certificates of deposit/time deposits | 10 | — | 10 | — |
| Asset-backed securities | 1 | — | 1 | — |
| U.S. municipal securities | 40 | — | — | 40 |
| Derivative instruments — assets: | | | | |
| Foreign currency forward/option contracts | 127 | — | 127 | — |
| Interest rate swap contracts | 19 | — | 19 | — |
| | | | | |
| Liabilities: | | | | |
| Derivative instruments — liabilities: | | | | |
| Foreign currency forward/option contracts | 22 | — | 22 | — |
| Interest rate swap contracts | 31 | — | 31 | — |

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) | Three months ended June 30, 2019 | Three months ended June 30, 2018 | Six months ended June 30, 2019 | Six months ended June 30, 2018 |
|---|---|---|---|---|
| Beginning balance | **$ 49** | $ 30 | **$ 40** | $ 30 |
| Total gains or losses: | | | | |
| Included in earnings | **—** | — | **—** | — |
| Included in other comprehensive income | **—** | — | **—** | — |
| Purchases and issuances | **—** | — | **9** | — |
| Sales and settlements | **—** | — | **—** | — |
| Transfers in and/or out of level 3 | **—** | — | **—** | — |
| Ending balance | **$ 49** | $ 30 | **$ 49** | $ 30 |
| 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 in 3M's 2018 Annual Report on Form 10-K.

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

Disclosures are required for certain assets and liabilities that are measured at fair value, but are recognized and disclosed at fair value on a nonrecurring basis in periods subsequent to initial recognition. For 3M, such measurements of fair value relate primarily to long-lived asset 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 or adjustments to equity securities using the measurement alternative for the three and six months months ended June 30, 2019 and 2018.

*Fair Value of Financial Instruments:*

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

| (Millions) | June 30, 2019 Carrying Value | June 30, 2019 Fair Value | December 31, 2018 Carrying Value | December 31, 2018 Fair Value |
|---|---|---|---|---|
| Long-term debt, excluding current portion | **$ 14,914** | **$ 15,715** | $ 13,411 | $ 13,586 |

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 June 30, 2019 and December 31, 2018 due to lower interest rates and tighter credit spreads compared to issuance levels.

**NOTE 14. Commitments and Contingencies**

*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 include various products liability (involving products that the Company now or formerly manufactured and sold), intellectual property, and commercial claims and lawsuits, and environmental proceedings. Unless otherwise stated, the Company is vigorously defending all such litigation. 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, debarment or injunctive relief. Additional information about the Company's process for disclosure and recording of liabilities and insurance receivables related to legal proceedings can be found in Note 16 "Commitments and Contingencies" in the Company's Annual Report on Form 10-K for the year ended December 31, 2018.

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 June 30, 2019, the Company is a named defendant, with multiple co-defendants, in numerous lawsuits in various courts that purport to represent approximately 1,660 individual claimants, compared to approximately 2,320 individual claimants with actions pending at December 31, 2018.

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

The Company's current volume of new and pending matters is substantially lower than it experienced at the peak of filings in 2003. The Company expects that filing of claims by unimpaired claimants in the future will continue to be at much lower levels than in the past. Accordingly, the number of claims alleging more serious injuries, including mesothelioma, other malignancies, and black lung disease, will represent a greater percentage of total claims than in the past. Over the past twenty years, the Company has prevailed in fourteen of the fifteen 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 has 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 $65 million jury verdict in April 2018 in the Kentucky case mentioned above currently on 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. The case was inactive from the fourth quarter of 2007 until late 2013, other than a case management conference in March 2011. In November 2013, the State filed a motion to bifurcate the lawsuit into separate liability and damages proceedings. At the hearing on the motion, the court declined to bifurcate the lawsuit. 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 fact that the complaint asserts 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 might allocate to each defendant if the case is 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 the settlements-in-principle of the coal mine dust lawsuits mentioned above, 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), its review of its respirator mask/asbestos liabilities, and 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 the first six months of 2019 for respirator mask/asbestos liabilities by $329 million, of which $313 million pre-tax (or $238 million after tax ($0.40 per diluted share)) was accrued in the first quarter of 2019. In the first six months of 2019, the Company made payments for legal fees and settlements of $67 million related to the respirator mask/asbestos litigation. As of June 30, 2019, the Company had an accrual for respirator mask/asbestos liabilities (excluding Aearo accruals) of $935 million, up $262 million from the accrual at December 31, 2018. 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 June 30, 2019, 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 purchased 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 June 30, 2019, 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 June 30, 2019, the Company, through its Aearo subsidiary, had accruals of $27 million for product liabilities and defense costs related to current and future Aearo-related asbestos and silica-related 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. 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 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.

*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 PFOA and/or PFOS 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. 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 address its 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 address the presence of PFAS in the soil at the Company's manufacturing facility in Decatur, Alabama. Pursuant to a permit issued by ADEM, for approximately 20 years, the Company incorporated its wastewater treatment plant sludge containing PFAS in fields at its Decatur facility. After a review of the available options to address the presence of PFAS in the soil, ADEM agreed that the preferred remediation option is to use a multilayer cap over the former sludge incorporation areas on the manufacturing site with subsequent groundwater migration controls and treatment. Implementation of that plan continues, and construction of the cap was substantially completed in 2018.

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 will continue at the Cottage Grove site during 2019.

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 PFOS and PFOA. 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 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, 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 released draft interim recommendations in April 2019, aiming to provide guidance for screening levels and preliminary remediation goals to inform final clean-up levels of contaminated sites.

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.

In several states, the state legislature or the state environmental agency have been evaluating or have taken actions related to cleanup standards, groundwater values or drinking water values for PFOS, PFOA, and other PFAS.

The Company cannot predict what additional regulatory actions arising from the foregoing or other proceedings and activities, if any, may be taken regarding such compounds or the consequences of any such actions.

*Litigation Related to Historical PFAS Manufacturing Operations in Alabama*

As previously reported, a former employee filed a putative class action lawsuit in 2002 in the Circuit Court of Morgan County, Alabama (the "St. John case"), seeking unstated damages and alleging that the plaintiffs suffered fear, increased risk, subclinical injuries, and property damage from exposure to certain perfluorochemicals at or near the Company's Decatur, Alabama, manufacturing facility. The plaintiffs' counsel filed an amended complaint in November 2006, limiting the case to property damage claims on behalf of a putative class of residents and property owners in the vicinity of the Decatur plant. In June 2015, the plaintiffs filed an amended complaint adding additional defendants, including BFI Waste Management Systems of Alabama, LLC; BFI Waste Management of North America, LLC; the City of Decatur, Alabama; Morgan County, Alabama; Municipal Utilities Board of Decatur; and Morgan County, Alabama, d/b/a Decatur Utilities.

In 2005, the judge – in a second putative class action lawsuit filed by three residents of Morgan County, Alabama, seeking unstated compensatory and punitive damages involving alleged damage to their property from emissions of certain perfluorochemical compounds from the Company's Decatur, Alabama, manufacturing facility that formerly manufactured those compounds (the "Chandler case") – granted the Company's motion to abate the case, effectively putting the case on hold pending the resolution of class certification issues in the St. John case. Despite the stay, plaintiffs filed an amended complaint seeking damages for alleged personal injuries and property damage on behalf of the named plaintiffs and the members of a putative class. No further action in the case is expected unless and until the stay is lifted.

In February 2009, a resident of Franklin County, Alabama, filed a putative class action lawsuit in the Circuit Court of Franklin County (the "Stover case") seeking compensatory damages and injunctive relief based on the application by the Decatur utility's wastewater treatment plant of wastewater treatment sludge to farmland and grasslands in the state that allegedly contain PFOA, PFOS and other perfluorochemicals. The named plaintiff seeks to represent a class of all persons within the State of Alabama who have had PFOA, PFOS, and other perfluorochemicals released or deposited on their property. In March 2010, the Alabama Supreme Court ordered the case transferred from Franklin County to Morgan County. In May 2010, consistent with its handling of the other matters, the Morgan County Circuit Court abated this case, putting it on hold pending the resolution of the 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 described above for $35 million and indemnification of 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.

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. The St. John and Tennessee Riverkeeper cases, which relate to the 3M plant in Decatur, are stayed through November 2019.

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. 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.

In January 2017, several hundred plaintiffs sued 3M, its subsidiary Dyneon, and Daikin America in Lawrence and Morgan Counties, Alabama. 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 discharge into the Tennessee River. The plaintiffs also contend that the defendants have discharged into Bakers Creek and the Decatur Utilities Dry Creek Wastewater Treatment Plant, which, in turn, discharges wastewater containing these chemicals 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 2017, a putative class action (the "King" case) was filed against 3M, its subsidiary 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. They assert various common law claims, including negligence, nuisance, wantonness, and fraudulent concealment, and they 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 that have released and continue to release PFOA, PFOS and related chemicals into the groundwater and surface water of their sites, resulting in discharge into the Tennessee River. The plaintiffs also contend that the defendants have discharged chemicals into the Decatur Utilities Dry Creek Wastewater Treatment Plant, which, in turn, discharged wastewater containing these chemicals 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 January 2018, certain property owners in Trinity, Alabama filed a lawsuit against 3M, Dyneon, and three unnamed defendants in the U.S. District Court for the Northern District of Alabama. The plaintiffs assert claims for negligence, strict liability, trespass, nuisance, wanton and reckless conduct, and citizen suit claims for violation of the Resource Conservation and Recovery Act. They allege these claims arise from the defendants' contamination of their property by disposal of PFAS in a landfill located on their property. The plaintiffs seek compensatory and punitive damages and a court order directing the defendants to remediate all PFAS contamination on their property. In September 2018, the case was dismissed by stipulation of the parties.

In September 2018, an individual plaintiff filed a lawsuit in the U.S. District Court for the Northern District of Alabama raising allegations and claims substantially similar to those asserted by plaintiffs in the King case.

*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*

In December 2010, the State of Minnesota, by its Attorney General, filed a lawsuit in Hennepin County District Court against 3M to recover damages (including unspecified assessment costs and reasonable attorney's fees) for alleged injury to, destruction of, and loss of use of certain of the State's natural resources under the Minnesota Environmental Response and Liability Act (MERLA) and the Minnesota Water Pollution Control Act (MWPCA), as well as statutory nuisance and common law claims of trespass, nuisance, and negligence with respect to the presence of PFAS in the groundwater, surface water, fish or other aquatic life, and sediments (the "NRD Lawsuit"). The State also sought declarations under MERLA that 3M is responsible for all damages the State may suffer in the future for injuries to natural resources from releases of PFAS into the environment, and that 3M is responsible for compensation for future loss or destruction of fish, aquatic life, and other damages under the MWPCA. In September 2017, the State's damages expert submitted a report that contended the State incurred $5 billion in damages. In November 2017, the State of Minnesota filed a motion for leave to amend its complaint to seek punitive damages from 3M, and 3M filed a motion for summary judgment contending, among other things, that the State's claims were barred by the applicable statute of limitations. In December 2017, the court urged the parties to attempt to resolve the litigation before trial, and in January 2018, the court appointed a mediator to facilitate that process. 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 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. The projects will also result in 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 June 2018, the State of New York, by its Attorney General, filed a lawsuit in Albany Country Supreme Court against 3M, Tyco Fire Products LP, Chemguard, Inc., Buckeye Fire Equipment Co., National Foam, Inc., and Kidde-Fenwal, Inc., seeking to recover the costs incurred in responding to the contamination caused by Aqueous Film Forming Foam (AFFF) manufactured by 3M and others; damages for injury to, destruction of, and loss of the State's natural resources and related recreational series; and property damage. This case was removed to federal court and transferred to the MDL for AFFF cases.

In July 2018, the now former governor of Michigan requested that the now former Michigan Attorney General file a lawsuit against 3M and others related to PFAS in a public letter. In May 2019, the new Michigan Attorney General issued a request for proposal seeking outside legal expertise in pursuing claims against manufacturers, distributors, and other responsible parties related to PFAS.

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 for AFFF cases.

In February 2019, the State of New York, by its Attorney General, filed a second lawsuit in Albany County Supreme Court against 3M, Tyco Fire Products LP, Chemguard, Inc., Buckeye Fire Equipment Co., and National Foam, Inc. seeking (1) compensatory damages consisting of (i) costs incurred and to be incurred by the State in investigating, monitoring, remediating, and otherwise responding to injuries and/or threats to public health and the environment caused by defendants' AFFF products used at sites across New York State; and (ii) damages for harm to the State's natural resources; (2) punitive damages; and (3) 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 in response to the threats and/or injuries they have caused.

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. One complaint was filed in Salem County and alleges the defendants should pay for clean-up and removal costs and damages as a result of alleged discharges of hazardous substances and pollutants by the defendants at DuPont's Chambers Works facility in Pennsville, New Jersey. The other complaint was filed in Middlesex County and seeks similar relief relating to DuPont's Parlin, New Jersey facility. 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. 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.

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. We expect this lawsuit to be 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 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 lawsuit is expected to be 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.

*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 2000. As of June 30, 2019, 116 putative class action and other lawsuits have been filed against 3M and other defendants in various state and federal courts where current or former airports, military bases, or fire training facilities are or were located. In these cases, plaintiffs typically allege that certain PFAS used in AFFF contaminated the soil and groundwater where AFFF was used and seek damages for loss of use and enjoyment of properties, diminished property values, investigation costs, remediation costs, and in some cases, personal injury and funds for medical monitoring. Several companies have been sued along with 3M, including Ansul Co. (acquired by Tyco, Inc.), Angus Fire, Buckeye Fire Protection Co., Chemguard, National Foam, Inc., and United Technologies Corp.

In December 2018, the U.S. Judicial Panel on Multidistrict Litigation 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 a multi-district litigation (MDL) proceeding to centralize pre-trial proceedings. As of June 30, 2019, there were 106 cases in the MDL.

*Other PFAS-related Environmental Litigation*

3M manufactured and sold products containing various perfluorooctanyl compounds (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., E.I. DuPont De Nemours and Co., and various carpet manufacturers.

In New York, 3M is defending 46 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 Company. 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. 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. Plaintiffs seek unstated compensatory, consequential, and punitive damages, as well as attorneys' fees and costs.

In Michigan, three putative class actions are pending in the U.S. District Court for the Western District of Michigan against 3M and Wolverine World Wide (Wolverine) and other defendants. The complaints include some or all of the following claims: negligence, trespass, intentional and negligent infliction of emotional distress, battery, products liability, public and private nuisance, fraudulent concealment, and unjust enrichment. The actions arise from Wolverine's allegedly improper disposal of materials and wastes related to their shoe manufacturing operations. Plaintiffs allege Wolverine used 3M Scotchgard in its manufacturing process and that chemicals from 3M's product have contaminated the environment after being disposed of near drinking water sources. In addition to the three federal court putative class actions, as of June 30, 2019, 3M has been named as a defendant in 236 private individual actions in Michigan state court based on similar allegations. Wolverine also filed a third-party complaint against 3M in a suit by the State of Michigan against Wolverine seeking 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 Alabama, 3M is defending two lawsuits filed in state court by local public water suppliers 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 PFOA and PFOS into the surface water and groundwater, contaminating drinking water supplies of cities located downstream along the Coosa River.

In Delaware, 3M is defending one putative class action filed in federal court relating to alleged contamination allegedly caused by waste from Wolverine World Wide, which used Scotchgard in its manufacture of leather products. 3M allegedly supplied Scotchgard to Wolverine. A second putative class action lawsuit filed against 3M in federal court in Delaware, relating to Wolverine, was transferred to Michigan in May 2019.

In Maine, 3M is defending one individual action in federal court relating to contamination of drinking water and dairy farm operations by PFAS from wastewater sludge. Plaintiffs contend that PFAS entered the wastewater via discharge from another company's facility in Kennebunk, Maine.

In New Jersey, 3M is defending one putative class action in federal court that relates to the DuPont "Chambers Works" plant. Plaintiffs allege that PFAS compounds from the plant have contaminated private wells for drinking water.

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. The named plaintiff, a firefighter allegedly exposed to PFAS chemicals through his use of firefighting foam, purports to represent a class of "all individuals residing within the United States who, at the time a class is certified in this case, have detectable levels of PFAS materials in their blood serum." The plaintiff brings claims for negligence, battery, and conspiracy, but does not seek damages for personal injury, medical monitoring, or property damage. Instead, the plaintiff seeks an order finding the defendants "are liable and responsible for the PFAS in Plaintiff's and the class members' blood and/or bodies" and an order "establishing an independent panel of scientists" to be "tasked with independently studying, evaluating, reviewing, identifying, publishing, and notifying/informing the Class" of research results. 3M and other entities jointly filed a motion to dismiss in February 2019. The motion is fully briefed and remains pending.

In March 2019, the New Jersey Department of Environmental Protection (NJDEP) issued a directive, information request and notice to Solvay, DuPont, Chemours, and 3M relating to PFAS. The NJDEP, in its effort to obtain a "full understanding" of Respondents' historical and current "development, manufacture, transport, use, storage, release, discharge, and/or disposal of PFAS in New Jersey," requested information from each respondent and a collective meeting with the NJDEP to discuss costs to "investigate, test, treat, cleanup, and remove" PFAS from New Jersey's environment.

*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. The Company is cooperating with this request.

The Company operates under a 2009 consent order issued under the federal Toxic Substances Control Act (TSCA) 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). The Company continues to cooperate with the EPA and ADEM in their investigations and will work with the regulatory authorities to demonstrate full 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 EPA and ADEM.

*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, 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, except for those matters 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 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 recently 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) or $186 million after tax ($0.32 per diluted share) in the first quarter of 2019. As of June 30, 2019, the Company had recorded liabilities of $251 million for "other environmental liabilities." This accrual represents the Company's best estimate of the probable loss: (i) to implement the Settlement Agreement and Consent Order with the MPCA (including the best estimate of the probable liability under the settlement of the NRD Lawsuit with the State of Minnesota for interim treatment of municipal and private wells), (ii) the remedial action agreement with ADEM, (iii) mitigation plans for the presence of PFAS in the soil and groundwater at two former disposal sites in Washington County, Minnesota (Oakdale and Woodbury), (iv) to cover certain environmental matters and litigation in which 3M is a defendant related to the manufacture and disposal of PFAS at five 3M facilities, including three in the United States and two in Europe. 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 June 30, 2019, the Company had recorded liabilities of $22 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 June 30, 2019, the Company's receivable for insurance recoveries related to the environmental matters and litigation was $33 million. The Company increased its receivable for insurance recoveries by $25 million in the first quarter of 2019. The insurance receivable was not changed in the second quarter of 2019. 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*

As of June 30, 2019, the Company is a named defendant in lawsuits involving approximately 5,170 plaintiffs (compared to approximately 5,015 plaintiffs at December 31, 2018) who allege the Bair Hugger™ patient warming system caused a surgical site infection. Nearly all of the lawsuits are pending in federal court in Minnesota. 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 Bair Hugger™ product line was acquired by 3M as part of the 2010 acquisition of Arizant, Inc., a leading manufacturer of patient warming solutions designed to prevent hypothermia and maintain normal body temperature in surgical settings). 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) granted the plaintiffs' motion to transfer and consolidate 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 2017, the U.S. District Court and the Minnesota state courts denied the plaintiffs' motions to amend their complaints to add claims for punitive damages. At a joint hearing before the U.S. District Court and the Minnesota State court, on the parties' motion to exclude each other's experts, and 3M's motion for summary judgment with respect to general causation, the federal court did not exclude the plaintiffs' experts and denied 3M's motion for summary judgment on general causation. The U.S. District Court is reconsidering that decision. In June 2019, the MDL judge heard oral argument on 3M's motion for reconsideration. A decision is expected in approximately 60 days. In January 2018, the state court, after hearing the same arguments, excluded plaintiffs' experts and granted 3M's motion for summary judgment on general causation, dismissing all 61 cases pending before the state court in Minnesota. Plaintiffs appealed that ruling and the state court's punitive damages ruling. In January 2019, the Minnesota Court of Appeals affirmed the Minnesota state court orders in their entirety. The Minnesota Supreme Court denied plaintiffs' petition for review. Dismissal was entered in April 2019, effectively ending the Minnesota state court cases.

In April 2018, the federal court partially granted 3M's motion for summary judgment in the first bellwether case, leaving for trial a claim for strict liability based upon design defect. The court dismissed the plaintiff's claims for negligence, failure to warn, and common law and statutory fraud. In the trial of the first bellwether case in May 2018, the jury returned a unanimous verdict in 3M's favor finding that the Bair Hugger™ patient warming system was not defective and was not the cause of the plaintiff's injury. The plaintiff has appealed the verdict to the U.S. Court of Appeals for the Eighth Circuit. Of the other 12 bellwether cases designated for trial, the courts or the plaintiffs have so far dismissed 11 cases. The remaining bellwether case had been set for trial in May 2019, but the federal court has postponed that trial pending ruling in defendants' motion to reconsider.

3M is defending one active state court action. The case is pending in Hidalgo County, Texas and combines Bair Hugger product liability claims with medical malpractice claims. Trial is set for May 2020. During the second quarter, 3M also defended three actions filed in Missouri state court. In an effort to avoid removal to federal court and transfer to the MDL, the plaintiffs in these cases named in-state 3M sales representatives as defendants and/or combined Bair Hugger product liability claims with medical malpractice claims against in-state providers. 3M removed each of these cases to federal court and moved to transfer them to the MDL. One case has been transferred and the other two are expected to be transferred during the third quarter of 2019. Plaintiffs opposed transfer to the MDL and are expected to file motions before the MDL judge to remand the cases to Missouri state court.

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 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.

In September 2011, 3M Oral Care launched Lava Ultimate CAD/CAM dental restorative material. The product was originally indicated for inlay, onlay, veneer, and crown applications. In June 2015, 3M Oral Care voluntarily removed crown applications from the product's instructions for use, following reports from dentists of patients' crowns debonding, requiring additional treatment. The product remains on the market for other applications. 3M communicated with the U.S. Food and Drug Administration, as well as regulators outside the United States. 3M also informed customers and distributors of its action, offered to accept return of unused materials and provide refunds. In May 2018, 3M reached a preliminary settlement for an amount that did not have a material impact to the Company of the lawsuit pending in the U.S. District Court for the District of Minnesota that sought certification of a class of dentists in the United States and its territories. The settlement is subject to the court's approval and certification of the settlement class, with a right of class members to opt-out of the settlement and bring individual claims against the Company. The parties' motion for preliminary approval was granted in April 2019. The final approval hearing is set for September 2019.

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 June 30, 2019, the Company is a named defendant in approximately 1,050 lawsuits (including seven putative class actions) in various state and federal courts that purport to represent approximately 2,230 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. The court conducted a case management conference in June 2019 on a discovery plan and scheduling.

For product liability litigation matters described in this section for which a liability has been recorded, the Company believes 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.

*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. On July 23, 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 15. Leases**

The Company adopted ASU No. 2016-02 and related standards (collectively ASC 842, *Leases*), which replaced previous lease accounting guidance, on January 1, 2019 using the modified retrospective method of adoption. 3M elected the transition method expedient which allows entities to initially apply the requirements by recognizing a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. As a result of electing this transition method, prior periods have not been restated. Due to the cumulative net impact of adopting ASC 842, the January 1, 2019 balance of retained earnings was increased by $14 million, primarily relating to previously deferred gains from sale-leaseback transactions. In addition, adoption of the new standard resulted in the recording of right of use assets and associated lease liabilities of $0.8 billion each as of January 1, 2019. The Company's accounting for finance leases (previously called capital leases) remains substantially unchanged. ASC 842 did not have a material impact on 3M's consolidated income statement. 3M elected the package of practical expedients permitted under the transition guidance within ASC 842, which includes not reassessing lease classification of existing leases. The Company did not elect the hindsight practical expedient.

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

Operating lease right-of-use assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. The discount rate used to calculate present value is 3M's incremental borrowing rate or, if available, the rate implicit in the lease. 3M determines the incremental borrowing rate for each lease based primarily on its 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.

The components of lease expense are as follows:

| (Millions) | Three months ended June 30, 2019 | Six months ended June 30, 2019 |
|---|---|---|
| Operating lease cost | $ 79 | $ 151 |
| Finance lease cost: | | |
| Amortization of assets | 6 | 10 |
| Interest on lease liabilities | 1 | 1 |
| Variable lease cost | 22 | 42 |
| Total net lease cost | $ 108 | $ 204 |

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: June 30, 2019 |
|---|---|---|---|
| Operating leases: | | | |
| Operating lease right of use assets | Operating lease right of use assets | $ | 879 |
| | | | |
| Current operating lease liabilities | Operating lease liabilities - current | $ | 247 |
| Noncurrent operating lease liabilities | Operating lease liabilities | | 619 |
| Total operating lease liabilities | | $ | 866 |
| | | | |
| Finance leases: | | | |
| Property and equipment, at cost | Property, plant and equipment | $ | 235 |
| Accumulated amortization | Property, plant and equipment (accumulated depreciation) | | (95) |
| Property and equipment, net | | $ | 140 |
| | | | |
| Current obligations of finance leases | Other current liabilities | $ | 16 |
| Finance leases, net of current obligations | Other liabilities | | 121 |
| Total finance lease liabilities | | $ | 137 |
| | | | |
| Weighted average remaining lease term (in years): | | | |
| Operating leases | | | 5.9 |
| Finance leases | | | 9.3 |
| Weighted average discount rate: | | | |
| Operating leases | | | 3.2 % |
| Finance leases | | | 3.8 % |

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

| (Millions) | | Six months ended June 30, 2019 |
|---|---|---|
| Cash paid for amounts included in the measurement of lease liabilities: | | |
| Operating cash flows from operating leases | $ | 155 |
| Operating cash flows from finance leases | | 1 |
| Financing cash flows from finance leases | | 7 |
| | | |
| Right of use assets obtained in exchange for lease liabilities: | | |
| Operating leases | | 229 |
| Finance leases | | 54 |

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. Refer to Note 9 in 3M's 2018 Annual Report on Form 10-K for additional non-cash details associated with prior activity.

Maturities of lease liabilities were as follows:

| | June 30, 2019 | |
|---|---|---|
| (Millions) | Finance Leases | Operating Leases |
| Remainder of 2019 | $ 13 | $ 147 |
| 2020 | 20 | 232 |
| 2021 | 16 | 158 |
| 2022 | 15 | 120 |
| 2023 | 15 | 84 |
| After 2023 | 65 | 221 |
| Total | $ 144 | $ 962 |
| Less: Amounts representing interest | (7) | (96) |
| Present value of future minimum lease payments | 137 | 866 |
| Less: Current obligations | 16 | 247 |
| Long-term obligations | $ 121 | $ 619 |

As of June 30, 2019, the Company has additional operating lease commitments that have not yet commenced of approximately $16 million. These commitments pertain to 3M's right of use buildings.

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

*Capital and Operating Leases:*
Rental expense under operating leases was $393 million in 2018, $343 million in 2017 and $318 million in 2016. It is 3M's practice to secure renewal rights for leases, thereby giving 3M the right, but not the obligation, to maintain a presence in a leased facility. 3M has the following primary capital leases:

- In 2003, 3M recorded a capital lease asset and obligation of approximately 34 million British Pound (GBP), or approximately $43 million at December 31, 2018, exchange rates, for a building in the United Kingdom (with a lease term of 22 years).
- 3M sold and leased-back certain recently constructed machinery and equipment in return for municipal securities, which in aggregate, were recorded as a capital lease asset and obligation of approximately $13 million in 2018, $13 million in 2017, and $12 million in 2016, with an average remaining lease term remaining of 15 years at December 31, 2018.

Minimum lease payments under capital and operating leases with non-cancelable terms in excess of one year as of December 31, 2018, were as follows:

| (Millions) | Capital Leases | Operating Leases |
|---|---|---|
| 2019 | $ 18 | $ 283 |
| 2020 | 16 | 208 |
| 2021 | 14 | 153 |
| 2022 | 12 | 122 |
| 2023 | 12 | 92 |
| After 2023 | 32 | 253 |
| Total | $ 104 | $ 1,111 |
| Less: Amounts representing interest | 12 | |
| Present value of future minimum lease payments | 92 | |
| Less: Current obligations under capital leases | 17 | |
| Long-term obligations under capital leases | $ 75 | |

**NOTE 16. 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, progressive stock options, stock appreciation rights, restricted stock, restricted stock units, other stock awards, and performance units and performance shares. As of June 30, 2019, the remaining shares available for grant under the LTIP Program are 21.9 million.

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 37 percent of the annual grant stock-based compensation expense; therefore, higher stock-based compensation expense is recognized in the first quarter.

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

Amounts recognized in the financial statements with respect to stock-based compensation programs, which include stock options, restricted stock, restricted stock units, performance shares and the General Employees' Stock Purchase Plan (GESPP), are provided in the following table. Capitalized stock-based compensation amounts were not material for the three and six months ended June 30, 2019 and 2018.

**Stock-Based Compensation Expense**

| (Millions) | Three months ended June 30, 2019 | Three months ended June 30, 2018 | Six months ended June 30, 2019 | Six months ended June 30, 2018 |
|---|---|---|---|---|
| Cost of sales | **$ 9** | $ 9 | **$ 31** | $ 32 |
| Selling, general and administrative expenses | **36** | 33 | **118** | 142 |
| Research, development and related expenses | **7** | 7 | **33** | 34 |
| Stock-based compensation expenses | **$ 52** | $ 49 | **$ 182** | $ 208 |
| Income tax benefits | **$ (28)** | $ (19) | **$ (108)** | $ (117) |
| Stock-based compensation expenses (benefits), net of tax | **$ 24** | $ 30 | **$ 74** | $ 91 |

**Stock Option Program**

The following table summarizes stock option activity during the six months ended June 30, 2019:

| (Options in thousands) | Number of Options | Weighted Average Exercise Price | Weighted Average Remaining Contractual Life (months) | Aggregate Intrinsic Value (millions) |
|---|---|---|---|---|
| Under option — | | | | |
| January 1 | **34,569** | **$ 138.98** | | |
| Granted: | | | | |
| Annual | **3,457** | **200.80** | | |
| Exercised | **(3,039)** | **89.26** | | |
| Forfeited | **(43)** | **201.03** | | |
| June 30 | **34,944** | **$ 149.34** | **69** | **$ 1,135** |
| Options exercisable | | | | |
| June 30 | **27,643** | **$ 134.86** | **59** | **$ 1,135** |

Stock options vest over a period from one year to three years with the expiration date at 10 years from date of grant. As of June 30, 2019, there was $97 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 23 months. The total intrinsic values of stock options exercised were $341 million and $345 million during the six months ended June 30, 2019 and 2018, respectively. Cash received from options exercised was $270 million and $212 million for the six months ended June 30, 2019 and 2018, respectively. The Company's actual tax benefits realized for the tax deductions related to the exercise of employee stock options were $72 million and $73 million for the six months ended June 30, 2019 and 2018, respectively.

For the primary 2019 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 2019 |
|---|---|
| Exercise price | $ 201.12 |
| Risk-free interest rate | 2.6 % |
| Dividend yield | 2.5 % |
| Expected volatility | 20.4 % |
| Expected life (months) | 79 |
| Black-Scholes fair value | $ 34.19 |

Expected volatility is a statistical measure of the amount by which a stock price is expected to fluctuate during a period. For the 2019 annual grant date, the Company estimated the expected volatility based upon the following three volatilities of 3M stock: the median of the term of the expected life rolling volatility; the median of the most recent term of the expected life volatility; and the implied volatility on the grant date. The expected term assumption is based on the weighted average of historical grants.

**Restricted Stock and Restricted Stock Units**

The following table summarizes restricted stock and restricted stock unit activity during the six months ended June 30, 2019:

| (Shares in thousands) | Number of Shares | Weighted Average Grant Date Fair Value |
|---|---|---|
| Nonvested balance — | | |
| As of January 1 | 1,789 | $ 180.02 |
| Granted | | |
| Annual | 564 | 200.41 |
| Other | 8 | 186.08 |
| Vested | (679) | 148.00 |
| Forfeited | (35) | 184.52 |
| As of June 30 | 1,647 | $ 200.13 |

As of June 30, 2019, there was $109 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 25 months. The total fair value of restricted stock and restricted stock units that vested during the six months ended June 30, 2019 and 2018 was $135 million and $154 million, respectively. The Company's actual tax benefits realized for the tax deductions related to the vesting of restricted stock and restricted stock units was $26 million and $29 million for the six months ended June 30, 2019 and 2018, 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 2019 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 during the six months ended June 30, 2019:

| (Shares in thousands) | Number of Shares | Weighted Average Grant Date Fair Value |
|---|---|---|
| Undistributed balance — | | |
| As of January 1 | **562** | **$ 188.96** |
| Granted | **162** | **207.49** |
| Distributed | **(210)** | **162.16** |
| Performance change | **(83)** | **207.20** |
| Forfeited | **(15)** | **209.44** |
| As of June 30 | **416** | **$ 205.26** |

As of June 30, 2019, there was $27 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 $45 million and $48 million for the six months ended June 30, 2019 and 2018, respectively. The Company's actual tax benefits realized for the tax deductions related to the distribution of performance shares were $9 million and $11 million for the six months ended June 30, 2019 and 2018, respectively.

**NOTE 17. Business Segments**

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 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. The difference between operating income and pre-tax income relates to other expense (income), which is not allocated to business segments. Further information about which is included in Note 6.

Effective in the second quarter of 2019, to enable the Company to better serve global customers and markets, the Company made the following changes to its business segments:

***Realignment of the Company's business segments from five to four***

The Company realigned its former five business segments into four: Safety and Industrial; Transportation and Electronics; Health Care; and Consumer. Existing divisions were largely realigned to this new structure. In addition, certain retail auto care product lines formerly in the Automotive Aftermarket Division (now within the Safety and Industrial business segment) were moved to the Construction and Home Improvement Division (within the Consumer business segment). Also, product lines relating to the refrigeration filtration business, formerly included in the Separation and Purification Sciences Division (now within the Health Care business segment) were moved to Other Safety and Industrial (within the Safety and Industrial business segment). 3M business segment reporting measures include dual credit to business segments for certain sales and operating income. Dual credit, which is based on which business segment provides customer account activity with respect to a particular product sold in a specific country, was reduced as a result of the closer alignment between customer account activity and their respective markets. The four business segments are as follows:

***Safety and Industrial***: This segment includes businesses that serve the global industrial, electrical and safety markets. This business segment consists of personal safety, adhesives and tapes, abrasives, closure and masking systems, electrical markets, automotive aftermarket, and roofing granules. This segment also includes the Communication Markets Division (which was substantially sold in 2018) and the refrigeration filtration product lines (within Other Safety and Industrial).

***Transportation and Electronics:*** This segment includes businesses that serve global transportation and electronic original equipment manufacturer (OEM) customers. This business segment consists of electronics (display materials and systems, electronic materials solutions), automotive and aerospace, commercial solutions, advanced materials, and transportation safety.

***Health Care***: This business segment serves the global healthcare industry and includes medical solutions, oral care, separation and purification sciences, health information systems, drug delivery systems, and food safety.

***Consumer***: This business serves global consumers and consists of home improvement, stationery and office supplies, home care, and consumer health care. This segment also includes, within the Construction and Home Improvement Division, certain retail auto care product lines.

In addition, as part of 3M's continuing effort to improve the alignment of its businesses around markets and customers, the Company made the following changes, effective in the first quarter of 2019, and other revisions impacting business segment reporting:

***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.

***Creation of Closure and Masking Systems Division and Medical Solutions Division***

- 3M created the Closure and Masking Systems Division, which combines the masking tape, packaging tape and personal care portfolios formerly within Industrial Adhesives and Tapes Division in the former Industrial business segment into a separate division also within the former Industrial business segment. 3M created the Medical Solutions Division in the Health Care business segment, which combines the former Critical and Chronic Care Division and Infection Prevention Division (which were also both within the Health Care business segment).

***Additional actions impacting business segment reporting***

- The business associated with certain safety products sold through retail channels in the Asia Pacific region was realigned from the Personal Safety Division within the former Safety and Graphics business segment to the Construction and Home Improvement Division within the Consumer business segment. In addition, certain previously non-allocated costs related to manufacturing and technology of centrally managed material resource centers of expertise within Corporate and Unallocated are now reflected as being allocated to the business segments.

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

**Business Segment Information**

| | Three months ended June 30, | | Six months ended June 30, | |
|---|---|---|---|---|
| **(Millions)** | **2019** | **2018** | **2019** | **2018** |
| **Net Sales** | | | | |
| Safety and Industrial | **$ 2,961** | $ 3,253 | **$ 5,947** | $ 6,521 |
| Transportation and Electronics | **2,452** | 2,527 | **4,809** | 5,046 |
| Health Care | **1,831** | 1,730 | **3,569** | 3,475 |
| Consumer | **1,303** | 1,309 | **2,497** | 2,517 |
| Corporate and Unallocated | **48** | 12 | **70** | 12 |
| Elimination of Dual Credit | **(424)** | (441) | **(858)** | (903) |
| Total Company | **$ 8,171** | $ 8,390 | **$ 16,034** | $ 16,668 |
| **Operating Income** | | | | |
| Safety and Industrial | **$ 653** | $ 1,285 | **$ 1,297** | $ 2,056 |
| Transportation and Electronics | **592** | 669 | **1,115** | 1,325 |
| Health Care | **483** | 470 | **947** | 968 |
| Consumer | **268** | 279 | **501** | 511 |
| Corporate and Unallocated | **(193)** | (200) | **(818)** | (1,236) |
| Elimination of Dual Credit | **(101)** | (102) | **(204)** | (216) |
| Total Company | **$ 1,702** | $ 2,401 | **$ 2,838** | $ 3,408 |

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. 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 divestiture in 2018. Because this category includes a variety of miscellaneous items, it is subject to fluctuation on a quarterly and annual basis.

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, certain respirators are primarily sold by the Personal Safety Division within the Safety and Industrial business segment; however, a sales district within the Consumer business segment provides the contact 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.

**Item 2. 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 the following sections:

- Overview
- Results of Operations
- Performance by Business Segment
- Financial Condition and Liquidity
- Cautionary Note Concerning Factors That May Affect Future Results

Forward-looking statements in Part I, Item 2 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 Part I, Item 2 and the risk factors provided in Part II, Item 1A for discussion of these risks and uncertainties).

**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 17, effective in the second quarter of 2019, the Company realigned its former five business segments into four to enable the Company to better serve global customers and markets. In addition, certain product lines were moved to better align with their respective end customers. Earlier in the first quarter of 2019, the Company changed its business segment reporting in its continuing effort to improve the alignment of businesses around markets and customers. These changes included the realignment of certain customer account activity in various countries (affecting dual credit reporting), creation of the Closure and Masking Systems and Medical Solutions divisions, and certain other actions that impacted segment reporting. 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.

***Earnings per share attributable to 3M common shareholders – diluted:***

The following table provides the increase (decrease) in diluted earnings per share for the three and six months ended June 30, 2019 compared to 2018.

| (Earnings per diluted share) | Three months ended June 30, 2019 | Six months ended June 30, 2019 |
|---|---|---|
| Same period last year | $ 3.07 | $ 4.04 |
| Significant litigation-related charges | — | 0.36 |
| TCJA measurement period adjustment | — | 1.16 |
| Same period last year, excluding significant litigation-related charges and TCJA measurement period adjustment | $ 3.07 | $ 5.56 |
| Increase/(decrease) in earnings per share - diluted, due to: | | |
| 2018 divestiture of Communication Markets Division, net of related restructuring actions | (0.48) | (0.48) |
| Organic growth/productivity and other | (0.19) | (0.35) |
| Second quarter 2019 restructuring actions | (0.21) | (0.21) |
| Acquisitions/divestitures | 0.01 | (0.07) |
| Foreign exchange impacts | — | (0.05) |
| Income tax rate | (0.07) | (0.12) |
| Shares of common stock outstanding | 0.07 | 0.16 |
| Current period, excluding significant litigation-related charges and Venezuelan deconsolidation | $ 2.20 | $ 4.44 |
| Significant litigation-related charges | — | 0.72 |
| Loss on deconsolidation of Venezuelan subsidiary | 0.28 | 0.28 |
| Current period | $ 1.92 | $ 3.44 |

For the second quarter of 2019, net income attributable to 3M was $1.127 billion, or $1.92 per diluted share compared to $1.857 billion or $3.07 per diluted share in the same period last year, a decrease of 37.5 percent on a per diluted share basis. For the first six months of 2019, net income attributable to 3M was $2.018 billion, or $3.44 per diluted share compared to $2.459 billion or $4.04 per diluted share in the same period last year, a decrease of 14.9 percent on a per diluted share basis.

The Company refers to various "adjusted" amounts or measures on an "adjusted basis". These exclude the 2019 charge related to the deconsolidation of the Company's Venezuelan subsidiary, the 2018 and 2019 significant litigation-related charges, and the 2018 measurement period adjustments to the provisional amounts recorded in December 2017 from the enactment of the Tax Cuts and Jobs Act (TCJA). These non-GAAP measures are further described and reconciled to the most directly comparable GAAP financial measures in the *Certain amounts adjusted for impacts of deconsolidation of the Company's Venezuelan subsidiary, significant litigation-related charges and measurement period adjustments to the impact of the enactment of the Tax Cuts and Jobs Act (TCJA) - (non-GAAP measures)* section below.

On an adjusted basis, net income attributable to 3M was $1.289 billion, or $2.20 per diluted share in the second quarter of 2019, a decrease of 28.3 percent on a per diluted share basis compared to second quarter 2018. Additionally, adjusted net income attributable to 3M was $2.604 billion, or $4.44 per diluted share for the six months ended 2019, compared to $3.386 billion, or $5.56 per diluted share for the first six months of 2018, a decrease of 20.1 percent on a per diluted share basis.

In the first six months of 2019, 3M experienced slowing in several key end markets (China, automotive and electronics) particularly in industrial-related businesses within Asia Pacific and the United States, which negatively impacted sales growth. The Company also experienced lower production volumes as all businesses aggressively reduced inventories in the second quarter of 2019.

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

*2018 divestiture of Communication Markets Division, net of related restructuring actions and exit activities:*

- In June 2018, 3M completed the sale of substantially all of its Communication Markets Division and reflected a pre-tax gain of $494 million as a result of this divestiture, which was reported within the Company's Safety and Industrial business. During the second 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 900 positions worldwide and resulted in a second quarter 2018 pre-tax charge of $105 million. The aggregate net impact of the gain on sale and related restructuring actions increased earnings per share by 48 cents per diluted share for both the second quarter and first six months of 2018 and reflects the specific income tax rate associated with these items.

*Organic growth/productivity and other:*

- Negative organic local-currency sales combined with lower production volumes reduced earnings per diluted share. Higher raw material costs also contributed negatively to earnings per diluted share. These decreases were partially offset by selling price increases in addition to business transformation, which is having a positive impact on 3M's productivity efforts.
- On a combined basis, lower defined benefit pension and postretirement service cost expense decreased expense year-on-year.
- Higher income related to non-service cost components of pension and postretirement expense, decreased expense year-on-year.
- Interest expense (net of interest income) increased $21 million and $44 million for the second quarter and first six months of 2019, respectively, as a result of higher U.S. average debt balances and higher borrowing costs.

*Second quarter 2019 restructuring actions:*

- During the second quarter of 2019, in light of a slower than expected 2019, management approved and committed to undertake certain restructuring actions. These actions span all business groups, functions and geographies, with emphasis on corporate structure and underperforming areas of the portfolio. These actions impacted approximately 2,000 positions worldwide, including attrition. The Company recorded a second quarter 2019 pre-tax charge of $148 million, or 21 cents per diluted share for both the second quarter and first six months of 2019. This amount reflects the specific income tax rate associated with these items. See Note 5 for additional details.

*Acquisitions/divestitures:*

- Acquisition impacts, which are measured for the first twelve months post-transaction, relate to the acquisition of M*Modal (first quarter 2019), decreased earnings per diluted share by 3 cents and 6 cents year-on-year for the second quarter and first six months of 2019, respectively. This net impact related to M*Modal included income from operations, more than offset by transaction and integration costs. Interest expense related to financing costs of M*Modal is also included.
- Divestiture impacts, which include the incremental year-on-year pre-tax gain on divestitures and the lost operating income from divested businesses (other than lost income related to the divestiture of the Communication Markets Division), decreased earnings per diluted share by 2 cents and 4 cents year-on-year for the second quarter and first six months of 2019, respectively.
- Remaining stranded costs and lost operating income related to the 2018 divestiture of the Communication Markets Division decreased earnings per diluted share by 1 cent and 4 cents year-on-year for the second quarter and first six months of 2019, respectively.
- 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, net of ongoing deal costs, earnings per diluted share increased 7 cents year-on-year for the second quarter and first six months of 2019.

*Foreign exchange impacts:*

- Foreign currency impacts (net of hedging) decreased pre-tax earnings year-on-year by approximately $2 million and $36 million, or the equivalent of an immaterial amount and 5 cents per diluted share for the second quarter and first six months of 2019, respectively, excluding the impact of foreign currency changes on tax rates.

*Income tax rate:*

- The effective tax rate for the second quarter of 2019 was 21.8 percent, an increase of 1.0 percentage points versus 2018. The effective tax rate for the first six months of 2019 was 20.1 percent, a decrease of 5.5 percentage points versus 2018. Excluding the significant litigation-related charges in the first quarter of 2018 and 2019, measurement period adjustment

related to TCJA in the first quarter of 2018, and the deconsolidation of the Venezuelan subsidiary (as discussed below), the effective tax rate increased 0.1 percentage points year-on-year for the first six months of 2019.
- Factors that changed the effective tax rate for the second quarter and first six months of 2019 primarily related to significant events such as the tax benefit related to the "held-for-sale" status of legal entities associated with the pending divestiture of the gas and flame detection business, significant litigation events, the deconsolidation of the Venezuelan subsidiary, adjustments to uncertain tax positions and the effects of the international tax provisions from U.S. tax reform. Refer to Note 8 for additional details.

*Shares of common stock outstanding:*
- Lower shares outstanding increased earnings per share year-on-year by 7 cents and 16 cents per diluted share for the second quarter and first six months of 2019. Weighted-average diluted shares outstanding in the second quarter and first six months of 2019 declined 3.0 percent and 3.5 percent year-on-year, respectively, which benefited earnings per share. The decrease in the outstanding weighted-average diluted shares relates to the Company's purchase of $400 million and $1.1 billion of its own stock in the second quarter and first six months of 2019, respectively.

***Certain amounts adjusted for impacts of deconsolidation of the Company's Venezuelan subsidiary, significant litigation-related charges and measurement period adjustments to the impact of the enactment of the Tax Cuts and Jobs Act (TCJA) - (non-GAAP measures):***

In the first quarter of 2019, the Company recorded significant litigation-related charges of $548 million ($424 million after tax) related to historical PFAS (certain perfluorinated compounds) manufacturing operations and coal mine dust respirator mask lawsuits as further discussed in Note 14. These were reflected in cost of sales ($223 million) and selling, general and administrative expense ($325 million). In the first quarter of 2018, the Company recorded significant litigation-related charges of $897 million ($710 million after tax) from the previously disclosed agreement reached with the State of Minnesota that resolved the Natural Resource Damages (NRD) lawsuit, essentially all of which were reflected in selling, general and administrative expense.

During the first quarter of 2018, 3M recorded a tax expense of $217 million related to a measurement period adjustment to the provisional amounts recorded in December 2017 from the enactment of the TCJA as further discussed in Note 8.

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.

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 deconsolidation of the Company's Venezuelan subsidiary, significant litigation-related charges and measurement period adjustment to the impact of enactment of the TCJA. These items represent significant charges that impacted the Company's financial results. Operating income, 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 an adjusted measure. 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.

| (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 |
|---|---|---|---|---|---|---|---|---|
| Three months ended June 30, 2018 GAAP | $ 2,401 | 28.6 % | $ 2,350 | $ 488 | 20.8 % | $ 1,857 | $ 3.07 | |
| Three months ended June 30, 2018 adjusted amounts (non-GAAP measures) | $ 2,401 | 28.6 % | $ 2,350 | $ 488 | 20.8 % | $ 1,857 | $ 3.07 | |
| | | | | | | | | |
| Three months ended June 30, 2019 GAAP | $ 1,702 | 20.8 % | $ 1,446 | $ 315 | 21.8 % | $ 1,127 | $ 1.92 | (37.5)% |
| Adjustment for loss on deconsolidation of Venezuelan subsidiary | | | 162 | — | | 162 | 0.28 | |
| Three months ended June 30, 2019 adjusted amounts (non-GAAP measures) | $ 1,702 | 20.8 % | $ 1,608 | $ 315 | 19.6 % | $ 1,289 | $ 2.20 | (28.3)% |

| (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 |
|---|---|---|---|---|---|---|---|---|
| Six months ended June 30, 2018 GAAP | $ 3,408 | 20.4 % | $ 3,315 | $ 847 | 25.6 % | $ 2,459 | $ 4.04 | |
| Adjustment for significant litigation-related charges | 897 | | 897 | 187 | | 710 | 1.16 | |
| Adjustment for measurement period accounting of TCJA | | | | (217) | | 217 | 0.36 | |
| Six months ended June 30, 2018 adjusted amounts (non-GAAP measures) | $ 4,305 | 25.8 % | $ 4,212 | $ 817 | 19.4 % | $ 3,386 | $ 5.56 | |
| | | | | | | | | |
| Six months ended June 30, 2019 GAAP | $ 2,838 | 17.7 % | $ 2,534 | $ 510 | 20.1 % | $ 2,018 | $ 3.44 | (14.9)% |
| Adjustment for significant litigation-related charges | 548 | | 548 | 124 | | 424 | 0.72 | |
| Adjustment for loss on deconsolidation of Venezuelan subsidiary | | | 162 | — | | 162 | 0.28 | |
| Six months ended June 30, 2019 adjusted amounts (non-GAAP measures) | $ 3,386 | 21.1 % | $ 3,244 | $ 634 | 19.5 % | $ 2,604 | $ 4.44 | (20.1)% |

***Sales and operating income by business segment:***

In the second quarter and first six months of 2019, 3M experienced slowing in several key end markets (China, automotive and electronics) particularly in industrial-related businesses within Asia Pacific and the United States, which negatively impacted sales growth. The Company also experienced lower production volumes as all businesses aggressively reduced inventories in the second quarter of 2019.

The following tables contain sales and operating income results by business segment for the three and six months ended June 30, 2019 and 2018. Refer to the section entitled "Performance by Business Segment" later in MD&A for additional discussion concerning 2019 versus 2018 results, including Corporate and Unallocated. Refer to Note 17 for additional information on business segments, including Elimination of Dual Credit.

| (Dollars in millions) | Three months ended June 30, 2019 Net Sales | 2019 Oper. Income | 2018 Net Sales | 2018 Oper. Income | % change Net Sales | % change Oper. Income |
|---|---|---|---|---|---|---|
| **Business Segments** | | | | | | |
| Safety and Industrial | **$ 2,961** | **$ 653** | $ 3,253 | $ 1,285 | **(9.0)%** | **(49.2)%** |
| Transportation and Electronics | **2,452** | **592** | 2,527 | 669 | **(2.9)** | **(11.6)** |
| Health Care | **1,831** | **483** | 1,730 | 470 | **5.8** | **2.9** |
| Consumer | **1,303** | **268** | 1,309 | 279 | **(0.5)** | **(3.6)** |
| Corporate and Unallocated | **48** | **(193)** | 12 | (200) | **—** | **—** |
| Elimination of Dual Credit | **(424)** | **(101)** | (441) | (102) | **—** | **—** |
| Total Company | **$ 8,171** | **$ 1,702** | $ 8,390 | $ 2,401 | **(2.6)%** | **(29.1)%** |

| (Dollars in millions) | Six months ended June 30, 2019 Net Sales | 2019 Oper. Income | 2018 Net Sales | 2018 Oper. Income | % change Net Sales | % change Oper. Income |
|---|---|---|---|---|---|---|
| **Business Segments** | | | | | | |
| Safety and Industrial | **$ 5,947** | **$ 1,297** | $ 6,521 | $ 2,056 | **(8.8)%** | **(36.9)%** |
| Transportation and Electronics | **4,809** | **1,115** | 5,046 | 1,325 | **(4.7)%** | **(15.9)%** |
| Health Care | **3,569** | **947** | 3,475 | 968 | **2.7 %** | **(2.2)%** |
| Consumer | **2,497** | **501** | 2,517 | 511 | **(0.8)%** | **(1.8)%** |
| Corporate and Unallocated | **70** | **(818)** | 12 | (1,236) | **—** | **—** |
| Elimination of Dual Credit | **(858)** | **(204)** | (903) | (216) | **—** | **—** |
| Total Company | **$ 16,034** | **$ 2,838** | $ 16,668 | $ 3,408 | **(3.8)%** | **(16.7)%** |

| Worldwide Sales Change By Business Segment | Three months ended June 30, 2019 Organic local-currency sales | Acquisitions | Divestitures | Translation | Total sales change |
|---|---|---|---|---|---|
| Safety and Industrial | (5.0)% | — % | (1.9)% | (2.1)% | (9.0)% |
| Transportation and Electronics | (1.2) | — | — | (1.7) | (2.9) |
| Health Care | 3.5 | 4.4 | — | (2.1) | 5.8 |
| Consumer | 0.7 | — | — | (1.2) | (0.5) |
| Total Company | (0.9)% | 0.9 % | (0.8)% | (1.8)% | (2.6)% |

| Worldwide Sales Change By Business Segment | Six months ended June 30, 2019 Organic local-currency sales | Acquisitions | Divestitures | Translation | Total sales change |
|---|---|---|---|---|---|
| Safety and Industrial | (3.6)% | — % | (2.3)% | (2.9) % | (8.8)% |
| Transportation and Electronics | (2.3) | — | — | (2.4) | (4.7) |
| Health Care | 2.1 | 3.6 | (0.1) | (2.9) | 2.7 |
| Consumer | 1.1 | — | — | (1.9) | (0.8) |
| Total Company | (1.0)% | 0.7 % | (0.9)% | (2.6)% | (3.8)% |

***Sales by geographic area:***

Percent change information compares the second quarter and first six months of 2019 with the same period last year, unless otherwise indicated. From a geographic perspective, any references to EMEA refer to Europe, Middle East and Africa on a combined basis.

| | Three months ended June 30, 2019 | | | | | |
|---|---|---|---|---|---|---|
| | United States | Asia Pacific | Europe, Middle East & Africa | Latin America/ Canada | Other Unallocated | Worldwide |
| Net sales (millions) | $ 3,404 | $ 2,415 | $ 1,593 | $ 759 | $ — | $ 8,171 |
| % of worldwide sales | 41.7 % | 29.6 % | 19.5 % | 9.2 % | — | 100.0 % |
| Components of net sales change: | | | | | | |
| Volume — organic | (0.1)% | (1.1)% | (4.8)% | (0.7)% | — | (1.4)% |
| Price | 0.2 | 0.2 | 1.2 | 1.4 | — | 0.5 |
| Organic local-currency sales | 0.1 | (0.9) | (3.6) | 0.7 | — | (0.9) |
| Acquisitions | 2.2 | — | — | 0.1 | — | 0.9 |
| Divestitures | (0.6) | (0.2) | (1.8) | (0.8) | — | (0.8) |
| Translation | — | (2.4) | (4.0) | (2.9) | — | (1.8) |
| Total sales change | 1.7 % | (3.5)% | (9.4)% | (2.9)% | — | (2.6)% |
| | | | | | | |
| Total sales change: | | | | | | |
| Safety and Industrial | (8.2)% | (7.8)% | (13.7)% | (4.0)% | — | (9.0)% |
| Transportation and Electronics | (0.1)% | (2.6)% | (8.4)% | (2.4)% | — | (2.9)% |
| Health Care | 14.5 % | 2.8 % | (4.0)% | (1.6)% | — | 5.8 % |
| Consumer | 2.0 % | (3.7)% | (8.0)% | (0.5)% | — | (0.5)% |
| | | | | | | |
| Organic local-currency sales change: | | | | | | |
| Safety and Industrial | (6.7)% | (3.9)% | (6.0)% | 0.6 % | — | (5.0)% |
| Transportation and Electronics | (0.1)% | (0.8)% | (4.6)% | (0.3)% | — | (1.2)% |
| Health Care | 4.7 % | 6.3 % | (0.1)% | 1.4 % | — | 3.5 % |
| Consumer | 2.0 % | (1.1)% | (3.6)% | 2.1 % | — | 0.7 % |

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

- In the Asia Pacific geographic area, China/Hong Kong total sales decreased 5 percent and organic local-currency sales decreased 1 percent. In Japan, both total sales and organic local-currency sales were flat year-on-year.
- In the Latin America/Canada geographic area, both total sales and organic local-currency sales increased 1 percent in Mexico. In Canada, total sales growth was flat, as organic local-currency sales growth of 3 percent was partially offset by foreign currency translation impacts. In Brazil, total sales decreased 3 percent, as organic local-currency sales growth of 3 percent was more than offset by foreign currency translation impacts.

| | Six months ended June 30, 2019 | | | | | |
|---|---|---|---|---|---|---|
| | United States | Asia Pacific | Europe, Middle East & Africa | Latin America/ Canada | Other Unallocated | Worldwide |
| Net sales (millions) | $ 6,450 | $ 4,893 | $ 3,217 | $ 1,476 | $ (2) | $ 16,034 |
| % of worldwide sales | 40.2 % | 30.5 % | 20.1 % | 9.2 % | — | 100.0 % |
| Components of net sales change: | | | | | | |
| Volume — organic | (0.7)% | (2.6)% | (2.8)% | (0.5)% | — | (1.7)% |
| Price | 0.5 | 0.4 | 1.3 | 1.2 | — | 0.7 |
| Organic local-currency sales | (0.2) | (2.2) | (1.5) | 0.7 | — | (1.0) |
| Acquisitions | 1.9 | — | 0.1 | 0.1 | — | 0.7 |
| Divestitures | (0.8) | (0.3) | (2.1) | (1.0) | — | (0.9) |
| Translation | — | (3.0) | (5.9) | (4.5) | — | (2.6) |
| Total sales change | 0.9 % | (5.5)% | (9.4)% | (4.7)% | — | (3.8)% |
| | | | | | | |
| Total sales change: | | | | | | |
| Safety and Industrial | (6.9)% | (8.2)% | (13.6)% | (6.2)% | — | (8.8)% |
| Transportation and Electronics | (0.7)% | (5.9)% | (7.8)% | (1.1)% | — | (4.7)% |
| Health Care | 9.4 % | 0.5 % | (4.3)% | (4.5)% | — | 2.7 % |
| Consumer | 3.0 % | (5.4)% | (8.1)% | (4.8)% | — | (0.8)% |
| | | | | | | |
| Organic local-currency sales change: | | | | | | |
| Safety and Industrial | (4.9)% | (3.5)% | (3.4)% | 0.4 % | — | (3.6)% |
| Transportation and Electronics | (0.7)% | (3.7)% | (2.2)% | 2.4 % | — | (2.3)% |
| Health Care | 1.5 % | 4.8 % | 1.5 % | 0.2 % | — | 2.1 % |
| Consumer | 3.0 % | (1.9)% | (1.8)% | 0.1 % | — | 1.1 % |

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

- In the Asia Pacific geographic area, China/Hong Kong total sales decreased 7 percent and organic local-currency sales decreased 3 percent. In Japan, total sales decreased 5 percent and organic local-currency sales decreased 4 percent.
- In the Latin America/Canada geographic area, total sales decreased 1 percent in Mexico, while organic local-currency sales increased 1 percent. In Canada, total sales decreased 2 percent, as organic local-currency sales growth of 2 percent was more than offset by foreign currency translation impacts. In Brazil, total sales decreased 8 percent, as organic local-currency sales growth of 3 percent was more than offset by foreign currency translation impacts.

***Managing currency risks:***

The stronger U.S. dollar had a negative impact on sales and earnings in the second quarter and first six months of 2019 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 $2.710 billion of operating cash flows in the first six months of 2019, an increase of $668 million when compared to the first six months of 2018, with this increase primarily due to the lower year-on-year significant litigation-related charges and the timing of associated payments that impacted both the first quarter of 2019 and first quarter of 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 the first six months of 2019, the Company purchased $1.1 billion of its own stock, compared to $2.5 billion of stock purchases in the first six months of 2018. As of June 30, 2019, approximately $8.4 billion remained available under the authorization. The Company continues to expect to purchase $1.0 billion to $1.5 billion of its own stock in 2019. In February 2019, 3M's Board of Directors declared a first-quarter 2019 dividend of $1.44 per share, an increase of 6 percent. This marked the 61st consecutive year of dividend increases for 3M. In May 2019, 3M's Board of Directors declared a second-quarter dividend of $1.44 per share.

3M currently has an AA- credit rating with a negative outlook from Standard & Poor's and has an A1 credit rating with a stable outlook from Moody's Investors Service. The Company generates significant ongoing cash flow and has proven access to capital markets funding throughout business cycles.

3M expects to contribute approximately $200 million of cash to its global defined benefit pension and postretirement plans in 2019. The Company does not have a required minimum cash pension contribution obligation for its U.S. plans in 2019.

**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:***

| | Three months ended June 30, | | | Six months ended June 30, | | |
|---|---|---|---|---|---|---|
| **(Percent of net sales)** | **2019** | **2018** | **Change** | **2019** | **2018** | **Change** |
| Cost of sales | **52.8 %** | 50.3 % | **2.5 %** | **53.8 %** | 50.9 % | **2.9 %** |
| Selling, general and administrative expenses | **20.6** | 21.5 | **(0.9)** | **22.7** | 26.2 | **(3.5)** |
| Research, development and related expenses | **5.8** | 5.6 | **0.2** | **5.9** | 5.7 | **0.2** |
| Gain on sale of businesses | — | (6.0) | **6.0** | **(0.1)** | (3.2) | **3.1** |
| Operating income margin | **20.8 %** | 28.6 % | **(7.8)%** | **17.7 %** | 20.4 % | **(2.7)%** |

3M expects global defined benefit pension and postretirement service cost expense in 2019 to decrease by approximately $60 million pre-tax when compared to 2018, which impacts cost of sales; selling, general and administrative expenses (SG&A); and research, development and related expenses (R&D). The year-on-year decrease in defined benefit pension and postretirement service cost expense for the second quarter and first six months of 2019 was approximately $15 million and $30 million, respectively.

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, increased in both the second quarter and first six months of 2019. Increases in the second quarter year-on-year primarily related to cost absorption penalties from lower production volumes as all businesses worked to reduce inventories. In the first six months of 2019, in addition to inventory reduction actions undertaken, the increase was primarily due to significant litigation-related charges taken in the first quarter of 2019 (as discussed earlier in the *Certain amounts adjusted for impacts of deconsolidation of the Company's Venezuelan subsidiary, significant litigation-related charges and measurement period adjustments to the impact of the enactment of the Tax Cuts and Jobs Act (TCJA) - (non-GAAP measures)* section).

Other factors that increased cost of sales as a percent of sales are foreign currency effects (net of hedge losses) and raw material cost increases. These factors were partially offset by selling price increases, which increased net sales year-on-year by 0.5 percent and 0.7 percent in the second quarter and first six months of 2019, respectively.

***Selling, General and Administrative Expenses:***

SG&A in dollars decreased 6.4 percent and 16.9 percent in the second quarter and first six months of 2019, respectively, when compared to the same period last year. The decrease in the second quarter primarily relates to indirect cost reductions. The decrease in the first six months of 2019 primarily relate to lower year-on-year impact related to significant litigation-related charges (as discussed earlier in the *Certain amounts adjusted for impacts of deconsolidation of the Company's Venezuelan subsidiary, significant litigation-related charges and measurement period adjustments to the impact of the enactment of the Tax Cuts and Jobs Act (TCJA) - (non-GAAP measures)* section).

***Research, Development and Related Expenses:***

R&D in dollars increased $2 million and decreased $7 million in the second quarter and first six months of 2019, respectively, when compared to the same period last year. R&D, measured as a percent of sales, increased in the second quarter and first six months of 2019, as 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.

***Gain on Sale of Businesses:***

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. Refer to Note 3 for additional details on divestitures.

***Operating Income:***

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 the three and six months ended June 30, 2019 versus 2018.

| (Percent of net sales) | Three months ended June 30, 2019 | Six months ended June 30, 2019 |
|---|---|---|
| Same period last year | 28.6 % | 20.4 % |
| Significant litigation-related charges | — | 5.4 |
| Same period last year, excluding significant litigation-related charges | 28.6 % | 25.8 % |
| Increase/(decrease) in operating income margin, due to: | | |
| 2018 divestiture of Communication Markets Division, net of related restructuring actions | (4.6) | (2.5) |
| Organic volume/productivity and other | (2.0) | (1.8) |
| Second quarter 2019 restructuring actions | (1.4) | (0.7) |
| Acquisitions/divestitures | (0.5) | (0.5) |
| Selling price and raw material impact | 0.3 | 0.4 |
| Foreign exchange impacts | 0.4 | 0.4 |
| Current period, excluding significant litigation-related charges | 20.8 % | 21.1 % |
| Significant litigation-related charges | — | (3.4) |
| Current period | 20.8 % | 17.7 % |

Operating income margins decreased 7.8 percentage points in the second quarter of 2019 when compared to the second quarter of 2018, and decreased 2.7 percentage points in the first six months of 2019 when compared to the first six months of 2018. Excluding the significant litigation-related charges, operating margins decreased 4.7 percentage points to 21.1 percent in the first six months of 2019 when compared to the first six months of 2018. Refer to the *Certain amounts adjusted for impacts of deconsolidation of the Company's Venezuelan subsidiary, significant litigation-related charges and measurement period adjustments to the impact of the enactment of the Tax Cuts and Jobs Act (TCJA) - (non-GAAP measures)* section above for additional details on the significant litigation-related charges.

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

*2018 divestiture of Communication Markets Division, net of related restructuring actions:*

- In June 2018, 3M completed the sale of substantially all of its Communication Markets Division and reflected a pre-tax gain of $494 million as a result of this divestiture. During the second 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 resulted in a second quarter 2018 pre-tax charge of $105 million.

*Organic volume/productivity and other:*

- Operating income margins decreased year-on-year due to negative organic local-currency growth and lower production volumes related to inventory reduction efforts. Productivity challenges were most pronounced in the Company's industrial-related businesses within Asia Pacific and the United States. Continued margin benefits realized as part of the Company's business transformation partially offset these operating income margin decreases.
- Operating income margins increased year-on-year due to lower defined benefit pension and postretirement service cost expense.

*Second quarter 2019 restructuring actions:*

- During the second quarter of 2019, in light of a slower than expected 2019, management approved and committed to undertake certain restructuring. Of the associated $148 million charge, $112 million impacted operating income while $35 million associated with a voluntary retirement incentive program impacted other expense (income). See Note 5 for additional details.

*Acquisitions/divestitures:*

- Acquisition-related impacts relate to the on-going integration of M*Modal, which decreased operating income margins year-on-year.
- Divestiture impacts (which is comprised of lower year-on-year divestiture gains other than the Communication Markets Division in addition to lost operating income from divested businesses) decreased operating income margins year-on-year.
- Remaining stranded costs to be addressed 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.

*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 the first six months of 2018 and 2019 included the $897 million and $548 million impact, respectively, of significant litigation-related charges (as discussed earlier in the *Certain amounts adjusted for impacts of deconsolidation of the Company's Venezuelan subsidiary, significant litigation-related charges and measurement period adjustments to the impact of the enactment of the Tax Cuts and Jobs Act (TCJA) - (non-GAAP measures)* section.

***Other Expense (Income), Net:***

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

Interest expense increased in the second quarter and first six months of 2019 compared to the same period in 2018 due to higher U.S. average debt balances and higher borrowing costs.

Other expense (income) increased year-on-year in the second quarter and first six months 2019 due to the impact of deconsolidation of the Company's Venezuelan subsidiary. Refer to Note 1 for additional details. In addition, other expense (income) also increased year-on-year due to the charge associated with the voluntary retirement incentive program. Refer to Note 11 for additional details.

***Provision for Income Taxes:***

| | Three months ended June 30, | | Six months ended June 30, | |
|---|---|---|---|---|
| **(Percent of pre-tax income)** | **2019** | **2018** | **2019** | **2018** |
| Effective tax rate | **21.8 %** | 20.8 % | **20.1 %** | 25.6 % |

The effective tax rate for the second quarter of 2019 was 21.8 percent, compared to 20.8 percent in the second quarter of 2018, an increase of 1.0 percentage points. The effective tax rate for the first six months of 2019 was 20.1 percent, compared to 25.6 percent in the first six months 2018, a decrease of 5.5 percentage points. The changes in the tax rates between years were impacted by many factors, including measurement period adjustments related to the Tax Cuts and Jobs Act (TCJA) and significant litigation-related charges, and the impact from the deconsolidation of the Company's Venezuelan subsidiary as further described in the Overview, *Certain amounts adjusted for impacts of deconsolidation of the Company's Venezuelan subsidiary, significant litigation-related charges and measurement period adjustments to the impact of the enactment of the Tax Cuts and Jobs Act (TCJA) - (non-GAAP measures)* section and in Note 8. Additional factors that impacted the tax rates between years were the tax benefit related to the "held-for-sale" status of the pending divestiture of the gas and flame detection business and the effects of the international tax provisions from U.S. tax reform.

3M currently estimates its effective tax rate for 2019 will be approximately 20 to 22 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 8 for further discussion of income taxes.

***Net Income Attributable to Noncontrolling Interest:***

| | Three months ended June 30, | | Six months ended June 30, | |
|---|---|---|---|---|
| **(Millions)** | **2019** | **2018** | **2019** | **2018** |
| Net income attributable to noncontrolling interest | **$ 4** | $ 5 | **$ 6** | $ 9 |

Net income 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 approximately $2 million for the second quarter of 2019, and decreased pre-tax income by approximately $36 million for the six months ended June 30, 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, increased pre-tax income by approximately $55 million and $121 million for the three and six months ended June 30, 2019. These estimates include transaction gains and losses, including derivative instruments designed to reduce foreign currency exchange rate risks.

***Significant Accounting Policies:***

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

**PERFORMANCE BY BUSINESS SEGMENT**

Disclosures relating to 3M's business segments are provided in Note 17. Effective in the second quarter of 2019, to enable the Company to better serve global customers and markets, the Company made the following changes to its business segments:

***Realignment of the Company's business segments from five to four***

The Company realigned its former five business segments into four: Safety and Industrial; Transportation and Electronics; Health Care; and Consumer. Existing divisions were largely realigned to this new structure. In addition, certain retail auto care product lines formerly in the Automotive Aftermarket Division (now within the Safety and Industrial business segment) were moved to the Construction and Home Improvement Division (within the Consumer business segment). Also, product lines relating to the refrigeration filtration business, formerly included in the Separation and Purification Sciences Division (now within the Health Care business segment) were moved to Other Safety and Industrial (within the Safety and Industrial business segment). 3M business segment reporting measures include dual credit to business segments for certain sales and operating income. Dual credit, which is based on which business segment provides customer account activity with respect to a particular product sold in a specific country, was reduced as a result of the closer alignment between customer account activity and their respective markets. The four business segments are as follows:

***Safety and Industrial***: This segment includes businesses that serve the global industrial, electrical and safety markets. This business segment consists of personal safety, adhesives and tapes, abrasives, closure and masking systems, electrical markets, automotive aftermarket, and roofing granules. This segment also includes the Communication Markets Division (which was substantially sold in 2018) and the refrigeration filtration product lines (within Other Safety and Industrial).

***Transportation and Electronics:*** This segment includes businesses that serve global transportation and electronic original equipment manufacturer (OEM) customers. This business segment consists of electronics (display materials and systems, electronic materials solutions), automotive and aerospace, commercial solutions, advanced materials, and transportation safety.

***Health Care***: This business segment serves the global healthcare industry and includes medical solutions, oral care, separation and purification sciences, health information systems, drug delivery systems, and food safety.

***Consumer***: This business serves global consumers and consists of home improvement, stationery and office supplies, home care, and consumer health care. This segment also includes, within the Construction and Home Improvement Division, certain retail auto care product lines.

In addition, as part of 3M's continuing effort to improve the alignment of its businesses around markets and customers, the Company made the following changes, effective in the first quarter of 2019, and other revisions impacting business segment reporting:

***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.

***Creation of Closure and Masking Systems Division and Medical Solutions Division***

- 3M created the Closure and Masking Systems Division, which combines the masking tape, packaging tape and personal care portfolios formerly within Industrial Adhesives and Tapes Division in the former Industrial business segment into a separate division also within the former Industrial business segment. 3M created the Medical Solutions Division in the Health Care business segment, which combines the former Critical and Chronic Care Division and Infection Prevention Division (which were also both within the Health Care business segment).

***Additional actions impacting business segment reporting***

- The business associated with certain safety products sold through retail channels in the Asia Pacific region was realigned from the Personal Safety Division within the former Safety and Graphics business segment to the Construction and Home Improvement Division within the Consumer business segment. In addition, certain previously non-allocated costs related to manufacturing and technology of centrally managed material resource centers of expertise within Corporate and Unallocated are now reflected as being allocated to the business segments.

Business segment information presented 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 17. 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. 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 divestiture in 2018. Because this category includes a variety of miscellaneous items, it is subject to fluctuation on a quarterly and annual basis.

Corporate and Unallocated operating expenses decreased in both the second quarter and first six months of 2019, when compared to the same periods last year. In the first quarter of 2018 and 2019, significant litigation-related charges of $897 million and $548 million, respectively, were reflected in Corporate and Unallocated. In the second quarter of 2018 and 2019, operating expenses included the restructuring charge of $105 million and $82 million, respectively, as further discussed in Note 5. In addition, 3M's defined benefit pension and postretirement service-cost expense allocation to Corporate and Unallocated decreased year-on-year.

***Operating Business Segments:***

Information related to 3M's business segments for both the second quarter and first six months of 2019 and 2018 are 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.

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.

Refer to 3M's 2018 Annual Report on Form 10-K, Item 1, Business, for discussion of 3M products that are included in each business segment.

***Safety and Industrial Business:***

| | Three months ended June 30, | | Six months ended June 30, | |
|---|---|---|---|---|
| | **2019** | **2018** | **2019** | **2018** |
| Sales (millions) | **$ 2,961** | $ 3,253 | **$ 5,947** | $ 6,521 |
| Sales change analysis: | | | | |
| Organic local-currency | **(5.0)%** | 6.2 % | **(3.6)%** | 4.6 % |
| Acquisitions | **—** | 5.4 | **—** | 5.1 |
| Divestitures | **(1.9)** | (1.4) | **(2.3)** | (0.8) |
| Translation | **(2.1)** | 1.0 | **(2.9)** | 2.8 |
| Total sales change | **(9.0)%** | 11.2 % | **(8.8)%** | 11.7 % |
| | | | | |
| Operating income (millions) | **$ 653** | $ 1,285 | **$ 1,297** | $ 2,056 |
| Percent change | **(49.2)%** | 107.8 % | **(36.9)%** | 60.3 % |
| Percent of sales | **22.1 %** | 39.5 % | **21.8 %** | 31.5 % |

***Second quarter 2019 results:***

Sales in Safety and Industrial totaled $3.0 billion, a decrease of 9.0 percent compared to the same period last year. Organic local-currency sales decreased 5.0 percent, divestitures decreased sales by 1.9 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 industrial adhesives and tapes, electrical markets, abrasives, closure and masking, and automotive aftermarket declined year-on-year.
- Softness and channel inventory reductions impacted sales growth, particularly in automotive aftermarket, abrasives and closure and masking.

Acquisitions:

- Acquisition sales growth in 2018 reflects the acquisition of Scott Safety in October 2017. Scott Safety is a premier manufacturer of innovative products, including self-contained breathing apparatus systems and other safety devices.

Divestitures:

- 2017 divestitures that impacted 2018 results relate to the sale of the safety prescription eyewear business (first quarter 2017) and assets of its electrical marking/labelling business (fourth quarter 2017).
- In the first quarter of 2018, 3M completed the sale of its polymer additives compounding business.
- 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 June 2018, 3M completed the sale of substantially all of its Communication Markets Division.

Operating income:

- Operating income margins decreased 17.4 percentage points, primarily impacted by the prior year gain on the divestiture of the Communication Markets Division, which resulted in a net year-on-year operating income margin reduction of 15.2 percentage points. Operating income margins were also negatively impacted by 0.4 percentage points related to the restructuring charges initiated in the second quarter of 2019.

***First six months 2019 results:***

Sales in Safety and Industrial totaled $5.9 billion, a decrease of 8.8 percent compared to the same period last year. Organic local-currency sales decreased 3.6 percent, divestitures decreased sales by 2.3 percent, and foreign currency translation decreased sales by 2.9 percent.

On an organic local-currency sales basis:

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

Acquisitions:

- Acquisition sales growth in 2018 reflects the acquisition of Scott Safety in October 2017. Scott Safety is a premier manufacturer of innovative products, including self-contained breathing apparatus systems and other safety devices.

Divestitures:

- 2017 divestitures that impacted 2018 results relate to the sale of its safety prescription eyewear business (first quarter 2017) and assets of its electrical marking/labelling business (fourth quarter 2017).
- In the first quarter of 2018, 3M completed the sale of its polymer additives compounding business.
- 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 June 2018, 3M completed the sale of substantially all of its Communication Markets Division.

Operating income:

- Operating income margins decreased 9.7 percentage points, primarily related to the first quarter 2018 sale of certain personal safety product offerings and the divestiture of the Communication Markets Division, resulting in a net year-on-year operating income margin reduction of 7.8 percentage points. Operating income margins were also impacted by sales declines, particularly in Asia Pacific and the U.S, and lower production volumes related to inventory reduction efforts.

***Transportation and Electronics Business:***

| | Three months ended June 30, | | Six months ended June 30, | |
|---|---|---|---|---|
| | **2019** | **2018** | **2019** | **2018** |
| Sales (millions) | **$ 2,452** | $ 2,527 | **$ 4,809** | $ 5,046 |
| Sales change analysis: | | | | |
| Organic local-currency | **(1.2)%** | 5.4 % | **(2.3)%** | 4.3 % |
| Divestitures | **—** | (2.2) | **—** | (3.0) |
| Translation | **(1.7)** | 1.3 | **(2.4)** | 2.8 |
| Total sales change | **(2.9)%** | 4.5 % | **(4.7)%** | 4.1 % |
| | | | | |
| Operating income (millions) | **$ 592** | $ 669 | **$ 1,115** | $ 1,325 |
| Percent change | **(11.6)%** | (35.6)% | **(15.9)%** | (17.6)% |
| Percent of sales | **24.1 %** | 26.5 % | **23.2 %** | 26.3 % |

***Second quarter 2019 results:***

Sales in Transportation and Electronics totaled $2.5 billion, down 2.9 percent in U.S. dollars. Organic local-currency sales decreased 1.2 percent and foreign currency translation decreased sales by 1.7 percent.

Total sales decreased 3 percent within both the electronics-related businesses and within Asia Pacific.

On an organic local-currency sales basis:
- Sales increased in advanced materials and transportation safety, while commercial solutions and automotive and aerospace 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 2 percent in 3M's electronics-related businesses, with increases in display materials and systems more than offset by decreases in 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 1 percent in Asia Pacific, where 3M's electronics business is concentrated.

Divestitures:
- 2017 divestitures that impacted 2018 results included the sale of 3M's identity management business and tolling and automated license/number plate business (both in second quarter 2017) and electronic monitoring business (fourth quarter 2017).

Operating income:
- Operating income margins decreased 2.4 percentage points, primarily impacted by continued sales declines, particularly in Asia Pacific and the U.S, and lower production volumes related to inventory reduction efforts. Operating income margins were also negatively impacted by 0.3 percentage points related to the restructuring charges initiated in the second quarter of 2019.

***First six months 2019 results:***

Sales in Transportation and Electronics totaled $4.8 billion, down 4.7 percent in U.S. dollars. Organic local-currency sales decreased 2.3 percent and foreign currency translation decreased sales by 2.4 percent.

Total sales decreased 5 percent within the electronics-related businesses in addition to a 6 percent decrease in Asia Pacific.

On an organic local-currency sales basis:
- Sales increased in advanced materials, while commercial solutions and automotive and aerospace declined.
- Transportation solutions was flat year-on-year.
- 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 4 percent in 3M's electronics-related businesses, with increases in display materials and systems more than offset by decreases in 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.

Divestitures:
- 2017 divestitures that impacted 2018 results included the sale of 3M's identity management business and tolling and automated license/number plate business (both in second quarter 2017) and electronic monitoring business (fourth quarter 2017).

Operating income:
- Operating income margins decreased 3.1 percentage points, primarily impacted by continued sales declines, particularly in Asia Pacific and the U.S, and lower production volumes related to inventory reduction efforts. Operating income margin was also impacted by the restructuring charges initiated in the second quarter of 2019.

***Health Care Business:***

| | Three months ended June 30, | | Six months ended June 30, | |
|---|---|---|---|---|
| | **2019** | **2018** | **2019** | **2018** |
| Sales (millions) | **$ 1,831** | $ 1,730 | **$ 3,569** | $ 3,475 |
| Sales change analysis: | | | | |
| Organic local-currency | **3.5 %** | 4.4 % | **2.1 %** | 3.4 % |
| Acquisitions | **4.4** | 0.1 | **3.6** | 0.1 |
| Divestitures | **—** | (0.3) | **(0.1)** | (0.2) |
| Translation | **(2.1)** | 1.2 | **(2.9)** | 2.9 |
| Total sales change | **5.8 %** | 5.4 % | **2.7 %** | 6.2 % |
| | | | | |
| Operating income (millions) | **$ 483** | $ 470 | **$ 947** | $ 968 |
| Percent change | **2.9 %** | 8.6 % | **(2.2)%** | 8.1 % |
| Percent of sales | **26.4 %** | 27.2 % | **26.5 %** | 27.9 % |

***Second quarter 2019 results:***

Sales in Health Care totaled $1.8 billion, up 5.8 percent in U.S. dollars. Organic local-currency sales increased 3.5 percent, acquisitions increased sales by 4.4 percent, and foreign currency translation decreased sales by 2.1 percent.

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

Acquisitions:
- In September 2017, 3M acquired Elution Technologies, LLC, a manufacturer of food safety test kits.
- 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.

Divestitures:
- In the first quarter of 2019, the Company sold certain oral care technology comprising a business.

Operating income:
- Operating income margins decreased 0.8 percentage points year-on-year, driven by a 1.8 percentage point impact related to the M*Modal acquisition. Operating income margins were also negatively impacted by 0.3 percentage points related to the restructuring charges initiated in the second quarter of 2019.

***First six months 2019 results:***

Sales in Health Care totaled $3.6 billion, up 2.7 percent in U.S. dollars. Organic local-currency sales increased 2.1 percent, acquisitions increased sales by 3.6 percent, divestitures decreased sales by 0.1 percent, and foreign currency translation decreased sales by 2.9 percent.

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

Acquisitions:
- In September 2017, 3M acquired Elution Technologies, LLC, a manufacturer of food safety test kits.
- 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.

Divestitures:
- In the first quarter of 2019, the Company sold certain oral care technology comprising a business.

Operating income:
- Operating income margins decreased 1.4 percentage points year-on-year, driven by a 1.9 percentage point impact related to the M*Modal acquisition. Operating income margin was also impacted by the restructuring charges initiated in the second quarter of 2019.

In May 2019, 3M entered into an agreement to acquire Acelity Inc. and its KCI subsidiaries for a price plus an amount based on the extent days through closing which together are estimated at approximately $4.6 billion, subject to closing and other adjustments. The entities to be acquired also have outstanding debt and related items estimated at approximately $2.5 billion. This transaction is expected to close in the second half of 2019 and will be reflected within the Company's Health Care business. Refer to Note 3 for additional details.

***Consumer Business:***

| | Three months ended June 30, | | Six months ended June 30, | |
|---|---|---|---|---|
| | **2019** | **2018** | **2019** | **2018** |
| Sales (millions) | **$ 1,303** | $ 1,309 | **$ 2,497** | $ 2,517 |
| Sales change analysis: | | | | |
| Organic local-currency | **0.7 %** | 4.6 % | **1.1 %** | 3.4 % |
| Acquisitions | **—** | 0.2 | **—** | 0.3 |
| Translation | **(1.2)** | 0.3 | **(1.9)** | 1.5 |
| Total sales change | **(0.5)%** | 5.1 % | **(0.8)%** | 5.2 % |
| | | | | |
| Operating income (millions) | **$ 268** | $ 279 | **$ 501** | $ 511 |
| Percent change | **(3.6)%** | 30.2 % | **(1.8)%** | 13.3 % |
| Percent of sales | **20.6 %** | 21.3 % | **20.1 %** | 20.3 % |

***Second quarter 2019 results:***

Sales in Consumer totaled $1.3 billion, a decrease of 0.5 percent in U.S. dollars. Organic local-currency sales increased 0.7 percent and foreign currency translation decreased sales by 1.2 percent.

On an organic local-currency sales basis:
- Sales grew in consumer health care, stationery and office and home improvement, while home care declined.

Acquisitions:
- Acquisition sales growth in 2018 reflects certain safety products sold through retail channels in the Asia Pacific region from the acquisition of Scott Safety in October 2017.

Operating income:
- Operating income margins decreased 0.7 percentage points year-on-year. Operating income margins were negatively impacted by 0.4 percentage points related to the restructuring charges initiated in the second quarter of 2019.

***First six months 2019 results:***

Sales in Consumer totaled $2.5 billion, a decrease of 0.8 percent in U.S. dollars. Organic local-currency sales increased 1.1 percent and foreign currency translation decreased sales by 1.9 percent.

On an organic local-currency sales basis:

- Sales grew in home improvement and consumer health care, while home care declined.
- 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.

Acquisitions:

- Acquisition sales growth in 2018 reflects certain safety products sold through retail channels in the Asia Pacific region from the acquisition of Scott Safety in October 2017.

Operating income:

- Operating income margins decreased 0.2 percentage points year-on-year. Operating income margins were impacted by the restructuring charges initiated in the second quarter of 2019.

**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, positions the Company to be able to add further leverage to its capital structure. Investing in 3M's businesses to drive organic growth remains the first priority for capital deployment, including research and development, capital expenditures, and commercialization capability. Investment in organic growth will be supplemented by complementary acquisitions. 3M will also continue to return cash to shareholders through dividends and share repurchases. Sources for cash availability in the United States, such as ongoing cash flow from operations and access to capital markets, have historically been sufficient to fund dividend payments to shareholders, as well as funding U.S. acquisitions and other items as needed. The TCJA creates additional repatriation opportunities for 3M to access international cash positions on a continual and on-going basis and will help support U.S. capital deployments needs. 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 in 3M's 2018 Annual Report on Form 10-K 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 June 30, 2019, there was no commercial paper issued and outstanding, compared to $435 million outstanding at December 31, 2018.

***Total debt:***

The strength of 3M's capital structure and significant ongoing cash flows provide 3M proven access to capital markets. Additionally, the Company's 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 AA- credit rating with a negative outlook from Standard & Poor's and has an A1 credit rating with a stable outlook from Moody's Investors Service.

The Company's total debt was $1.2 billion higher at June 30, 2019 when compared to December 31, 2018. Increases in debt related to the first quarter 2019 issuance of $2.25 billion of medium-term notes, partially offset by the June 2019 repayment of $625 million aggregate principal amount of fixed-rate medium-term notes that matured in addition to lower commercial paper outstanding. For discussion of repayments of and proceeds from debt refer to the following "Cash Flows from Financing Activities" section.

Effective February 24, 2017, 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 May 16, 2014. 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 June 30, 2019, the total amount of debt issued as part of the medium-term notes program (Series F), inclusive of debt issued in February 2019 and prior years is approximately $17.6 billion (utilizing the foreign exchange rates applicable at the time of issuance for the Euro denominated debt). Information with respect to long-term debt issuances and maturities for the periods presented is included in Note 12 of 3M's 2018 Annual Report on Form 10-K.

In March 2016, 3M amended and restated its existing $2.25 billion five-year revolving credit facility expiring in August 2019 to a $3.75 billion five-year revolving credit facility expiring in March 2021. This credit agreement includes a provision under which 3M may request an increase of up to $1.25 billion (at lenders' discretion), bringing the total facility up to $5.0 billion. This revolving credit facility is undrawn at June 30, 2019. Under the $3.75 billion credit agreement, 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 June 30, 2019, this ratio was approximately 20 to 1. Debt covenants do not restrict the payment of dividends. Apart from the committed facilities, an additional $302 million in stand-alone letters of credit and bank guarantees were also issued and outstanding at June 30, 2019. These instruments are utilized in connection with normal business activities.

***Cash, cash equivalents and marketable securities:***

At June 30, 2019, 3M had $3.0 billion of cash, cash equivalents and marketable securities, of which approximately $2.8 billion was held by the Company's foreign subsidiaries and approximately $200 million was held by the United States. These balances are invested in bank instruments and other high-quality fixed income securities. At December 31, 2018, cash, cash equivalents and marketable securities held by the Company's foreign subsidiaries and by the United States totaled approximately $3.1 billion and $160 million, respectively.

***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 June 30, 2019 and December 31, 2018.

| (Millions) | June 30, 2019 | December 31, 2018 | Change |
|---|---|---|---|
| Total debt | **$ 15,806** | $ 14,622 | **$ 1,184** |
| Less: Cash, cash equivalents and marketable securities | **3,034** | 3,270 | **(236)** |
| Net debt (non-GAAP measure) | **$ 12,772** | $ 11,352 | **$ 1,420** |

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) | June 30, 2019 | | December 31, 2018 | | Change | |
|---|---|---|---|---|---|---|
| Current assets | **$** | **14,051** | **$** | 13,709 | **$** | 342 |
| Less: Current liabilities | | **7,265** | | 7,244 | | 21 |
| Working capital (non-GAAP measure) | **$** | **6,786** | **$** | 6,465 | **$** | 321 |

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 $321 million compared with December 31, 2018. Current asset balance changes increased working capital by $342 million, driven by increases in accounts receivable, partially offset by decreases inventories (discussed further below). Current liability balance changes decreased working capital by $21 million, primarily due to increases in accruals related respirator mask/asbestos and other environmental liabilities (refer to Note 14 for additional details on these accruals) and the addition of the current portion of operating lease liabilities due to the adoption of Accounting Standards Update (ASU) No. 2016-02, *Leases* (refer to Note 15 for additional details on leases), partially offset by decreases in short-term debt.

Accounts receivable increased $354 million from December 31, 2018, primarily due to the receivables acquired from the M*Modal acquisition. Inventory decreased $66 million from December 31, 2018 as a result of the Company's commitment to improve its response to slowing growth conditions in several key end markets and channel inventory adjustments by customers.

***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:***

| | Six months ended June 30, | | | |
|---|---|---|---|---|
| (Millions) | 2019 | | 2018 | |
| Net income including noncontrolling interest | **$** | **2,024** | $ | 2,468 |
| Depreciation and amortization | | **751** | | 762 |
| Company pension and postretirement contributions | | **(88)** | | (261) |
| Company pension and postretirement expense | | **176** | | 204 |
| Stock-based compensation expense | | **182** | | 208 |
| Gain on sale of businesses | | **(5)** | | (530) |
| Income taxes (deferred and accrued income taxes) | | **(237)** | | 233 |
| Loss on deconsolidation of Venezuelan subsidiary | | **162** | | — |
| Accounts receivable | | **(258)** | | (606) |
| Inventories | | **75** | | (337) |
| Accounts payable | | **(173)** | | (12) |
| Other — net | | **101** | | (87) |
| Net cash provided by (used in) operating activities | **$** | **2,710** | $ | 2,042 |

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 the first six months of 2019, cash flows provided by operating activities increased $668 million compared to the same period last year, with this increase primarily due to lower year-on-year significant litigation-related charges and the timing of associated payments. Factors that decreased operating cash flows were increases in inventory and accounts receivable. The combination of accounts receivable, inventories and accounts payable increased working capital by $356 million in the first six months of 2019, compared to the working capital increases of $955 million in the first six months of 2018. Additional discussion on working capital changes is provided earlier in the “Financial Condition and Liquidity” section.

***Cash Flows from Investing Activities:***

| (Millions) | Six months ended June 30, 2019 | 2018 |
|---|---|---|
| Purchases of property, plant and equipment (PP&E) | **$ (812)** | $ (669) |
| Proceeds from sale of PP&E and other assets | **3** | 96 |
| Acquisitions, net of cash acquired | **(704)** | 13 |
| Purchases and proceeds from maturities and sale of marketable securities and investments, net | **254** | 672 |
| Proceeds from sale of businesses, net of cash sold | **6** | 806 |
| Other — net | **18** | (11) |
| Net cash provided by (used in) investing activities | **$ (1,235)** | $ 907 |

Investments in property, plant and equipment enable growth across many diverse markets, helping to meet product demand and increasing manufacturing efficiency. The Company expects 2019 capital spending to be approximately $1.6 billion to $1.7 billion as 3M continues to invest in its businesses.

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) and laboratory facilities.

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.

Purchases of marketable securities and investments and proceeds from maturities and sale of marketable securities and investments are primarily attributable to asset-backed securities, certificates of deposit/time deposits, commercial paper, and other securities, which are classified as available-for-sale. Refer to Note 9 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:***

| (Millions) | Six months ended June 30, 2019 | 2018 |
|---|---|---|
| Change in short-term debt — net | **$ (441)** | $ 774 |
| Repayment of debt (maturities greater than 90 days) | **(871)** | (6) |
| Proceeds from debt (maturities greater than 90 days) | **2,265** | 6 |
| Total cash change in debt | **$ 953** | $ 774 |
| Purchases of treasury stock | **(1,101)** | (2,537) |
| Proceeds from issuances of treasury stock pursuant to stock option and benefit plans | **365** | 305 |
| Dividends paid to shareholders | **(1,660)** | (1,612) |
| Other — net | **(34)** | (26) |
| Net cash provided by (used in) financing activities | **$ (1,477)** | $ (3,096) |

Total debt was approximately $15.8 billion at June 30, 2019 and $14.6 billion at December 31, 2018. Increases in debt related to the first quarter 2019 issuance of $2.25 billion of medium-term notes. 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 acquisition of M*Modal. Outstanding commercial paper was zero at June 30, 2019, as compared to $435 million at December 31, 2018. Net commercial paper issuances and 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.

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 the first six months of 2019, the Company purchased $1.1 billion of its own stock. The Company continues to expect full-year 2019 gross share repurchases to be between $1.0 billion to $1.5 billion. For more information, refer to the table titled "Issuer Purchases of Equity Securities" in Part II, Item 2. The Company does not utilize derivative instruments linked to the Company's stock.

3M has paid dividends each year since 1916. In February 2019, 3M's Board of Directors declared a first-quarter 2019 dividend of $1.44 per share, an increase of 6 percent. This is equivalent to an annual dividend of $5.76 per share and marked the 61st consecutive year of dividend increases. In May 2019, 3M's Board of Directors declared a second-quarter 2019 dividend of $1.44 per share.

Other cash flows from financing activities may include various other items, such as distributions to or sales of noncontrolling interests, changes in cash overdraft balances, and principal payments for capital 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. In the table below details the components of free cash flow for the six months ended June 30, 2019 and 2018.

In the first six months of 2019, free cash flow conversion was impacted by significant litigation-related charges and the impact from the deconsolidation of the Company's Venezuelan subsidiary. In the first six months of 2018, free cash flow conversion was impacted by significant litigation-related charges and the measurement period adjustment relative to the accounting for the 2017 enactment of the TCJA. Refer to the preceding "Cash Flows from Operating Activities" section for discussion of additional items that impacted operating cash flow. Refer to the proceeding "Cash Flows from Investing Activities" section for discussion on capital spending for property, plant and equipment.

| | Six months ended June 30, | |
|---|---|---|
| **(Millions)** | **2019** | **2018** |
| **Major GAAP Cash Flow Categories** | | |
| Net cash provided by (used in) operating activities | **$ 2,710** | $ 2,042 |
| Net cash provided by (used in) investing activities | **(1,235)** | 907 |
| Net cash provided by (used in) financing activities | **(1,477)** | (3,096) |
| | | |
| **Free Cash Flow (non-GAAP measure)** | | |
| Net cash provided by (used in) operating activities | **$ 2,710** | $ 2,042 |
| Purchases of property, plant and equipment (PP&E) | **(812)** | (669) |
| Free cash flow | **$ 1,898** | $ 1,373 |
| Net income attributable to 3M | **$ 2,018** | $ 2,459 |
| Free cash flow conversion | **94 %** | 56 % |

**CAUTIONARY NOTE CONCERNING FACTORS THAT MAY AFFECT FUTURE RESULTS**

This Quarterly Report on Form 10-Q, including "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part I, Item 2, 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:

- the Company's strategy for growth, future revenues, earnings, cash flow, uses of cash and other measures of financial performance, and market position,
- worldwide economic, political, regulatory, capital markets and other external conditions, such as interest rates, foreign currency exchange rates, financial conditions of our suppliers and customers, and natural and other disasters or climate change affecting the operations of the Company or our suppliers and customers,
- new business opportunities, product development, and future performance or results of current or anticipated products,
- the scope, nature or impact of acquisition, strategic alliance and divestiture activities,
- the outcome of contingencies, such as legal and regulatory proceedings,
- 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,
- information technology security, and
- the effects of changes in tax (including the Tax Cuts and Jobs Act), environmental 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 3. Quantitative and Qualitative Disclosures About Market Risk.**

In the context of Item 3, 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. For a discussion of sensitivity analysis related to these types of market risks, refer to Part II, Item 7A, Quantitative and Qualitative Disclosures About Market Risk, in 3M's 2018 Annual Report on Form 10-K. There have been no material changes in information that would have been provided in the context of Item 3 from the end of the preceding year until June 30, 2019. However, the Company does provide risk management discussion in various places in this Quarterly Report on Form 10-Q, primarily in the Derivatives note.

**Item 4. 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. 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.

**3M COMPANY**
**FORM 10-Q**
**For the Quarterly Period Ended June 30, 2019**
**PART II. Other Information**

**Item 1. Legal Proceedings.**

Discussion of legal matters is incorporated by reference from Part I, Item 1, Note 14, "Commitments and Contingencies" of this document, and should be considered an integral part of Part II, Item 1, "Legal Proceedings."

**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."

* *Results are impacted by the effects of, and changes in, worldwide economic, political, regulatory, capital markets 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. The Company's business is subject to global competition and geopolitical risks and may be adversely affected by factors in the United States and other countries that are beyond its control, such as slower economic growth, disruptions in financial markets, economic downturns in the form of either contained or widespread recessionary conditions, inflation, elevated unemployment levels, sluggish or uneven recovery, 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; natural and other disasters affecting the operations of the Company or its customers and suppliers; or adverse changes in the availability and cost of capital, interest rates, tax rates, tax laws, or exchange control, ability to expatriate earnings and other regulations in the jurisdictions in which the Company operates. Natural occurrences and human activities are increasingly releasing greenhouse gases into the atmosphere, contributing to changes in the earth's climate. 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.

* *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 AA- credit rating with a negative outlook from Standard & Poor's and has an A1 credit rating with a stable outlook from Moody's Investors Service. 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.

* *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.

* *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.

* *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 may be adversely affected by 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 fluctuations in the costs and availability of purchased components, compounds, raw materials and energy, including oil and natural gas and their derivatives, due to shortages, increased demand, supply interruptions, currency exchange risks, natural disasters and other 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. It is possible that any of its supplier relationships could be interrupted due to natural and other disasters and other events, or be terminated in the future. Any sustained interruption in the Company's receipt of adequate supplies 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.

* *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, future results will be affected by the Company's ability to integrate acquired businesses quickly and obtain the anticipated synergies. The Company has recently announced the realignment from five to four business segments to better serve its global customers and markets. Successful execution of these and 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 enterprise resource planning (ERP) system on a worldwide basis. There can be no assurance that all of the projected productivity improvements will be realized. Operational challenges, including those related to productivity improvements, could have a material adverse effect on the Company's business, financial conditions and results of operations.

* *The Company employs information technology systems to support its business, including ongoing phased implementation of an 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 managed by 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 may have 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 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 may still be vulnerable to damage, disruptions or shutdowns due to attacks by hackers, breaches, employee error or malfeasance, power outages, computer viruses, ransomware, telecommunication or utility failures, systems failures, service or cloud provider breaches, natural disasters or other catastrophic events. It is possible for such vulnerabilities to remain undetected for an extended period, up to and including several years. While we have experienced, and expect to continue to experience, these types of vulnerabilities to the Company's information technology networks and infrastructure, none of them to date has had a material impact to the Company. There may be other challenges and risks as the Company upgrades and standardizes its ERP system on a worldwide basis. Any such events could result in legal claims or proceedings, liability or penalties

under privacy laws, disruptions or shutdowns, 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.

* *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 relevant 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.

* *The Company's future results may be affected by various legal and regulatory proceedings and legal compliance risks, including those involving product liability, antitrust, intellectual property, environmental, the U.S. Foreign Corrupt Practices Act and other anti-bribery laws, U.S. trade sanctions compliance, or other matters.* 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. 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. For a more detailed discussion of the legal proceedings involving the Company and the associated accounting estimates, see the discussion in Note 14 "Commitments and Contingencies" within the Notes to Consolidated Financial Statements.

**Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.**

**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, 2019 | 1,723,445 | $ 192.18 | 1,723,187 | $ 9,065 |
| February 1-28, 2019 | 1,052,365 | $ 204.91 | 1,048,301 | $ 8,850 |
| March 1-31, 2019 | 355,200 | $ 204.83 | 355,200 | $ 8,777 |
| Total January 1-March 31, 2019 | 3,131,010 | $ 197.89 | 3,126,688 | $ 8,777 |
| April 1-30, 2019 | — | $ — | — | $ 8,777 |
| May 1-31, 2019 | 1,172,572 | $ 170.30 | 1,172,572 | $ 8,578 |
| June 1-30, 2019 | 1,197,673 | $ 169.25 | 1,197,673 | $ 8,375 |
| Total April 1-June 30, 2019 | 2,370,245 | $ 169.77 | 2,370,245 | $ 8,375 |
| Total January 1-June 30, 2019 | 5,501,255 | $ 185.78 | 5,496,933 | $ 8,375 |

(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 3. Defaults Upon Senior Securities.** — No matters require disclosure.

**Item 4. Mine Safety Disclosures.** Pursuant to Section 1503 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Act"), the Company is required to disclose, in connection with the mines it operates, information concerning mine safety violations or other regulatory matters in its periodic reports filed with the SEC. The information concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Act is included in Exhibit 95 to this quarterly report.

**Item 5. Other Information.** — No matters require disclosure.

**Item 6. Exhibits.**

| | |
|---|---|
| (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) | 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) | XBRL Taxonomy Extension Schema Document. |
| (101.CAL) | XBRL Taxonomy Extension Calculation Linkbase Document. |
| (101.DEF) | XBRL Taxonomy Extension Definition Linkbase Document. |
| (101.LAB) | XBRL Taxonomy Extension Label Linkbase Document. |
| (101.PRE) | XBRL Taxonomy Extension Presentation Linkbase Document. |

**SIGNATURES**

Pursuant to the requirements 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
(Registrant)

Date: July 26, 2019

By /s/ Nicholas C. Gangestad
Nicholas C. Gangestad,

Senior Vice President and Chief Financial Officer
(Mr. Gangestad is the Principal Financial Officer and has been duly authorized to sign on behalf of the Registrant.)