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 September 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 September 30, 2019
Common Stock, $0.01 par value per share	575,050,655 shares

3M COMPANY
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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 September 30, 2019	Three months ended September 30, 2018	Nine months ended September 30, 2019	Nine months ended September 30, 2018
Net sales	**$ 7,991**	$ 8,152	**$ 24,025**	$ 24,820
Operating expenses				
Cost of sales	**4,188**	4,159	**12,811**	12,622
Selling, general and administrative expenses	**1,455**	1,547	**5,089**	5,920
Research, development and related expenses	**443**	430	**1,390**	1,384
Gain on sale of businesses	**(106)**	—	**(114)**	(530)
Total operating expenses	**5,980**	6,136	**19,176**	19,396
Operating income	**2,011**	2,016	**4,849**	5,424
Other expense (income), net	**45**	51	**349**	144
Income before income taxes	**1,966**	1,965	**4,500**	5,280
Provision for income taxes	**378**	419	**888**	1,266
Net income including noncontrolling interest	**$ 1,588**	$ 1,546	**$ 3,612**	$ 4,014
Less: Net income attributable to noncontrolling interest	**5**	3	**11**	12
Net income attributable to 3M	**$ 1,583**	$ 1,543	**$ 3,601**	$ 4,002
Weighted average 3M common shares outstanding — basic	**576.5**	585.6	**577.2**	591.1
Earnings per share attributable to 3M common shareholders — basic	**$ 2.75**	$ 2.64	**$ 6.24**	$ 6.77
Weighted average 3M common shares outstanding — diluted	**583.0**	598.4	**585.9**	605.1
Earnings per share attributable to 3M common shareholders — diluted	**$ 2.72**	$ 2.58	**$ 6.15**	$ 6.61

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 September 30,		Nine months ended September 30,	
(Millions)	**2019**	**2018**	**2019**	**2018**
Net income including noncontrolling interest	**$ 1,588**	$ 1,546	**$ 3,612**	$ 4,014
Other comprehensive income (loss), net of tax:				
Cumulative translation adjustment	**(202)**	(112)	**(2)**	(441)
Defined benefit pension and postretirement plans adjustment	**76**	114	**356**	344
Cash flow hedging instruments	**8**	46	**(24)**	147
Total other comprehensive income (loss), net of tax	**(118)**	48	**330**	50
Comprehensive income (loss) including noncontrolling interest	**1,470**	1,594	**3,942**	4,064
Comprehensive (income) loss attributable to noncontrolling interest	**(3)**	—	**(10)**	(4)
Comprehensive income (loss) attributable to 3M	**$ 1,467**	$ 1,594	**$ 3,932**	$ 4,060

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)	September 30, 2019	December 31, 2018
Assets		
Current assets		
Cash and cash equivalents	**$ 7,731**	$ 2,853
Marketable securities — current	**30**	380
Accounts receivable — net	**5,020**	5,020
Inventories		
Finished goods	**1,890**	2,120
Work in process	**1,231**	1,292
Raw materials and supplies	**886**	954
Total inventories	**4,007**	4,366
Prepaids	**717**	741
Other current assets	**515**	349
Total current assets	**18,020**	13,709
Property, plant and equipment	**25,508**	24,873
Less: Accumulated depreciation	**(16,617)**	(16,135)
Property, plant and equipment — net	**8,891**	8,738
Operating lease right of use assets	**834**	—
Goodwill	**10,410**	10,051
Intangible assets — net	**2,847**	2,657
Other assets	**1,548**	1,345
Total assets	**$ 42,550**	$ 36,500
Liabilities		
Current liabilities		
Short-term borrowings and current portion of long-term debt	**$ 1,960**	$ 1,211
Accounts payable	**2,079**	2,266
Accrued payroll	**669**	749
Accrued income taxes	**137**	243
Operating lease liabilities — current	**241**	—
Other current liabilities	**2,735**	2,775
Total current liabilities	**7,821**	7,244
Long-term debt	**17,479**	13,411
Pension and postretirement benefits	**2,667**	2,987
Operating lease liabilities	**584**	—
Other liabilities	**3,235**	3,010
Total liabilities	**$ 31,786**	$ 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	**5,861**	5,643
Retained earnings	**42,085**	40,636
Treasury stock, at cost: 368,982,401 shares at September 30, 2019; 367,457,888 shares at December 31, 2018	**(29,865)**	(29,626)
Accumulated other comprehensive income (loss)	**(7,388)**	(6,866)
Total 3M Company shareholders' equity	**10,702**	9,796
Noncontrolling interest	**62**	52
Total equity	**$ 10,764**	$ 9,848
Total liabilities and equity	**$ 42,550**	$ 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)	Nine months ended September 30, 2019	2018
Cash Flows from Operating Activities		
Net income including noncontrolling interest	**$ 3,612**	$ 4,014
Adjustments to reconcile net income including noncontrolling interest to net cash provided by operating activities		
Depreciation and amortization	**1,130**	1,117
Company pension and postretirement contributions	**(129)**	(303)
Company pension and postretirement expense	**242**	306
Stock-based compensation expense	**230**	258
Gain on sale of businesses	**(111)**	(530)
Deferred income taxes	**(88)**	(73)
Loss on deconsolidation of Venezuelan subsidiary	**162**	—
Changes in assets and liabilities		
Accounts receivable	**(14)**	(596)
Inventories	**255**	(562)
Accounts payable	**(222)**	148
Accrued income taxes (current and long-term)	**(53)**	122
Other — net	**(282)**	280
Net cash provided by (used in) operating activities	**4,732**	4,181
Cash Flows from Investing Activities		
Purchases of property, plant and equipment (PP&E)	**(1,161)**	(1,046)
Proceeds from sale of PP&E and other assets	**91**	143
Acquisitions, net of cash acquired	**(704)**	13
Purchases of marketable securities and investments	**(917)**	(1,352)
Proceeds from maturities and sale of marketable securities and investments	**1,265**	2,066
Proceeds from sale of businesses, net of cash sold	**236**	806
Other — net	**45**	8
Net cash provided by (used in) investing activities	**(1,145)**	638
Cash Flows from Financing Activities		
Change in short-term debt — net	**(466)**	(698)
Repayment of debt (maturities greater than 90 days)	**(871)**	(456)
Proceeds from debt (maturities greater than 90 days)	**6,116**	2,247
Purchases of treasury stock	**(1,243)**	(3,601)
Proceeds from issuance of treasury stock pursuant to stock option and benefit plans	**437**	401
Dividends paid to shareholders	**(2,488)**	(2,406)
Other — net	**(158)**	(36)
Net cash provided by (used in) financing activities	**1,327**	(4,549)
Effect of exchange rate changes on cash and cash equivalents	**(36)**	(138)
Net increase (decrease) in cash and cash equivalents	**4,878**	132
Cash and cash equivalents at beginning of year	**2,853**	3,053
Cash and cash equivalents at end of period	**$ 7,731**	$ 3,185

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 September 30, 2019, the Company had a balance of net monetary assets denominated in Argentine pesos (ARS) of approximately 430 million ARS and the exchange rate was approximately 57 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 (11.9 million average options for the three months ended September 30, 2019; 8.0 million average options for the nine months ended September 30, 2019; 3.2 million average options for the three months ended September 30, 2018; 2.8 million average options for the nine months ended September 30, 2018). The computations for basic and diluted earnings per share follow:

Earnings Per Share Computations

	Three months ended September 30,		Nine months ended September 30,	
(Amounts in millions, except per share amounts)	**2019**	**2018**	**2019**	**2018**
Numerator:				
Net income attributable to 3M	**$ 1,583**	$ 1,543	**$ 3,601**	$ 4,002
Denominator:				
Denominator for weighted average 3M common shares outstanding – basic	**576.5**	585.6	**577.2**	591.1
Dilution associated with the Company's stock-based compensation plans	**6.5**	12.8	**8.7**	14.0
Denominator for weighted average 3M common shares outstanding – diluted	**583.0**	598.4	**585.9**	605.1
Earnings per share attributable to 3M common shareholders – basic	**$ 2.75**	$ 2.64	**$ 6.24**	$ 6.77
Earnings per share attributable to 3M common shareholders – diluted	**$ 2.72**	$ 2.58	**$ 6.15**	$ 6.61

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. Adopted using the modified retrospective approach. 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. 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. 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. Simplifies related accounting by eliminating requirement to separately measure and report hedge ineffectiveness. Expands an entity's ability to hedge nonfinancial and financial risk components.	January 1, 2019	See Note 12 for additional details. 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. Impact on January 1, 2019 includes increases of $0.9 billion in each of retained earnings and accumulated other comprehensive loss. 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. 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. 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. 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. 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. 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. 3M continues to evaluate this ASU's impact on its consolidated results of operations and financial condition. Based on the analysis completed to date and due to the nature and extent of 3M's financial instruments in scope for this ASU (primarily accounts receivable) and the historical, current and expected credit quality of its customers, 3M does not expect this ASU to have a material impact on its consolidated results of operations and financial condition. 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. 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 does not expect this ASU to have a material impact on its consolidated results of operations and financial condition.

NOTE 2. Revenue

Contract Balances:
Deferred revenue (current portion) as of September 30, 2019 and December 31, 2018 was $605 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 $80 million and $560 million of the December 31, 2018 balance was recognized as revenue during the three and nine months ended September 30, 2019, respectively, while approximately $70 million and $460 million of the December 31, 2017 balance was recognized as revenue during the the three and nine months ended September 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 September 30,		Nine months ended September 30,	
Net Sales (Millions)	**2019**	**2018**	**2019**	**2018**
Abrasives	**$ 345**	$ 362	**$ 1,079**	$ 1,171
Adhesives and Tapes	**696**	734	**2,075**	2,191
Automotive Aftermarket	**310**	334	**929**	1,038
Closure and Masking Systems	**282**	300	**835**	920
Communication Markets	**—**	8	**—**	169
Electrical Markets	**298**	315	**911**	949
Personal Safety	**813**	864	**2,656**	2,745
Roofing Granules	**101**	83	**293**	283
Other Safety and Industrial	**4**	21	**18**	76
Total Safety and Industrial Business Segment	**$ 2,849**	$ 3,021	**$ 8,796**	$ 9,542
Advanced Materials	**$ 319**	$ 313	**$ 961**	$ 932
Automotive and Aerospace	**485**	509	**1,486**	1,610
Commercial Solutions	**437**	436	**1,361**	1,415
Electronics	**1,001**	1,101	**2,759**	2,951
Transportation Safety	**261**	260	**745**	758
Other Transportation and Electronics	**—**	—	**—**	(1)
Total Transportation and Electronics Business Segment	**$ 2,503**	$ 2,619	**$ 7,312**	$ 7,665
Drug Delivery	**$ 99**	$ 102	**$ 301**	$ 340
Food Safety	**86**	82	**254**	246
Health Information Systems	**296**	208	**853**	618
Medical Solutions	**737**	732	**2,294**	2,273
Oral Care	**312**	317	**991**	1,013
Separation and Purification Sciences	**191**	203	**602**	631
Other Health Care	**—**	(1)	**(5)**	(3)
Total Health Care Business Group	**$ 1,721**	$ 1,643	**$ 5,290**	$ 5,118
Consumer Health Care	**$ 97**	$ 97	**$ 297**	$ 300
Home Care	**242**	249	**747**	773
Home Improvement	**612**	579	**1,739**	1,694
Stationery and Office	**361**	367	**1,006**	1,022
Other Consumer	**12**	10	**32**	30
Total Consumer Business Group	**$ 1,324**	$ 1,302	**$ 3,821**	$ 3,819
Corporate and Unallocated	**$ 28**	$ 35	**$ 98**	$ 47
Elimination of Dual Credit	**(434)**	(468)	**(1,292)**	(1,371)
Total Company	**$ 7,991**	$ 8,152	**$ 24,025**	$ 24,820

Net Sales (Millions)	Three months ended September 30, 2019					
	United States	Asia Pacific	Europe, Middle East and Africa	Latin America and Canada	Other Unallocated	Worldwide
Safety and Industrial	**$ 1,153**	**$ 713**	**$ 626**	**$ 356**	**$ 1**	**$ 2,849**
Transportation and Electronics	**594**	**1,390**	**363**	**157**	**(1)**	**2,503**
Health Care	**827**	**360**	**388**	**145**	**1**	**1,721**
Consumer	**843**	**233**	**136**	**112**	**—**	**1,324**
Corporate and Unallocated	**25**	**1**	**1**	**1**	**—**	**28**
Elimination of Dual Credit	**(150)**	**(207)**	**(49)**	**(27)**	**(1)**	**(434)**
Total Company	**$ 3,292**	**$ 2,490**	**$ 1,465**	**$ 744**	**$ —**	**$ 7,991**

Net Sales (Millions)	Nine months ended September 30, 2019					
	United States	Asia Pacific	Europe, Middle East and Africa	Latin America and Canada	Other Unallocated	Worldwide
Safety and Industrial	**$ 3,498**	**$ 2,190**	**$ 2,035**	**$ 1,073**	**$ —**	**$ 8,796**
Transportation and Electronics	**1,796**	**3,917**	**1,138**	**463**	**(2)**	**7,312**
Health Care	**2,477**	**1,121**	**1,253**	**438**	**1**	**5,290**
Consumer	**2,342**	**745**	**413**	**321**	**—**	**3,821**
Corporate and Unallocated	**91**	**1**	**1**	**6**	**(1)**	**98**
Elimination of Dual Credit	**(462)**	**(591)**	**(158)**	**(81)**	**—**	**(1,292)**
Total Company	**$ 9,742**	**$ 7,383**	**$ 4,682**	**$ 2,220**	**$ (2)**	**$ 24,025**

Net Sales (Millions)	Three months ended September 30, 2018					
	United States	Asia Pacific	Europe, Middle East and Africa	Latin America and Canada	Other Unallocated	Worldwide
Safety and Industrial	$ 1,208	$ 788	$ 665	$ 361	$ (1)	$ 3,021
Transportation and Electronics	627	1,464	378	149	1	2,619
Health Care	740	357	399	146	1	1,643
Consumer	818	237	137	110	—	1,302
Corporate and Unallocated	36	—	—	—	(1)	35
Elimination of Dual Credit	(164)	(225)	(52)	(25)	(2)	(468)
Total Company	$ 3,265	$ 2,621	$ 1,527	$ 741	$ (2)	$ 8,152

Net Sales (Millions)	Nine months ended September 30, 2018					
	United States	Asia Pacific	Europe, Middle East and Africa	Latin America and Canada	Other Unallocated	Worldwide
Safety and Industrial	$ 3,726	$ 2,397	$ 2,296	$ 1,126	$ (3)	$ 9,542
Transportation and Electronics	1,838	4,151	1,218	458	—	7,665
Health Care	2,248	1,114	1,303	453	—	5,118
Consumer	2,273	778	438	330	—	3,819
Corporate and Unallocated	43	—	—	3	1	47
Elimination of Dual Credit	(471)	(639)	(178)	(81)	(2)	(1,371)
Total Company	$ 9,657	$ 7,801	$ 5,077	$ 2,289	$ (4)	$ 24,820

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) 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	508	
Other assets	59	
Accounts payable and other liabilities	(124)	
Interest bearing debt	(251)	
Deferred tax asset/(liability)	(21)	
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 nine months ended September 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 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 third quarter of 2019 were approximately $75 million and $5 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 nine months of 2019 were approximately $200 million and $40 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 October 2019, 3M completed the acquisition of Acelity Inc. and its KCI subsidiaries for cash of approximately $4.5 billion, subject to closing and other adjustments, and assumption of $2.5 billion of debt and related items (see also Note 10). Acelity is a leading global medical technology company focused on advanced wound care and specialty surgical applications marketed under the KCI brand. This transaction will be reflected within the Company's Health Care business. Due to the limited amount of time since the October acquisition date and the limitations on access to Acelity information prior to the acquisition date, the preliminary allocation of purchase consideration is incomplete at this time. As a result, the Company is unable to provide the amounts recognized as of the acquisition date for the major classes of assets acquired and liabilities assumed, including the information required for valuation of intangible assets and goodwill.

There were no acquisitions that closed during the nine months ended September 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 August 2019, 3M closed on the sale of its gas and flame detection business, a leader in fixed and portable gas and flame detection, to Teledyne Technologies Incorporated. This business has annual sales of approximately $120 million. The transaction resulted in a pre-tax gain of $112 million that was reported within the Company's Safety and Industrial business.

In August 2019, 3M entered into an agreement with Avon Rubber p.l.c. to purchase 3M's advanced ballistic-protection business for $91 million, subject to closing and other adjustments, plus contingent considerations of up to $25 million depending on the outcome of pending tenders. The business, with annual sales of approximately $85 million, consists of ballistic helmets, body armor, flat armor and related helmet-attachment products serving government and law enforcement. The transaction, which is subject to customary closing conditions and regulatory approvals, is expected to be completed in late 2019 or early 2020. The Company reflected an immaterial impact in the third quarter of 2019 within the Transportation and Electronics business as a result of measuring this disposal group at the lower of its carrying amount or fair value less cost to sell.

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 $30 million and immaterial in the first nine 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 September 30, 2019 included the following:

(Millions)	**September 30, 2019**
Inventory	**$ 25**
Property, plant and equipment	**10**
Intangible assets	**35**

In addition, approximately $10 million of goodwill was estimated to be attributable to disposal groups classified as held-for-sale as of September 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 $508 million during the first nine 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 September 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	**—**	**—**	**508**	**—**	**508**
Divestiture activity	**(49)**	**—**	**—**	**—**	**(49)**
Translation and other	**(51)**	**(27)**	**(53)**	**31**	**(100)**
Balance as of September 30, 2019	$ **4,616**	$ **1,830**	$ **3,703**	$ **261**	$ **10,410**

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 September 30, 2019, and December 31, 2018, follow:

(Millions)	September 30, 2019	December 31, 2018
Customer related intangible assets	**$ 2,525**	$ 2,291
Patents	**536**	542
Other technology-based intangible assets	**727**	576
Definite-lived tradenames	**673**	664
Other amortizable intangible assets	**122**	125
Total gross carrying amount	**$ 4,583**	$ 4,198
Accumulated amortization — customer related	**(1,107)**	(998)
Accumulated amortization — patents	**(493)**	(487)
Accumulated amortization — other technology-based	**(382)**	(333)
Accumulated amortization — definite-lived tradenames	**(300)**	(276)
Accumulated amortization — other	**(89)**	(88)
Total accumulated amortization	**$ (2,371)**	$ (2,182)
Total finite-lived intangible assets — net	**$ 2,212**	$ 2,016
Non-amortizable intangible assets (primarily tradenames)	**635**	641
Total intangible assets — net	**$ 2,847**	$ 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 nine months ended September 30, 2019 and 2018 follows:

	Three months ended September 30,		Nine months ended September 30,	
(Millions)	2019	2018	2019	2018
Amortization expense	**$ 69**	$ 61	**$ 208**	$ 188

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

(Millions)	Remainder of 2019	2020	2021	2022	2023	2024	After 2024
Amortization expense	$ 69	$ 264	$ 256	$ 242	$ 213	$ 183	$ 950

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. The table above excludes the impact of the carrying value of finite-lived intangible assets associated with disposal groups classified as held-for-sale at September 30, 2019. See Note 3 for additional details. 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 sales, 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	(41)	—	(41)
Adjustments	(14)	—	(14)
Accrued restructuring action balances as of September 30, 2019	$ 17	$ —	$ 17

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	(68)	—	(68)
Adjustments	(3)	—	(3)
Accrued restructuring action balances as of September 30, 2019	$ 13	$ —	$ 13

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 September 30, 2019	Three months ended September 30, 2018	Nine months ended September 30, 2019	Nine months ended September 30, 2018
Interest expense	**$ 109**	$ 85	**$ 324**	$ 255
Interest income	**(26)**	(15)	**(64)**	(52)
Pension and postretirement net periodic benefit cost (benefit)	**(38)**	(19)	**(73)**	(59)
Loss on deconsolidation of Venezuelan subsidiary	**—**	—	**162**	—
Total	**$ 45**	$ 51	**$ 349**	$ 144

Pension and postretirement net periodic benefit costs described in the table above include all components of defined benefit plan net periodic benefit costs except service cost, which is reported in various operating expense lines. Pension and postretirement net periodic benefit costs for the nine months ended September 30, 2019 include a second quarter 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, second and third quarters 2019 and 2018, respectively, or $4.32 and $4.08 per share for the first nine months of 2019 and 2018, respectively.

Consolidated Changes in Equity

Three months ended September 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 June 30, 2019	$ 10,142	$ 5,821	$ 41,362	$ (29,828)	$ (7,272)	$ 59
Net income	1,588		1,583			5
Other comprehensive income (loss), net of tax:						
Cumulative translation adjustment	(202)				(200)	(2)
Defined benefit pension and post-retirement plans adjustment	76				76	—
Cash flow hedging instruments	8				8	—
Total other comprehensive income (loss), net of tax	(118)					
Dividends declared	(828)		(828)			
Stock-based compensation	49	49				
Reacquired stock	(141)			(141)		
Issuances pursuant to stock option and benefit plans	72		(32)	104		
Balance at September 30, 2019	$ 10,764	$ 5,870	$ 42,085	$ (29,865)	$ (7,388)	$ 62

Nine Months Ended September 30, 2019

(Millions)	Total	3M Company Shareholders: 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	3,612		3,601			11
Other comprehensive income (loss), net of tax:						
Cumulative translation adjustment	(2)				(1)	(1)
Defined benefit pension and post-retirement plans adjustment	356				356	—
Cash flow hedging instruments	(24)				(24)	—
Total other comprehensive income (loss), net of tax	330					
Dividends declared	(2,488)		(2,488)			
Stock-based compensation	218	218				
Reacquired stock	(1,211)			(1,211)		
Issuances pursuant to stock option and benefit plans	441		(531)	972		
Balance at September 30, 2019	$ 10,764	$ 5,870	$ 42,085	$ (29,865)	$ (7,388)	$ 62

Three months ended September 30, 2018

(Millions)	Total	3M Company Shareholders: Common Stock and Additional Paid-in Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Non-controlling Interest
Balance at June 30, 2018	$ 10,428	$ 5,559	$ 39,442	$ (27,617)	$ (7,019)	$ 63
Net income	1,546		1,543			3
Other comprehensive income (loss), net of tax:						
Cumulative translation adjustment	(112)				(109)	(3)
Defined benefit pension and post-retirement plans adjustment	114				114	—
Cash flow hedging instruments	46				46	—
Total other comprehensive income (loss), net of tax	48					
Dividends declared	(794)		(794)			
Stock-based compensation	47	47				
Reacquired stock	(1,058)			(1,058)		
Issuances pursuant to stock option and benefit plans	94		(71)	165		
Balance at September 30, 2018	$ 10,311	$ 5,606	$ 40,120	$ (28,510)	$ (6,968)	$ 63

Nine months ended September 30, 2018

(Millions)	Total	3M Company Shareholders: 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	4,014		4,002			12
Other comprehensive income (loss), net of tax:						
Cumulative translation adjustment	(441)				(433)	(8)
Defined benefit pension and post-retirement plans adjustment	344				344	—
Cash flow hedging instruments	147				147	—
Total other comprehensive income (loss), net of tax	50					
Dividends declared	(2,406)		(2,406)			
Stock-based compensation	245	245				
Reacquired stock	(3,621)			(3,621)		
Issuances pursuant to stock option and benefit plans	407		(591)	998		
Balance at September 30, 2018	$ 10,311	$ 5,606	$ 40,120	$ (28,510)	$ (6,968)	$ 63

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

Three months ended September 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 June 30, 2019, net of tax:	$ (1,912)	$ (5,369)	$ 9	$ (7,272)
Other comprehensive income (loss), before tax:				
Amounts before reclassifications	(149)	—	31	(118)
Amounts reclassified out	—	101	(21)	80
Total other comprehensive income (loss), before tax	(149)	101	10	(38)
Tax effect	(51)	(25)	(2)	(78)
Total other comprehensive income (loss), net of tax	(200)	76	8	(116)
Balance at September 30, 2019, net of tax:	$ (2,112)	$ (5,293)	$ 17	$ (7,388)

Nine months ended September 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	(86)	153	14	81
Amounts reclassified out	142	310	(48)	404
Total other comprehensive income (loss), before tax	56	463	(34)	485
Tax effect	(57)	(107)	10	(154)
Total other comprehensive income (loss), net of tax	(1)	356	(24)	331
Balance at September 30, 2019, net of tax:	$ (2,112)	$ (5,293)	$ 17	$ (7,388)

Three months ended September 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 June 30, 2018, net of tax:	$ (1,962)	$ (5,046)	$ (11)	$ (7,019)
Other comprehensive income (loss), before tax:				
Amounts before reclassifications	(110)	—	22	(88)
Amounts reclassified out	—	150	37	187
Total other comprehensive income (loss), before tax	(110)	150	59	99
Tax effect	1	(36)	(13)	(48)
Total other comprehensive income (loss), net of tax	(109)	114	46	51
Balance at September 30, 2018, net of tax:	$ (2,071)	$ (4,932)	$ 35	$ (6,968)

Nine months ended September 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	(392)	—	122	(270)
Amounts reclassified out	—	452	99	551
Total other comprehensive income (loss), before tax	(392)	452	221	281
Tax effect	(41)	(108)	(74)	(223)
Total other comprehensive income (loss), net of tax	(433)	344	147	58
Balance at September 30, 2018, net of tax	$ (2,071)	$ (4,932)	$ 35	$ (6,968)

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

Reclassifications out of Accumulated Other Comprehensive Income Attributable to 3M

Details about Accumulated Other Comprehensive Income Components (Millions)	Amount Reclassified from Accumulated Other Comprehensive Income: Three months ended September 30, 2019	Three months ended September 30, 2018	Nine months ended September 30, 2019	Nine months ended September 30, 2018	Location on Income Statement
Cumulative translation adjustment					
Deconsolidation of Venezuelan subsidiary	**$ —**	$ —	**$ (142)**	$ —	Other income (expense), net
Total before tax	**—**	—	**(142)**	—	
Tax effect	**—**	—	**—**	—	Provision for income taxes
Net of tax	**$ —**	$ —	**$ (142)**	$ —	
Defined benefit pension and postretirement plans adjustments					
Gains (losses) associated with defined benefit pension and postretirement plans amortization					
Prior service benefit	**$ 18**	$ 20	**$ 50**	$ 58	See Note 11
Net actuarial loss	**(119)**	(170)	**(358)**	(510)	See Note 11
Deconsolidation of Venezuelan subsidiary	**—**	—	**(2)**	—	Other income (expense), net
Total before tax	**(101)**	(150)	**(310)**	(452)	
Tax effect	**25**	36	**70**	108	Provision for income taxes
Net of tax	**$ (76)**	$ (114)	**$ (240)**	$ (344)	
Cash flow hedging instruments gains (losses)					
Foreign currency forward/option contracts	**$ 22**	$ (37)	**$ 50**	$ (98)	Cost of sales
Interest rate swap contracts	**(1)**	—	**(2)**	(1)	Interest expense
Total before tax	**21**	(37)	**48**	(99)	
Tax effect	**(4)**	8	**(9)**	22	Provision for income taxes
Net of tax	**$ 17**	$ (29)	**$ 39**	$ (77)	
Total reclassifications for the period, net of tax	**$ (59)**	$ (143)	**$ (343)**	$ (421)	

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. The Company is in the process of resolving open issues identified during those examinations. 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 September 30, 2019, no taxing authority has 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 September 30, 2019 and December 31, 2018 are $736 million and $655 million, respectively.

As of September 30, 2019 and December 31, 2018, the Company had valuation allowances of $70 million and $67 million on its deferred tax assets, respectively.

The effective tax rate for the third quarter of 2019 was 19.3 percent, compared to 21.3 percent in the third quarter of 2018, a decrease of 2.0 percentage points. Primary factors that decreased the Company’s effective tax rate included adjustments related to impacts of U.S. international tax provisions, geographical income mix, and increased benefits from the R&D tax credit. These decreases were partially offset by the tax related to the divestiture of the Company’s gas and flame detection business and decreased benefit from stock options.

The effective tax rate for the first nine months of 2019 was 19.7 percent, compared to 24.0 percent in the first nine months of 2018, a decrease of 4.3 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), prior year resolution of the NRD lawsuit (as described in Note 14), geographical income mix, and increased benefits from the R&D tax credit. These decreases were partially offset by the deconsolidation of the Venezuelan subsidiary and adjustments to uncertain tax positions. In addition, the effective tax rate decreased due to the divestiture of the Company's gas and flame detection business.

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)	**September 30, 2019**	**December 31, 2018**
Commercial paper	**$ —**	$ 366
Certificates of deposit/time deposits	**27**	10
U.S. municipal securities	**3**	3
Asset-backed securities	**—**	1
Current marketable securities	**$ 30**	$ 380
U.S. municipal securities	**$ 46**	$ 37
Non-current marketable securities	**$ 46**	$ 37
Total marketable securities	**$ 76**	$ 417

At September 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 September 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)	**September 30, 2019**
Due in one year or less	$ 30
Due after one year through five years	13
Due after five years through ten years	24
Due after ten years	9
Total marketable securities	$ 76

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

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

In September 2019, 3M entered into a credit facility expiring in July 2020 in the amount of 80 billion Japanese yen. At September 30, 2019, 69 billion Japanese yen, or approximately $640 million at September 30, 2019 exchange rates, was drawn and outstanding.

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

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

Remainder of 2019	2020	2021	2022	2023	2024	After 2024	Total
$ 105	$ 1,305	$ 1,671	$ 1,591	$ 1,796	$ 1,101	$ 11,225	$ 18,794

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 the three and nine months ended September 30, 2019 and 2018 follow:

Benefit Plan Information

(Millions)	Three months ended September 30, Qualified and Non-qualified Pension Benefits United States 2019	2018	International 2019	2018	Postretirement Benefits 2019	2018
Net periodic benefit cost (benefit)						
Operating expense						
Service cost	**$ 63**	$ 72	**$ 32**	$ 37	**$ 10**	$ 13
Non-operating expense						
Interest cost	**$ 155**	$ 141	**$ 40**	$ 40	**$ 20**	$ 20
Expected return on plan assets	**(260)**	(272)	**(75)**	(78)	**(20)**	(21)
Amortization of prior service benefit	**(6)**	(6)	**(3)**	(4)	**(9)**	(10)
Amortization of net actuarial loss	**91**	126	**20**	29	**8**	15
Total non-operating expense (benefit)	**(20)**	(11)	**(18)**	(13)	**(1)**	4
Total net periodic benefit cost (benefit)	**$ 43**	$ 61	**$ 14**	$ 24	**$ 9**	$ 17

(Millions)	Nine months ended September 30, Qualified and Non-qualified Pension Benefits United States 2019	2018	International 2019	2018	Postretirement Benefits 2019	2018
Net periodic benefit cost (benefit)						
Operating expense						
Service cost	**$ 188**	$ 216	**$ 98**	$ 110	**$ 32**	$ 39
Non-operating expense						
Interest cost	**$ 466**	$ 423	**$ 118**	$ 120	**$ 62**	$ 60
Expected return on plan assets	**(780)**	(816)	**(225)**	(235)	**(61)**	(63)
Amortization of prior service benefit	**(18)**	(18)	**(9)**	(10)	**(23)**	(30)
Amortization of net actuarial loss	**274**	378	**59**	87	**25**	45
Settlements, curtailments, special termination benefits and other	**35**	—	**1**	—	**—**	—
Total non-operating expense (benefit)	**(23)**	(33)	**(56)**	(38)	**3**	12
Total net periodic benefit cost (benefit)	**$ 165**	$ 183	**$ 42**	$ 72	**$ 35**	$ 51

For the nine months ended September 30, 2019 contributions totaling $126 million were made to the Company's U.S. and international pension plans and $3 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

<u>Cash Flow Hedges:</u>

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

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 September 30, 2019, the Company had a balance of $17 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 $114 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 September 30, 2019, 3M expects to reclassify approximately $69 million, $18 million, $63 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, and in 2020, respectively, in addition to reclassifying approximately $64 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.

	Pretax Gain (Loss) Recognized in Other Comprehensive Income on Derivative	Pretax Gain (Loss) Reclassified from Accumulated Other Comprehensive Income into Income	
Three months ended September 30, 2019 (Millions)	**Amount**	**Location**	**Amount**
Foreign currency forward/option contracts	$ 105	Cost of sales	$ 22
Interest rate swap contracts	(74)	Interest expense	(1)
Total	$ 31		$ 21
Nine months ended September 30, 2019 (Millions)	**Amount**	**Location**	**Amount**
Foreign currency forward/option contracts	$ 137	Cost of sales	$ 50
Interest rate swap contracts	(123)	Interest expense	(2)
Total	$ 14		$ 48

	Pretax Gain (Loss) Recognized in Other Comprehensive Income on Effective Portion of Derivative	Pretax Gain (Loss) Recognized in Income on Effective Portion of Derivative as a Result of Reclassification from Accumulated Other Comprehensive Income		Ineffective Portion of Gain (Loss) on Derivative and Amount Excluded from Effectiveness Testing Recognized in Income	
Three months ended September 30, 2018 (Millions)	**Amount**	**Location**	**Amount**	**Location**	**Amount**
Foreign currency forward/option contracts	$ 12	Cost of sales	$ (37)	Cost of sales	$ —
Interest rate swap contracts	10	Interest expense	—	Interest expense	—
Total	$ 22		$ (37)		$ —
Nine months ended September 30, 2018 (Millions)	**Amount**	**Location**	**Amount**	**Location**	**Amount**
Foreign currency forward/option contracts	$ 112	Cost of sales	$ (98)	Cost of sales	$ —
Interest rate swap contracts	10	Interest expense	(1)	Interest expense	—
Total	$ 122		$ (99)		$ —

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 the three and nine months ended September 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:

	Gain (Loss) on Derivative Recognized in Income		Gain (Loss) on Hedged Item Recognized in Income	
Three months ended September 30, 2018 (Millions)	**Location**	**Amount**	**Location**	**Amount**
Interest rate swap contracts	Interest expense	$ —	Interest expense	$ —
Total		$ —		$ —
Nine months ended September 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:

	Carrying Value of the Hedged Liabilities (in millions)		Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Value of the Hedged Liabilities (in millions)	
Location on the Consolidated Balance Sheet	**September 30, 2019**	**December 31, 2018**	**September 30, 2019**	**December 31, 2018**
Short-term borrowings and current portion of long-term debt	$ 499	$ 596	$ (1)	$ (4)
Long-term debt	771	1,276	26	18
Total	$ 1,270	$ 1,872	$ 25	$ 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 September 30, 2019, the total notional amount of foreign exchange forward contracts designated in net investment hedges was approximately 150 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.

	Pretax Gain (Loss) Recognized as Cumulative Translation within Other Comprehensive Income		Amount Excluded from Effectiveness Testing Recognized in Income		
Three months ended September 30, 2019 (Millions)	**Amount**		**Location**	**Amount**	
Foreign currency denominated debt	$	177	Cost of sales	$	—
Foreign currency forward contracts		38	Cost of sales		6
Total	$	215		$	6
Nine months ended September 30, 2019 (Millions)	**Amount**		**Location**	**Amount**	
Foreign currency denominated debt	$	205	Cost of sales	$	—
Foreign currency forward contracts		43	Cost of sales		18
Total	$	248		$	18

	Pretax Gain (Loss) Recognized as Cumulative Translation within Other Comprehensive Income on Effective Portion of Instrument		Ineffective Portion of Gain (Loss) on Instrument and Amount Excluded from Effectiveness Testing Recognized in Income		
Three months ended September 30, 2018 (Millions)	**Amount**		**Location**	**Amount**	
Foreign currency denominated debt	$	(14)	Cost of sales	$	—
Foreign currency forward contracts		(3)	Cost of sales		1
Total	$	(17)		$	1
Nine months ended September 30, 2018 (Millions)	**Amount**		**Location**	**Amount**	
Foreign currency denominated debt	$	157	Cost of sales	$	(2)
Foreign currency forward contracts		14	Cost of sales		1
Total	$	171		$	(1)

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 September 30, 2019 Gain (Loss) on Derivative Recognized in Income			Nine months ended September 30, 2019 Gain (Loss) on Derivative Recognized in Income		
(Millions)	**Location**	**Amount**		**Location**	**Amount**	
Foreign currency forward/option contracts	Cost of sales	$	6	Cost of sales	$	4
Foreign currency forward contracts	Interest expense		(8)	Interest expense		(26)
Total		$	(2)		$	(22)

(Millions)	Three months ended September 30, 2018 Gain (Loss) on Derivative Recognized in Income Location	Amount	Nine months ended September 30, 2018 Gain (Loss) on Derivative Recognized in Income Location	Amount
Foreign currency forward/option contracts	Cost of sales	$ 11	Cost of sales	$ 11
Foreign currency forward contracts	Interest expense	(7)	Interest expense	(98)
Total		$ 4		$ (87)

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 September 30, 2019		Nine months ended September 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	$ 4,188	$ 45	$ 12,811	$ 349
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	$ 22	$ —	$ 50	$ —
Interest rate swap contracts:				
Amount of gain or (loss) reclassified from accumulated other comprehensive income into income	—	(1)	—	(2)
Gain or (loss) on fair value hedging relationships:				
Interest rate swap contracts:				
Hedged items	$ —	$ 1	$ —	$ (11)
Derivatives designated as hedging instruments	—	(1)	—	11

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.

September 30, 2019 (Millions)	Gross Notional Amount	Assets Location	Assets Fair Value Amount	Liabilities Location	Liabilities Fair Value Amount
Derivatives designated as hedging instruments					
Foreign currency forward/option contracts	$ 2,235	Other current assets	$ 128	Other current liabilities	$ 2
Foreign currency forward/option contracts	1,110	Other assets	70	Other liabilities	1
Interest rate swap contracts	500	Other current assets	—	Other current liabilities	1
Interest rate swap contracts	603	Other assets	20	Other liabilities	—
Total derivatives designated as hedging instruments			$ 218		$ 4
Derivatives not designated as hedging instruments					
Foreign currency forward/option contracts	$ 1,931	Other current assets	$ 9	Other current liabilities	$ 10
Total derivatives not designated as hedging instruments			$ 9		$ 10
Total derivative instruments			$ 227		$ 14

December 31, 2018 (Millions)	Gross Notional Amount	Assets Location	Assets Fair Value Amount	Liabilities Location	Liabilities Fair Value Amount
Derivatives designated as hedging instruments					
Foreign currency forward/option contracts	$ 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 September 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

September 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	Gross Amounts not Offset in the Consolidated Balance Sheet that are Subject to Master Netting Agreements: Cash Collateral Received	Net Amount of Derivative Assets
Derivatives subject to master netting agreements	$ 227	$ 9	$ —	$ 218
Derivatives not subject to master netting agreements	—			—
Total	$ 227			$ 218

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

September 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	Gross Amounts not Offset in the Consolidated Balance Sheet that are Subject to Master Netting Agreements: Cash Collateral Pledged	Net Amount of Derivative Liabilities
Derivatives subject to master netting agreements	$ 14	$ 9	$ —	$ 5
Derivatives not subject to master netting agreements	—			—
Total	$ 14			$ 5

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 $69 million and $190 million for the the three and nine months ended September 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:

Investments

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

In addition to the information above, 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 September 30, 2019	Fair Value Measurements Using Inputs Considered as Level 1	Level 2	Level 3
Assets:				
Available-for-sale:				
Marketable securities:				
Commercial paper	$ —	$ —	$ —	$ —
Certificates of deposit/time deposits	27	—	27	—
U.S. municipal securities	49	—	—	49
Investments	22	22	—	—
Derivative instruments — assets:				
Foreign currency forward/option contracts	207	—	207	—
Interest rate swap contracts	20	—	20	—
Liabilities:				
Derivative instruments — liabilities:				
Foreign currency forward/option contracts	13	—	13	—
Interest rate swap contracts	1	—	1	—

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 September 30, 2019	2018	Nine months ended September 30, 2019	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 nine months ended September 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 and investments, 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:

	September 30, 2019		December 31, 2018	
(Millions)	Carrying Value	Fair Value	Carrying Value	Fair Value
Long-term debt, excluding current portion	**$ 17,479**	**$ 18,573**	$ 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 September 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, 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 September 30, 2019, the Company is a named defendant, with multiple co-defendants, in numerous lawsuits in various courts that purport to represent approximately 1,770 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 nine months of 2019 for respirator mask/asbestos liabilities by $337 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 nine months of 2019, the Company made payments for legal defense costs and settlements of $390 million related to the respirator mask/asbestos litigation. As of September 30, 2019, the Company had an accrual for respirator mask/asbestos liabilities (excluding Aearo accruals) of $620 million. This accrual represents the Company's best estimate of probable loss and reflects an estimation period for future claims that may be filed against the Company approaching the year 2050. The Company cannot estimate the amount or upper end of the range of amounts by which the liability may exceed the accrual the Company has established because of the (i) inherent difficulty in projecting the number of claims that have not yet been asserted or the time period in which future claims may be asserted, (ii) the complaints nearly always assert claims against multiple defendants where the damages alleged are typically not attributed to individual defendants so that a defendant's share of liability may turn on the law of joint and several liability, which can vary by state, (iii) the multiple factors described above that the Company considers in estimating its liabilities, and (iv) the several possible developments described above that may occur that could affect the Company's estimate of liabilities.

As of September 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.

<u>Respirator Mask/Asbestos Litigation — Aearo Technologies</u>

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 September 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 September 30, 2019, the Company, through its Aearo subsidiary, had accruals of $24 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 continues 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 parts per billion (ppb). In February 2018, the MDH published reports finding no unusual rates of certain cancers or adverse birth outcomes (low birth rates or premature births) among residents of Washington and Dakota Counties in Minnesota. In April 2019, the MDH issued a new HBV for PFOS of 15 ppt and a new HBV for PFHxS of 47 ppt.

In May 2018, the EPA announced a four-step PFAS action plan, which includes evaluating the need to set Safe Drinking Water Act maximum contaminant levels (MCLs) for PFOA and PFOS and beginning the steps necessary to designate PFOA and PFOS as "hazardous substances" under CERCLA. In November 2018, the EPA asked for public comment on draft toxicity assessments for two PFAS compounds, including PFBS. In February 2019, the EPA issued a PFAS Action Plan that outlines short- and long-term actions the EPA is taking to address PFAS – actions that include developing a national drinking water determination for PFOA and PFOS, strengthening enforcement authorities and evaluating cleanup approaches, nationwide drinking water monitoring for PFAS, expanding scientific knowledge for understanding and managing risk from PFAS, and developing consistent risk communication tools for communicating with other agencies and the public. With respect to groundwater contaminated with PFOA and PFOS, the EPA 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, which will fund a new water filtration system, with 3M 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 March 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.

In July 2019, 3M announced that it had initiated an investigation into the possible presence of PFAS in three closed municipal landfills in Decatur that accepted waste from 3M's Decatur plant and other companies in the 1960s through the 1980s. 3M is working with local and state entities as it conducts its investigation and will report the results and recommended remedial action, if any, to those entities and the public.

Litigation Related to Historical PFAS Manufacturing Operations in Minnesota

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

State Attorneys General Litigation related to PFAS

Minnesota. In December 2010, the State of Minnesota, by its Attorney General, filed a lawsuit in Hennepin County District Court against 3M 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.

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

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

New Jersey. In March 2019, the New Jersey Attorney General filed two actions against 3M, DuPont, and Chemours on behalf of the New Jersey Department of Environmental Protection (NJDEP), the NJDEP's commissioner, and the New Jersey Spill Compensation Fund regarding alleged discharges at two DuPont facilities in Pennsville, New Jersey (Salem County) and Parlin, New Jersey (Middlesex County). 3M is included as a defendant in both cases because it allegedly supplied PFOA to DuPont for use at the facilities at issue. Both cases expressly seek to have the defendants pay all costs necessary to investigate, remediate, assess, and restore the affected natural resources of New Jersey. DuPont removed these cases to federal court, where they remain pending in the early stages of litigation.

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

New Hampshire. In May 2019, the New Hampshire Attorney General filed two lawsuits alleging contamination of the state's drinking water supplies and other natural resources by PFAS chemicals. The first lawsuit was filed against 3M and seven co-defendants, alleging PFAS contamination resulting from the use of AFFF products at several sites around the state. This case was removed to federal court and transferred to the AFFF MDL. The second suit asserts PFAS contamination from non-AFFF sources and names 3M, DuPont, and Chemours as defendants. This suit remains pending in state court in early stages of litigation.

Vermont. In June 2019, the Vermont Attorney General filed two lawsuits alleging contamination of the state's drinking water supplies and other natural resources by PFAS chemicals. The first lawsuit was filed against 3M and ten co-defendants, alleging PFAS contamination resulting from the use of AFFF products at several sites around the state. This case was removed to federal court and transferred to the AFFF MDL. The second suit asserts PFAS contamination from non-AFFF sources and names 3M and several entities related to DuPont and Chemours as defendants. This suit remains pending in state court in early stages of litigation.

Michigan. 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.

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

Aqueous Film Forming Foam (AFFF) Environmental Litigation

3M manufactured and marketed AFFF for use in firefighting at airports and military bases from approximately 1963 to 2002. As of September 30, 2019, 130 putative class action and other lawsuits have been filed against 3M (along with other defendants) in various state and federal courts where current or former airports, military bases, or fire training facilities are or were located. As previously noted, some of these cases have been brought by state or territory attorneys generals. 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 but not limited to Ansul Co. (acquired by Tyco, Inc.), Angus Fire, Buckeye Fire Protection Co., Chemguard, Chemours, DuPont, National Foam, Inc., and United Technologies Corp.

In December 2018, the U.S. Judicial Panel on Multidistrict Litigation granted motions to transfer and consolidate all AFFF cases pending in federal courts to the U.S. District Court for the District of South Carolina to be managed in an MDL proceeding to centralize pre-trial proceedings. Additional AFFF cases continue to be transferred into the MDL as they are filed or removed to federal court. As of September 30, 2019, there were 125 cases in the MDL, 119 of which name 3M as a defendant. The parties in the MDL are currently in the process of conducting discovery.

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

In September 2019, an individual plaintiff filed an AFFF lawsuit against 3M, together with the State of Alaska, Chemguard, Tyco Fire Equipment Co., DuPont, Chemours and other co-defendants, in state court in Alaska. Plaintiff in this case seeks property damages and medical monitoring on behalf of a putative class. Also in September 2019, 3M was named a defendant, together with Tyco Fire Products, Chemguard, Buckeye Fire Protection and other co-defendants, in an AFFF action filed by individual plaintiffs in state court of New York. Plaintiffs in the New York case seek damages for alleged property damage and personal injuries, as well as injunctive relief in the form of medical monitoring and property testing and remediation.

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 47 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, one consolidated putative class action is pending in the U.S. District Court for the Western District of Michigan against 3M and Wolverine World Wide (Wolverine) and other defendants. The action arises from Wolverine's allegedly improper disposal of materials and wastes, including 3M Scotchgard, related to Wolverine's shoe manufacturing operations. Plaintiffs allege Wolverine used 3M Scotchgard in its manufacturing process and that chemicals from 3M's product contaminated the environment and drinking water sources after disposal. In addition to the one consolidated federal court putative class action, as of September 30, 2019, 3M has been named as a defendant in 254 private individual actions in Michigan state court based on similar allegations. Four of these cases have been selected for bellwether trials beginning in 2020. Wolverine also filed a third-party complaint against 3M in a suit by the State of Michigan and intervenor townships that seeks to compel Wolverine to investigate and address contamination associated with its historic disposal activity. 3M filed an answer and counterclaims to Wolverine's third-party complaint in June 2019. In September 2019, the parties (including 3M as third-party defendant) engaged in mediation, but resolution of the case was not reached. 3M and Wolverine have scheduled further mediation in late October 2019. 3M is also a defendant, together with Georgia-Pacific as co-defendant, in a putative class action in federal court in Michigan brought by residents of Parchment, who allege that the municipal drinking water is contaminated from waste generated by a paper mill owned by Georgia-Pacific's corporate predecessor. Defendants have moved to dismiss certain claims in the complaint, and the parties have begun discovery on the remaining claims.

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 brought by individuals alleging PFAS contamination of their water supply resulting from the operations of local metal plating facilities. Plaintiffs allege that 3M supplied PFAS to the metal plating facilities. DuPont/Chemours and the metal platers have also been named as defendants. 3M removed the case from state court to federal court, and plaintiffs have filed a motion to remand.

In Maine, 3M is defending one individual action in state 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 an action brought in federal court by Middlesex Water Company, alleging PFAS contamination of its water wells. The case is currently in the early stages of discovery. 3M has moved to dismiss the complaint and, separately, moved to transfer the case to the AFFF MDL. On a separate matter, 3M was dismissed without prejudice from a class action that was previously pending in federal court in New Jersey, relating to the DuPont Chambers Works plant.

In October 2018, 3M and other defendants, including DuPont and Chemours, were named in a putative class action in the U.S. District Court for the Southern District of Ohio brought by the named plaintiff, a firefighter allegedly exposed to PFAS chemicals through his use of firefighting foam, purporting to represent a putative class of all U.S. individuals with detectable levels of PFAS in their blood. The plaintiff brings claims for negligence, battery, and conspiracy and seeks injunctive relief, including an order “establishing an independent panel of scientists” to evaluate PFAS. 3M and other entities jointly filed a motion to dismiss in February 2019. In September 2019, the court denied the defendants’ motion.

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. In September 2019, a 3M representative testified before and responded to questions from the Subcommittee on Environment with respect to PFAS and the Company’s environmental stewardship initiatives.

The Company 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). During June and July 2019, the Company took steps to fully control the aforementioned processes by capturing all wastewater produced by the processes and by treating all air emissions. These processes have been back on line and in operation since July 2019. The Company continues to cooperate with the EPA and ADEM in their investigations and will work with the regulatory authorities to demonstrate 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.

As part of the ongoing work with EPA and ADEM to address compliance matters at the Decatur facility, the Company announced in September 2019 that it had elected to temporarily idle certain other manufacturing processes at 3M Decatur. The Company is reviewing its operations at the plant as it works to re-start the idled processes and ensure operations are in compliance with environmental regulatory requirements and Company policies and procedures. The Company is also reviewing operations at its other plants with similar manufacturing processes, such as those in Cordova, Illinois and Cottage Grove, Minnesota, to ensure those operations are in compliance with applicable environmental regulatory requirements and Company policies and procedures. The Company will continue to work with relevant state and federal agencies as it conducts these reviews. The Company cannot predict at this time the outcomes of resolving these compliance matters or what potential actions may be taken by the regulatory agencies.

In July 2019, Heavy & General Laborers’ Locals 472 & 172 Welfare Fund filed a putative securities class action against 3M Company, its former Chairman and CEO, current Chairman and CEO, and current CFO in the U.S. District Court for the District of New Jersey. In August 2019, an individual plaintiff filed a similar putative securities class action in the same district. Plaintiffs allege that defendants made false and misleading statements regarding 3M's exposure to liability associated with PFAS, and bring claims for damages under Section 10(b) of the Securities Exchange Act of 1934 and SEC Rule 10b-5 against all defendants, and under Section 20(a) of the Securities and Exchange Act of 1934 against the individual defendants. The suit is in the early stages of litigation.

Other Environmental Litigation

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

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

Environmental Liabilities and Insurance Receivables

The Company periodically examines whether the contingent liabilities related to the environmental matters and litigation described above are probable and estimable based on experience and developments in those matters. During the first quarter of 2019, the EPA issued its PFAS Action Plan and the Company settled the litigation with the Water Authority (both matters are described in more detail above). The Company completed a comprehensive review with the assistance of environmental consultants and other experts regarding environmental matters and litigation related to historical PFAS manufacturing operations in Minnesota, Alabama, Gendorf Germany, and at four former landfills in Alabama. As a result of these developments and of that review, the Company increased its accrual for "other environmental liabilities" by $235 million pre-tax (including the settlement with the Water Authority) or $186 million after tax ($0.32 per diluted share) in the first quarter of 2019. As of September 30, 2019, the Company had recorded liabilities of $241 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 September 30, 2019, the Company had recorded liabilities of $20 million for estimated non-PFAS related "environmental remediation liabilities" 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 September 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 third 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 September 30, 2019, the Company is a named defendant in two lawsuits involving two plaintiffs (compared to approximately 5,015 plaintiffs at December 31, 2018) who allege the Bair Hugger™ patient warming system caused a surgical site infection. 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 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. 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. In June 2019, the MDL judge heard oral arguments on 3M's motion for reconsideration. In July 2019, the U.S. District Court reconsidered that decision, excluded several of the plaintiffs' causation experts, and granted summary judgment for 3M in all cases pending in the MDL. Plaintiffs have appealed that decision to the U.S. Court of Appeals for the Eighth Circuit. Plaintiffs also previously appealed a May 2018 jury verdict in favor of 3M in the first bellwether trial in the MDL and the dismissal of another bellwether case.

In January 2018, the Minnesota 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. Final dismissal was entered in April 2019, effectively ending the Minnesota state court cases.

3M has been defending one active state court action in Hidalgo County, Texas, which combines Bair Hugger product liability claims with medical malpractice claims. In August 2019, the U.S. District Court managing the MDL entered an order enjoining the individual plaintiff from pursuing his claims in Texas state court because he had previously filed and dismissed a claim in the MDL. The plaintiff has appealed the order to the U.S. Court of Appeals for the Eighth Circuit.

During the third quarter of 2019, 3M also defended four actions filed in Missouri state court. 3M removed these cases to federal court and moved to transfer them to the MDL. Three cases have been transferred to the MDL. Plaintiffs opposed transfer to the MDL and have filed motions 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. In September 2019, the court issued an order granting final approval of the settlement.

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 September 30, 2019, the Company is a named defendant in approximately 2,245 lawsuits (including 13 putative class actions) in various state and federal courts that purport to represent approximately 11,297 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. Discovery is underway.

For product liability litigation matters described in this section for which a liability has been recorded, the amount recorded is not material to the Company's consolidated results of operations or financial condition. In addition, the Company is not able to estimate a possible loss or range of loss in excess of the established accruals at this time.

Compliance Matter

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

NOTE 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 September 30, 2019	Nine months ended September 30, 2019
Operating lease cost	$ 78	$ 229
Finance lease cost:		
Amortization of assets	5	15
Interest on lease liabilities	—	1
Variable lease cost	26	68
Total net lease cost	$ 109	$ 313

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: September 30, 2019
Operating leases:			
Operating lease right of use assets	Operating lease right of use assets	$	834
Current operating lease liabilities	Operating lease liabilities - current	$	241
Noncurrent operating lease liabilities	Operating lease liabilities		584
Total operating lease liabilities		$	825
Finance leases:			
Property and equipment, at cost	Property, plant and equipment	$	235
Accumulated amortization	Property, plant and equipment (accumulated depreciation)		(99)
Property and equipment, net		$	136
Current obligations of finance leases	Other current liabilities	$	18
Finance leases, net of current obligations	Other liabilities		116
Total finance lease liabilities		$	134
Weighted average remaining lease term (in years):			
Operating leases			5.7
Finance leases			9.2
Weighted average discount rate:			
Operating leases			3.3 %
Finance leases			3.8 %

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

(Millions)		Nine months ended September 30, 2019
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$	231
Operating cash flows from finance leases		1
Financing cash flows from finance leases		12
Right of use assets obtained in exchange for lease liabilities:		
Operating leases		288
Finance leases		58
Gain on sale leaseback transactions, net		59

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. In the third quarter of 2019, the Company sold an office location involving a leaseback resulting in a $59 million gain. 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:

(Millions)	September 30, 2019 Finance Leases	September 30, 2019 Operating Leases
Remainder of 2019	$ 8	$ 73
2020	20	241
2021	16	168
2022	15	123
2023	15	85
After 2023	67	211
Total	$ 141	$ 901
Less: Amounts representing interest	(7)	(76)
Present value of future minimum lease payments	134	825
Less: Current obligations	18	241
Long-term obligations	$ 116	$ 584

As of September 30, 2019, the Company has additional operating lease commitments that have not yet commenced of approximately $29 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 September 30, 2019, the remaining shares available for grant under the LTIP Program are 22.1 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 nine months ended September 30, 2019 and 2018.

Stock-Based Compensation Expense

	Three months ended September 30,		Nine months ended September 30,	
(Millions)	**2019**	**2018**	**2019**	**2018**
Cost of sales	**$ 8**	$ 8	**$ 39**	$ 40
Selling, general and administrative expenses	**33**	35	**151**	177
Research, development and related expenses	**7**	7	**40**	41
Stock-based compensation expenses	**$ 48**	$ 50	**$ 230**	$ 258
Income tax benefits	**$ (12)**	$ (20)	**$ (120)**	$ (137)
Stock-based compensation expenses (benefits), net of tax	**$ 36**	$ 30	**$ 110**	$ 121

Stock Option Program

The following table summarizes stock option activity during the nine months ended September 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	**(3,390)**	**90.13**		
Forfeited	**(96)**	**198.89**		
September 30	**34,540**	**$ 149.80**	**66**	**$ 910**
Options exercisable				
September 30	**27,295**	**$ 135.36**	**56**	**$ 910**

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 September 30, 2019, there was $79 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 22 months. The total intrinsic values of stock options exercised were $368 million and $411 million during the nine months ended September 30, 2019 and 2018, respectively. Cash received from options exercised was $304 million and $270 million for the nine months ended September 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 $77 million and $87 million for the nine months ended September 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 nine months ended September 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	13	181.09
Vested	(686)	148.24
Forfeited	(50)	190.88
As of September 30	1,630	$ 200.12

As of September 30, 2019, there was $90 million of compensation expense that has yet to be recognized related to non-vested restricted stock and restricted stock units. This expense is expected to be recognized over the remaining weighted-average vesting period of 23 months. The total fair value of restricted stock and restricted stock units that vested during the nine months ended September 30, 2019 and 2018 was $136 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 nine months ended September 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 nine months ended September 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	**(72)**	**206.51**
Forfeited	**(22)**	**209.93**
As of September 30	**420**	**$ 205.34**

As of September 30, 2019, there was $20 million of compensation expense that has yet to be recognized related to performance shares. This expense is expected to be recognized over the remaining weighted-average earnings period of 19 months. The total fair value of performance shares that were distributed were $45 million and $48 million for the nine months ended September 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 nine months ended September 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 and Industrial; Transportation and Electronics; Health Care; and Consumer. 3M's four business segments bring together common or related 3M technologies, enhancing the development of innovative products and services and providing for efficient sharing of business resources. Transactions among reportable segments are recorded at cost. 3M is an integrated enterprise characterized by substantial intersegment cooperation, cost allocations and inventory transfers. Therefore, management does not represent that these segments, if operated independently, would report the operating income information shown. 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

(Millions)	Three months ended September 30, 2019	Three months ended September 30, 2018	Nine months ended September 30, 2019	Nine months ended September 30, 2018
Net Sales				
Safety and Industrial	**$ 2,849**	$ 3,021	**$ 8,796**	$ 9,542
Transportation and Electronics	**2,503**	2,619	**7,312**	7,665
Health Care	**1,721**	1,643	**5,290**	5,118
Consumer	**1,324**	1,302	**3,821**	3,819
Corporate and Unallocated	**28**	35	**98**	47
Elimination of Dual Credit	**(434)**	(468)	**(1,292)**	(1,371)
Total Company	**$ 7,991**	$ 8,152	**$ 24,025**	$ 24,820
Operating Income				
Safety and Industrial	**$ 765**	$ 697	**$ 2,062**	$ 2,753
Transportation and Electronics	**631**	726	**1,746**	2,051
Health Care	**459**	475	**1,406**	1,443
Consumer	**308**	300	**809**	811
Corporate and Unallocated	**(40)**	(57)	**(858)**	(1,293)
Elimination of Dual Credit	**(112)**	(125)	**(316)**	(341)
Total Company	**$ 2,011**	$ 2,016	**$ 4,849**	$ 5,424

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, privacy screen protection products are primarily sold by the Display Materials and Systems Division within the Transportation and Electronics business segment; however, certain sales districts within the Consumer business segment provide the customer account activity for sales of the product to particular customers. In this example, the non-primary selling segment (Consumer) would also receive credit for the associated net sales initiated through its sales district and the related approximate operating income. The assigned operating income related to dual credit activity may differ from operating income that would result from actual costs associated with such sales. The offset to the dual credit business segment reporting is reflected as a reconciling item entitled "Elimination of Dual Credit," such that sales and operating income in total are unchanged.

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 the three and nine months ended September 30, 2019 compared to 2018.

(Earnings per diluted share)	Three months ended September 30, 2019	Nine months ended September 30, 2019
Same period last year	$ 2.58	$ 6.61
Significant litigation-related charges	—	1.16
TCJA measurement period adjustment	—	0.36
Same period last year, excluding significant litigation-related charges and TCJA measurement period adjustment	$ 2.58	$ 8.13
Increase/(decrease) in earnings per share - diluted, due to:		
2018 divestiture of Communication Markets Division, net of related restructuring actions	—	(0.48)
Organic growth/productivity and other	(0.16)	(0.46)
Second quarter 2019 restructuring actions	—	(0.21)
Acquisitions/divestitures	0.10	0.03
Foreign exchange impacts	0.05	—
Income tax rate	0.08	(0.06)
Shares of common stock outstanding	0.07	0.20
Current period, excluding significant litigation-related charges and Venezuelan deconsolidation	$ 2.72	$ 7.15
Significant litigation-related charges	—	0.72
Loss on deconsolidation of Venezuelan subsidiary	—	0.28
Current period	$ 2.72	$ 6.15

For the third quarter of 2019, net income attributable to 3M was $1.583 billion, or $2.72 per diluted share compared to $1.543 billion or $2.58 per diluted share in the same period last year, an increase of 5.4 percent on a per diluted share basis. For the first nine months of 2019, net income attributable to 3M was $3.601 billion, or $6.15 per diluted share compared to $4.002 billion or $6.61 per diluted share in the same period last year, a decrease of 7.0 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.

There were no items related to the determination of non-GAAP measures described above for either of the third quarters of 2019 or 2018. However, for the first nine months of 2019 compared to the same period in 2018, on an adjusted basis, net income attributable to 3M was $4.187 billion, or $7.15 per diluted share versus $4.929 billion, or $8.13 per diluted share, respectively, which was a decrease of 12.1 percent on a per diluted share basis.

In the first nine months of 2019, while 3M experienced sales growth in its Consumer and Health Care segments, this was more than offset by declines in 3M’s Safety and Industrial and Transportation and Electronics segments. These two businesses were impacted by weakness in certain end markets (China, automotive and electronics) and channel inventory adjustments, particularly within Asia Pacific and the United States. Earnings were also impacted by second quarter restructuring and actions taken by 3M to lower production volumes and reduce inventories to improve cash flow. Partially offsetting these impacts were benefits in the third quarter from the restructuring actions, as well as net gains related to property sales.

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 the first nine months of 2018 and reflects the specific income tax rate associated with these items.

Organic growth/productivity and other:

- Negative organic local-currency sales growth as a result of weakness in certain end markets and channel inventory adjustments, along with actions taken by 3M to lower production volumes and reduce inventories to improve cash flow, reduced earnings per diluted share. Partially offsetting these impacts were benefits from restructuring actions taken in the second quarter of 2019, as well as net gains related to property sales.
- 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 $13 million and $57 million for the third quarter and first nine months of 2019, respectively, as a result of higher U.S. average debt balances, partially offset by the year-on-year increase in interest income driven by higher balances in cash, cash equivalents and marketable securities resulting from the proceeds from debt issuances in advance of the October 2019 Acelity acquisition.

Second quarter 2019 restructuring actions:

- During the second quarter of 2019, in light of a slower than expected 2019 sales, 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 the first nine 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), but also include costs leading up to the October 2019 acquisition of Acelity. These items collectively decreased earnings per diluted share by 4 cents and 10 cents year-on-year for the third quarter and first nine months of 2019, respectively. The net impacts 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. Expenses related to the October 2019 acquisition of Acelity, largely relate to financing costs in advance of the close of the acquisition.
- Divestiture impacts 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). These items collectively increased earnings per diluted share by 14 cents and 17 cents year-on-year for the third quarter and first nine months of 2019, respectively. The net impacts included 14 cents for both the third quarter and first nine months of 2019 related to the gain from the third quarter 2019 divestiture of the Company's gas and flame detection business. The first nine months of 2019 also includes 7 cents from the second quarter 2019 "held for sale" tax benefit related to the legal entities associated with the divestiture. Other incremental year-on-year gains/losses on divestitures and the lost operating income from divested businesses decreased earnings per share by an immaterial amount and 4 cents year-on-year for the third quarter and first nine months of 2019, respectively.
- In addition to divestiture impacts above, remaining stranded costs and lost operating income related to the 2018 divestiture of the Communication Markets Division decreased earnings per diluted share by 4 cents year-on-year for first nine months of 2019. The impact for the third quarter was immaterial.

Foreign exchange impacts:

- Foreign currency impacts (net of hedging) increased pre-tax earnings year-on-year by approximately $39 million and $3 million, or the equivalent of 5 cents per diluted share and an immaterial amount for the third quarter and first nine months of 2019, respectively, excluding the impact of foreign currency changes on tax rates.

Income tax rate:

- As disclosed above, certain items above reflect specific income tax rates associated with those items. Overall, the effective tax rate for the third quarter of 2019 was 19.3 percent, a decrease of 2.0 percentage points versus 2018. The effective tax rate for the first nine months of 2019 was 19.7 percent, a decrease of 4.3 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 decreased 0.6 percentage points year-on-year for the first nine months of 2019.
- Factors that decreased the effective tax rate for the third quarter included adjustments related to impacts of U.S. international tax provisions, geographical income mix, and increased benefits from the R&D tax credit. These decreases were partially offset by the tax related to the divestiture of the Company's gas and flame detection business and decreased benefit from stock options. Factors that decreased the effective tax for the first nine months of 2019 included prior year measurement period adjustments related to 2017 Tax Cuts and Jobs Act (TCJA), prior year resolution of the NRD lawsuit (as described in Note 14), geographical income mix, and increased benefits from the R&D tax credit. These decreases were partially offset by the deconsolidation of the Venezuelan subsidiary, and adjustments to uncertain tax positions. In addition, the effective tax rate decreased due to the divestiture of the Company's gas and flame detection business. 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 20 cents per diluted share for the third quarter and first nine months of 2019. Weighted-average diluted shares outstanding in the third quarter and first nine months of 2019 declined 2.6 percent and 3.2 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 $142 million and $1.2 billion of its own stock in the third quarter and first nine 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
Nine months ended September 30, 2018 GAAP	$ 5,424	21.9 %	$ 5,280	$ 1,266	24.0 %	$ 4,002	$ 6.61	
Adjustment for significant litigation-related charges	897		897	187		710	1.16	
Adjustment for measurement period accounting of TCJA				(217)		217	0.36	
Nine months ended September 30, 2018 adjusted amounts (non-GAAP measures)	$ 6,321	25.5 %	$ 6,177	$ 1,236	20.0 %	$ 4,929	$ 8.13	
Nine months ended September 30, 2019 GAAP	$ 4,849	20.2 %	$ 4,500	$ 888	19.7 %	$ 3,601	$ 6.15	(7.0)%
Adjustment for significant litigation-related charges	548		548	124		424	0.72	
Adjustment for loss on deconsolidation of Venezuelan subsidiary			162	—		162	0.28	
Nine months ended September 30, 2019 adjusted amounts (non-GAAP measures)	$ 5,397	22.5 %	$ 5,210	$ 1,012	19.4 %	$ 4,187	$ 7.15	(12.1)%

Sales and operating income by business segment:

In the first nine months of 2019, while 3M experienced sales growth in its Consumer and Health Care segments, this was more than offset by declines in 3M's Safety and Industrial and Transportation and Electronics segments. These two businesses were impacted by weakness in certain end markets (China, automotive and electronics) and channel inventory adjustments, particularly within Asia Pacific and the United States. Earnings were also impacted by second quarter restructuring and actions taken by 3M to lower production volumes and reduce inventories to improve cash flow. Partially offsetting these impacts were benefits in the third quarter from the restructuring actions, as well as net gains related to property sales.

The following tables contain sales and operating income results by business segment for the three and nine months ended September 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.

	Three months ended September 30,				% change	
	2019		2018			
(Dollars in millions)	Net Sales	Oper. Income	Net Sales	Oper. Income	Net Sales	Oper. Income
Business Segments						
Safety and Industrial	**$ 2,849**	**$ 765**	$ 3,021	$ 697	**(5.7)%**	**9.6 %**
Transportation and Electronics	**2,503**	**631**	2,619	726	**(4.4)**	**(13.1)**
Health Care	**1,721**	**459**	1,643	475	**4.7**	**(3.2)**
Consumer	**1,324**	**308**	1,302	300	**1.7**	**2.3**
Corporate and Unallocated	**28**	**(40)**	35	(57)	**—**	**—**
Elimination of Dual Credit	**(434)**	**(112)**	(468)	(125)	**—**	**—**
Total Company	**$ 7,991**	**$ 2,011**	$ 8,152	$ 2,016	**(2.0)%**	**(0.2)%**

	Nine months ended September 30,				% change	
	2019		2018			
(Dollars in millions)	Net Sales	Oper. Income	Net Sales	Oper. Income	Net Sales	Oper. Income
Business Segments						
Safety and Industrial	**$ 8,796**	**$ 2,062**	$ 9,542	$ 2,753	**(7.8)%**	**(25.1)%**
Transportation and Electronics	**7,312**	**1,746**	7,665	2,051	**(4.6)**	**(14.9)**
Health Care	**5,290**	**1,406**	5,118	1,443	**3.3**	**(2.5)**
Consumer	**3,821**	**809**	3,819	811	**0.1**	**(0.3)**
Corporate and Unallocated	**98**	**(858)**	47	(1,293)	**—**	**—**
Elimination of Dual Credit	**(1,292)**	**(316)**	(1,371)	(341)	**—**	**—**
Total Company	**$ 24,025**	**$ 4,849**	$ 24,820	$ 5,424	**(3.2)%**	**(10.6)%**

	Three months ended September 30, 2019				
Worldwide Sales Change By Business Segment	Organic local-currency sales	Acquisitions	Divestitures	Translation	Total sales change
Safety and Industrial	(3.3)%	— %	(0.8)%	(1.6)%	(5.7)%
Transportation and Electronics	(3.4)	—	—	(1.0)	(4.4)
Health Care	2.0	4.4	—	(1.7)	4.7
Consumer	2.6	—	—	(0.9)	1.7
Total Company	(1.3)%	0.9 %	(0.3)%	(1.3)%	(2.0)%

	Nine months ended September 30, 2019				
Worldwide Sales Change By Business Segment	Organic local-currency sales	Acquisitions	Divestitures	Translation	Total sales change
Safety and Industrial	(3.5)%	— %	(1.8)%	(2.5) %	(7.8)%
Transportation and Electronics	(2.7)	—	—	(1.9)	(4.6)
Health Care	2.0	3.8	—	(2.5)	3.3
Consumer	1.7	—	—	(1.6)	0.1
Total Company	(1.1)%	0.8 %	(0.7)%	(2.2)%	(3.2)%

Sales by geographic area:

Percent change information compares the third quarter and first nine 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 September 30, 2019					
	United States	Asia Pacific	Europe, Middle East & Africa	Latin America/ Canada	Other Unallocated	Worldwide
Net sales (millions)	$ 3,292	$ 2,490	$ 1,465	$ 744	$ —	$ 7,991
% of worldwide sales	41.2 %	31.2 %	18.3 %	9.3 %	—	100.0 %
Components of net sales change:						
Volume — organic	(1.5)%	(4.0)%	0.6 %	2.3 %	—	(1.6)%
Price	0.4	(0.4)	1.4	0.5	—	0.3
Organic local-currency sales	(1.1)	(4.4)	2.0	2.8	—	(1.3)
Acquisitions	2.1	0.1	—	0.1	—	0.9
Divestitures	(0.2)	—	(1.3)	—	—	(0.3)
Translation	—	(0.7)	(4.8)	(2.3)	—	(1.3)
Total sales change	0.8 %	(5.0)%	(4.1)%	0.6 %	—	(2.0)%
Total sales change:						
Safety and Industrial	(4.5)%	(9.5)%	(5.8)%	(1.2)%	—	(5.7)%
Transportation and Electronics	(5.4)%	(5.1)%	(4.0)%	5.1 %	—	(4.4)%
Health Care	11.8 %	1.1 %	(2.9)%	(1.1)%	—	4.7 %
Consumer	3.1 %	(1.6)%	(0.7)%	1.2 %	—	1.7 %
Organic local-currency sales change:						
Safety and Industrial	(4.2)%	(8.2)%	1.9 %	1.1 %	—	(3.3)%
Transportation and Electronics	(5.4)%	(4.7)%	0.6 %	6.8 %	—	(3.4)%
Health Care	2.6 %	1.4 %	1.8 %	1.3 %	—	2.0 %
Consumer	3.1 %	(1.0)%	4.6 %	3.8 %	—	2.6 %

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 11 percent and organic local-currency sales decreased 9 percent. In Japan, total sales increased year-on-year by 6 percent and organic local-currency sales increased 3 percent.
- In the Latin America/Canada geographic area, total sales in Mexico increased 5 percent and organic local-currency sales increased 6 percent. In Canada, total sales increased 6 percent and organic local-currency sales increased 7 percent. In Brazil, total sales decreased 3 percent and organic local-currency sales decreased 1 percent.

	Nine months ended September 30, 2019					
	United States	Asia Pacific	Europe, Middle East & Africa	Latin America/ Canada	Other Unallocated	Worldwide
Net sales (millions)	$ 9,742	$ 7,383	$ 4,682	$ 2,220	$ (2)	$ 24,025
% of worldwide sales	40.6 %	30.7 %	19.5 %	9.2 %	—	100.0 %
Components of net sales change:						
Volume — organic	(1.0)%	(3.1)%	(1.8)%	0.4 %	—	(1.7)%
Price	0.5	0.1	1.3	1.0	—	0.6
Organic local-currency sales	(0.5)	(3.0)	(0.5)	1.4	—	(1.1)
Acquisitions	2.0	—	0.1	0.1	—	0.8
Divestitures	(0.6)	(0.2)	(1.9)	(0.7)	—	(0.7)
Translation	—	(2.2)	(5.5)	(3.8)	—	(2.2)
Total sales change	0.9 %	(5.4)%	(7.8)%	(3.0)%	—	(3.2)%
Total sales change:						
Safety and Industrial	(6.1)%	(8.6)%	(11.4)%	(4.6)%	—	(7.8)%
Transportation and Electronics	(2.3)%	(5.7)%	(6.6)%	0.9 %	—	(4.6)%
Health Care	10.2 %	0.7 %	(3.9)%	(3.4)%	—	3.3 %
Consumer	3.1 %	(4.2)%	(5.8)%	(2.8)%	—	0.1 %
Organic local-currency sales change:						
Safety and Industrial	(4.7)%	(5.1)%	(1.8)%	0.6 %	—	(3.5)%
Transportation and Electronics	(2.3)%	(4.1)%	(1.3)%	3.9 %	—	(2.7)%
Health Care	1.9 %	3.6 %	1.6 %	0.6 %	—	2.0 %
Consumer	3.1 %	(1.6)%	0.2 %	1.4 %	—	1.7 %

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 9 percent and organic local-currency sales decreased 5 percent. In Japan, both total sales and organic local-currency sales decreased 2 percent.
- In the Latin America/Canada geographic area, total sales in Mexico increased 1 percent and organic local-currency sales increased 3 percent. In Canada, total sales increased 1 percent, as organic local-currency sales growth of 4 percent was partially offset by foreign currency translation impacts. In Brazil, total sales decreased 6 percent, as organic local-currency sales growth of 2 percent was more than offset by foreign currency translation impacts.

Managing currency risks:

The stronger U.S. dollar had a negative impact on sales in the third quarter and first nine months of 2019 compared to the same period last year. Net of the Company’s hedging strategy, foreign currency positively impacted earnings in the third quarter of 2019 and was neutral in the first nine months of 2019 compared to the same periods 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 $4.732 billion of operating cash flows in the first nine months of 2019, an increase of $551 million when compared to the first nine 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 in addition to working capital improvements. 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 nine months of 2019, the Company purchased $1.2 billion of its own stock, compared to $3.6 billion of stock purchases in the first nine months of 2018. As of September 30, 2019, approximately $8.2 billion remained available under the authorization. The Company continues to expect to purchase $1.0 billion to $1.5 billion of its own stock during the full-year 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. In August 2019, 3M's Board of Directors declared a third-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 September 30,			Nine months ended September 30,		
(Percent of net sales)	**2019**	**2018**	**Change**	**2019**	**2018**	**Change**
Cost of sales	**52.4 %**	51.0 %	**1.4 %**	**53.3 %**	50.7 %	**2.6 %**
Selling, general and administrative expenses	**18.2**	19.0	**(0.8)**	**21.2**	23.9	**(2.7)**
Research, development and related expenses	**5.5**	5.3	**0.2**	**5.8**	5.6	**0.2**
Gain on sale of businesses	**(1.3)**	—	**(1.3)**	**(0.5)**	(2.1)	**1.6**
Operating income margin	**25.2 %**	24.7 %	**0.5 %**	**20.2 %**	21.9 %	**(1.7)%**

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 third quarter and first nine months of 2019 was approximately $17 million and $47 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 third quarter and first nine months of 2019. Increases in the third quarter compared to the same period last year primarily related to cost absorption penalties from lower production volumes as all businesses worked to reduce inventories and improve cash flow. In the first nine months of 2019, in addition to the costs of the inventory reduction actions undertaken to improve cash flow, the increase in cost of sales 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). These factors were partially offset by selling price increases, which increased net sales year-on-year by 0.3 percent and 0.6 percent in the third quarter and first nine months of 2019, respectively.

Selling, General and Administrative Expenses:

SG&A in dollars decreased 5.9 percent and 14.0 percent in the third quarter and first nine months of 2019, respectively, when compared to the same period last year. The decrease in the third quarter primarily relates to indirect cost reductions. The decrease in the first nine months of 2019 primarily relate to indirect cost reductions and 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 $13 million and $6 million in the third quarter and first nine months of 2019, respectively, when compared to the same period last year. R&D, measured as a percent of sales, increased in the third quarter and first nine 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. During the third quarter of 2019, the Company sold its gas and flame detection business for a pre-tax gain of $112 million. 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 the three and nine months ended September 30, 2019 and 2018.

(Percent of net sales)	Three months ended September 30, 2019		Nine months ended September 30, 2019	
Same period last year	**24.7**	%	**21.9**	%
Significant litigation-related charges	**—**		**3.6**	
Same period last year, excluding significant litigation-related charges	**24.7**	%	**25.5**	%
Increase/(decrease) in operating income margin, due to:				
2018 divestiture of Communication Markets Division, net of related restructuring actions	**—**		**(1.6)**	
Organic volume/productivity and other	**(1.6)**		**(1.9)**	
Second quarter 2019 restructuring actions	**—**		**(0.5)**	
Acquisitions/divestitures	**1.0**		**0.1**	
Selling price and raw material impact	**0.3**		**0.4**	
Foreign exchange impacts	**0.8**		**0.5**	
Current period, excluding significant litigation-related charges	**25.2**	%	**22.5**	%
Significant litigation-related charges	**—**		**(2.3)**	
Current period	**25.2**	%	**20.2**	%

Operating income margins increased 0.5 percentage points in the third quarter of 2019 when compared to the third quarter of 2018, and decreased 1.7 percentage points in the first nine months of 2019 when compared to the first nine months of 2018. Excluding the significant litigation-related charges, operating margins decreased 3.0 percentage points to 22.5 percent in the first nine months of 2019 when compared to the first nine 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:

- Negative organic local sales volume growth as a result of weakness in certain end markets and channel inventory adjustments, along with actions taken by 3M to lower production volumes and reduce inventories to improve cash flow, reduced operating margins. Partially offsetting these impacts were benefits from restructuring actions taken in the second quarter of 2019, as well as net gains related to property sales.
- 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 sales, 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 higher year-on-year divestiture gains other than the Communication Markets Division in addition to lost operating income from divested businesses) increased operating income margins year-on-year and was primary related to the gain from the divestiture of the Company's gas and flame detection business.
- 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 for the first nine months of 2019. Raw material costs were flat year-on-year for the third quarter 2019.

Foreign exchange impacts:

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

Significant litigation-related charges:

- Operating income margins for the first nine 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 (net of interest income) increased in the third quarter and first nine months of 2019 compared to the same period in 2018 due to higher U.S. average debt balances, partially offset by the year-on-year increase in interest income driven by higher balances in cash, cash equivalents and marketable securities resulting from the proceeds from debt issuances in advance of the October 2019 Acelity acquisition

Other expense (income) increased year-on-year in the first nine months 2019 primarily 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 September 30,		Nine months ended September 30,	
(Percent of pre-tax income)	**2019**	**2018**	**2019**	**2018**
Effective tax rate	**19.3 %**	21.3 %	**19.7 %**	24.0 %

The effective tax rate for the third quarter of 2019 was 19.3 percent, compared to 21.3 percent in the third quarter of 2018, a decrease of 2.0 percentage points. The effective tax rate for the first nine months of 2019 was 19.7 percent, compared to 24.0 percent in the first nine months 2018, a decrease of 4.3 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 are further discussed in Note 8.

3M currently estimates its effective tax rate for 2019 will be approximately 20 to 21 percent. The tax rate can vary from quarter to quarter due to discrete items, such as the settlement of income tax audits, changes in tax laws, and employee share-based payment accounting; as well as recurring factors, such as the geographic mix of income before taxes.

Refer to Note 8 for further discussion of income taxes.

Net Income Attributable to Noncontrolling Interest:

	Three months ended September 30,		Nine months ended September 30,	
(Millions)	**2019**	**2018**	**2019**	**2018**
Net income attributable to noncontrolling interest	**$ 5**	$ 3	**$ 11**	$ 12

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, increased pre-tax income by approximately $39 million and $3 million for the third quarter of 2019 and nine months ended September 30, 2019, respectively. 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 $69 million and $190 million for the the three and nine months ended September 30, 2019, respectively. 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 third quarter and first nine 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 the third quarter, operating expenses were partially offset by gains related to the sale of certain properties. 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 third quarter and first nine 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 September 30,		Nine months ended September 30,	
	2019	**2018**	**2019**	**2018**
Sales (millions)	**$ 2,849**	$ 3,021	**$ 8,796**	$ 9,542
Sales change analysis:				
Organic local-currency	**(3.3)%**	0.7 %	**(3.5)%**	3.2 %
Acquisitions	**—**	4.6	**—**	4.9
Divestitures	**(0.8)**	(3.3)	**(1.8)**	(1.6)
Translation	**(1.6)**	(2.1)	**(2.5)**	1.2
Total sales change	**(5.7)%**	(0.1)%	**(7.8)%**	7.7 %
Operating income (millions)	**$ 765**	$ 697	**$ 2,062**	$ 2,753
Percent change	**9.6 %**	(4.2)%	**(25.1)%**	36.9 %
Percent of sales	**26.8 %**	23.1 %	**23.4 %**	28.9 %

Third quarter 2019 results:

Sales in Safety and Industrial totaled $2.8 billion, down 5.7 percent in U.S. dollars. Organic local-currency sales decreased 3.3 percent, divestitures decreased sales by 0.8 percent, and foreign currency translation decreased sales by 1.6 percent.

On an organic local-currency sales basis:

- Sales increased in roofing granules, while personal safety, abrasives, industrial adhesives and tapes, electrical markets, closure and masking, and automotive aftermarket declined year-on-year.
- Softness and channel inventory reductions impacted sales growth across most of the Company's safety-related and industrial-related portfolio.

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.
- In August 2019, 3M completed the sale of its gas and flame detection business.

Operating income:

- Operating income margins increased 3.7 percentage points, primarily impacted by the gain on the divestiture of the gas and flame detection business, which resulted in a net year-on-year operating income margin increase of 3.9 percentage points.

First nine months 2019 results:

Sales in Safety and Industrial totaled $8.8 billion, down 7.8 percent in U.S. dollars. Organic local-currency sales decreased 3.5 percent, divestitures decreased sales by 1.8 percent, and foreign currency translation decreased sales by 2.5 percent.

On an organic local-currency sales basis:

- Sales increased in roofing granules and personal safety, while electrical markets, industrial adhesives and tapes, abrasives, closure and masking, and automotive aftermarket declined year-on-year.
- Softness and channel inventory reductions impacted sales growth across most of the Company's safety-related and industrial-related portfolio.

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.
- In August 2019, 3M completed the sale of its gas and flame detection business.

Operating income:

- Operating income margins decreased 5.5 percentage points, primarily related to the first quarter 2018 sale of certain personal safety product offerings and the divestiture of the Communication Markets Division in the second quarter of 2018, partially offset by the third quarter 2019 divestiture of the gas and flame detection business, resulting in a net year-on-year operating income margin reduction of 3.8 percentage points. Operating income margins were also impacted by sales declines, particularly in Asia Pacific and the U.S, and actions taken by 3M to lower production volumes and reduce inventories to improve cash flow.

Transportation and Electronics Business:

	Three months ended September 30,		Nine months ended September 30,	
	2019	**2018**	**2019**	**2018**
Sales (millions)	**$ 2,503**	$ 2,619	**$ 7,312**	$ 7,665
Sales change analysis:				
Organic local-currency	**(3.4)%**	3.0 %	**(2.7)%**	3.8 %
Divestitures	**—**	(0.9)	**—**	(2.2)
Translation	**(1.0)**	(1.4)	**(1.9)**	1.3
Total sales change	**(4.4)%**	0.7 %	**(4.6)%**	2.9 %
Operating income (millions)	**$ 631**	$ 726	**$ 1,746**	$ 2,051
Percent change	**(13.1)%**	4.4 %	**(14.9)%**	(11.0)%
Percent of sales	**25.2 %**	27.7 %	**23.9 %**	26.8 %

Third quarter 2019 results:

Sales in Transportation and Electronics totaled $2.5 billion, down 4.4 percent in U.S. dollars. Organic local-currency sales decreased 3.4 percent and foreign currency translation decreased sales by 1.0 percent.

Total sales decreased 9 percent within the electronics-related businesses and decreased 5 percent within Asia Pacific.

On an organic local-currency sales basis:

- Sales increased in advanced materials, transportation safety and commercial solutions, while 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 9 percent in 3M's electronics-related businesses, with decreases in both display materials and systems and electronics materials solutions. Electronics-related growth was impacted by soft consumer electronics, semiconductor and factory automation end markets in addition to channel inventory adjustments.
- Sales decreased 5 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 2.5 percentage points, primarily impacted by continued sales declines, particularly in Asia Pacific and the U.S, and actions taken by 3M to lower production volumes and reduce inventories to improve cash flow.

First nine months 2019 results:

Sales in Transportation and Electronics totaled $7.3 billion, down 4.6 percent in U.S. dollars. Organic local-currency sales decreased 2.7 percent and foreign currency translation decreased sales by 1.9 percent.

Total sales decreased 7 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 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 5 percent in 3M's electronics-related businesses, with decreases in both display materials and systems and electronics materials solutions. Electronics-related growth was impacted by soft consumer electronics, semiconductor 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 2.9 percentage points, primarily impacted by continued sales declines, particularly in Asia Pacific and the U.S, and actions taken by 3M to lower production volumes and reduce inventories to improve cash flow.

In August 2019, 3M entered into an agreement with Avon Rubber p.l.c. to purchase 3M's advanced ballistic-protection business for $91 million, subject to closing and other adjustments, plus contingent consideration of up to $25 million depending on the outcome of certain tenders. The transaction is expected to be completed in late 2019 or early 2020. Refer to Note 3 for additional details.

Health Care Business:

	Three months ended September 30,		Nine months ended September 30,	
	2019	**2018**	**2019**	**2018**
Sales (millions)	**$ 1,721**	$ 1,643	**$ 5,290**	$ 5,118
Sales change analysis:				
Organic local-currency	**2.0 %**	(0.7)%	**2.0 %**	2.0 %
Acquisitions	**4.4**	—	**3.8**	—
Divestitures	**—**	(0.2)	**—**	(0.1)
Translation	**(1.7)**	(1.7)	**(2.5)**	1.3
Total sales change	**4.7 %**	(2.6)%	**3.3 %**	3.2 %
Operating income (millions)	**$ 459**	$ 475	**$ 1,406**	$ 1,443
Percent change	**(3.2)%**	(5.2)%	**(2.5)%**	3.3 %
Percent of sales	**26.7 %**	28.9 %	**26.6 %**	28.2 %

Third quarter 2019 results:

Sales in Health Care totaled $1.7 billion, up 4.7 percent in U.S. dollars. Organic local-currency sales increased 2.0 percent, acquisitions increased sales by 4.4 percent, and foreign currency translation decreased sales by 1.7 percent.

On an organic local-currency sales basis:

- Sales increased in health information systems, food safety, medical solutions, and oral care, while drug delivery was flat.
- Separation and purification declined year on year primarily due to softness in the China market.

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 2.2 percentage points year-on-year, driven by a 1.5 percentage point impact related to the M*Modal acquisition.

First nine months 2019 results:

Sales in Health Care totaled $5.3 billion, up 3.3 percent in U.S. dollars. Organic local-currency sales increased 2.0 percent, acquisitions increased sales by 3.8 percent, and foreign currency translation decreased sales by 2.5 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 declined year-on-year.
- Drug delivery also 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 1.6 percentage points year-on-year, driven by a 1.9 percentage point impact related to the M*Modal acquisition.

In October 2019, 3M completed the acquisition of Acelity Inc. and its KCI subsidiaries for cash of approximately $4.5 billion, subject to closing and other adjustments, and assumption of $2.5 billion of debt and related items. Refer to Note 3 for additional details.

Consumer Business:

	Three months ended September 30,		Nine months ended September 30,	
	2019	**2018**	**2019**	**2018**
Sales (millions)	**$ 1,324**	$ 1,302	**$ 3,821**	$ 3,819
Sales change analysis:				
Organic local-currency	**2.6 %**	(2.2)%	**1.7 %**	1.4 %
Acquisitions	**—**	0.2	**—**	0.2
Translation	**(0.9)**	(1.3)	**(1.6)**	0.5
Total sales change	**1.7 %**	(3.3)%	**0.1 %**	2.1 %
Operating income (millions)	**$ 308**	$ 300	**$ 809**	$ 811
Percent change	**2.3 %**	(6.9)%	**(0.3)%**	4.9 %
Percent of sales	**23.2 %**	23.1 %	**21.2 %**	21.2 %

Third quarter 2019 results:

Sales in Consumer totaled $1.3 billion, a decrease of 1.7 percent in U.S. dollars. Organic local-currency sales increased 2.6 percent and foreign currency translation decreased sales by 0.9 percent.

On an organic local-currency sales basis:

- Sales grew in home improvement and consumer health care, while stationery and office and home care declined.
- Sales showed continued strength in the Company's Filtrete™, Command™ and Nexcare™ brands.

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 increased 0.1 percentage points year-on-year.

First nine months 2019 results:

Sales in Consumer totaled $3.8 billion, an increase of 0.1 percent in U.S. dollars. Organic local-currency sales increased 1.7 percent and foreign currency translation decreased sales by 1.6 percent.

On an organic local-currency sales basis:

- Sales grew in home improvement and consumer health care, while stationery and office was flat. Home care declined year-on-year.
- Geographically, the U.S. showed particular strength in the Company's Filtrete™ and Command™ brands, while Asia Pacific was impacted by lower consumer demand for respiratory solutions.

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 were flat year-on-year.

FINANCIAL CONDITION AND LIQUIDITY

3M maintains a strong financial position, supported by the strength and stability of the company's business model and cash flow capability, along with its proven access to the capital markets. This enables 3M to invest in its businesses to drive organic growth, with deployment toward research and development, capital expenditures, and commercialization capability as the company's top priority. 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 September 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 $4.8 billion higher at September 30, 2019 when compared to December 31, 2018. Increases in debt related to the first quarter and third quarter 2019 issuances of $2.25 billion of medium-term notes and $3.25 billion of other registered notes, respectively, in addition to the 69 billion Japanese yen (approximately $640 million at September 30, 2019 exchange rates) outstanding from the 80 billion Japanese yen credit facility established in September 2019. The Company entered into the third quarter issuance of debt in anticipation of the closing of the Acelity acquisition in October 2019. These issuances were 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.

In conjunction with the October 2019 acquisition of Acelity Inc, of the debt assumed, 3M did not immediately settle at close $0.4 billion of notes and, instead, satisfied and discharged those notes via an in-substance defeasance. Refer to Note 10 for additional information.

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 September 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). Additionally, the August 2019 debt was issued under the WKSI shelf registration, but not as part of the medium-term notes program (Series F). Information with respect to long-term debt issuances and maturities for the periods presented is included in Note 10 of this Form 10-Q and 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 September 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 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 September 30, 2019, this ratio was approximately 19 to 1. Debt covenants do not restrict the payment of dividends. Apart from the committed facilities, an additional $283 million in stand-alone letters of credit and bank guarantees were also issued and outstanding at September 30, 2019. These instruments are utilized in connection with normal business activities.

Cash, cash equivalents and marketable securities:

At September 30, 2019, 3M had $7.8 billion of cash, cash equivalents and marketable securities, of which approximately $2.1 billion was held by the Company's foreign subsidiaries and approximately $5.7 billion 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. The increase from December 31, 2018 primarily relates to the proceeds from debt issuances in advance of the October 2019 acquisition of Acelity. Refer to Note 10 for additional details.

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 September 30, 2019 and December 31, 2018.

(Millions)	September 30, 2019	December 31, 2018	Change
Total debt	**$ 19,439**	$ 14,622	**$ 4,817**
Less: Cash, cash equivalents and marketable securities	**7,807**	3,270	**4,537**
Net debt (non-GAAP measure)	**$ 11,632**	$ 11,352	**$ 280**

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)	September 30, 2019	December 31, 2018	Change
Current assets	**$ 18,020**	$ 13,709	**$ 4,311**
Less: Current liabilities	**7,821**	7,244	**577**
Working capital (non-GAAP measure)	**$ 10,199**	$ 6,465	**$ 3,734**

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

Working capital increased $3.7 billion compared with December 31, 2018. Balance changes in current assets increased working capital by $4.3 billion, driven by proceeds from debt issuances in advance of the October 2019 Acelity acquisition (discussed in the cash, cash equivalents and marketable securities section above). Working capital increases were partially offset by decreases in inventories, while accounts receivable was flat (discussed further below). Balance changes in current liabilities decreased working capital by $577 million, primarily due to increases in accruals related respirator mask/asbestos and other environmental liabilities, net of related subsequent payments (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 was flat compared to December 31, 2018, as increases related to the acquisition of M*Modal were offset by decreases in receivables from lower sales. Inventory decreased $359 million from December 31, 2018 as a result of the Company's commitment to improve its cash flow in response to slowing growth conditions in certain 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:

	Nine months ended September 30,	
(Millions)	**2019**	**2018**
Net income including noncontrolling interest	**$ 3,612**	$ 4,014
Depreciation and amortization	**1,130**	1,117
Company pension and postretirement contributions	**(129)**	(303)
Company pension and postretirement expense	**242**	306
Stock-based compensation expense	**230**	258
Gain on sale of businesses	**(111)**	(530)
Income taxes (deferred and accrued income taxes)	**(141)**	49
Loss on deconsolidation of Venezuelan subsidiary	**162**	—
Accounts receivable	**(14)**	(596)
Inventories	**255**	(562)
Accounts payable	**(222)**	148
Other — net	**(282)**	280
Net cash provided by (used in) operating activities	**$ 4,732**	$ 4,181

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 nine months of 2019, cash flows provided by operating activities increased $551 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 in addition to continued actions in reducing inventories. Factors that decreased operating cash flows included decreases in accounts payable and accrued income taxes. The combination of accounts receivable, inventories and accounts payable increased working capital by $19 million in the first nine months of 2019, compared to the working capital decreases of $199 million in the first nine months of 2018. Additional discussion on working capital changes is provided earlier in the “Financial Condition and Liquidity” section.

Cash Flows from Investing Activities:

	Nine months ended September 30,	
(Millions)	**2019**	**2018**
Purchases of property, plant and equipment (PP&E)	**$ (1,161)**	$ (1,046)
Proceeds from sale of PP&E and other assets	**91**	143
Acquisitions, net of cash acquired	**(704)**	13
Purchases and proceeds from maturities and sale of marketable securities and investments, net	**348**	714
Proceeds from sale of businesses, net of cash sold	**236**	806
Other — net	**45**	8
Net cash provided by (used in) investing activities	**$ (1,145)**	$ 638

Investments in property, plant and equipment enable growth across many diverse markets, helping to meet product demand and increasing manufacturing efficiency. The Company expects full-year 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:

	Nine months ended September 30,	
(Millions)	**2019**	**2018**
Change in short-term debt — net	**$ (466)**	$ (698)
Repayment of debt (maturities greater than 90 days)	**(871)**	(456)
Proceeds from debt (maturities greater than 90 days)	**6,116**	2,247
Total cash change in debt	**$ 4,779**	$ 1,093
Purchases of treasury stock	**(1,243)**	(3,601)
Proceeds from issuances of treasury stock pursuant to stock option and benefit plans	**437**	401
Dividends paid to shareholders	**(2,488)**	(2,406)
Other — net	**(158)**	(36)
Net cash provided by (used in) financing activities	**$ 1,327**	$ (4,549)

Total debt was approximately $19.4 billion at September 30, 2019 and $14.6 billion at December 31, 2018. Increases in debt related to the first quarter and third quarter 2019 issuances of $2.25 billion of medium-term notes and $3.25 billion of other registered notes, respectively. 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 September 30, 2019, as compared to $435 million at December 31, 2018. Net commercial paper issuances, repayments and borrowings by international subsidiaries and the 69 billion Japanese yen (approximately $640 million at September 30, 2019 exchange rates) outstanding from the 80 billion Japanese yen credit facility established in September 2019 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 nine months of 2019, the Company purchased $1.2 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. In August 2019, 3M's Board of Directors declared a third-quarter 2019 dividend of $1.44 per share.

Other cash flows from financing activities may include various other items, such as cash paid associated with certain derivative instruments, distributions to or sales of noncontrolling interests, changes in cash overdraft balances, and principal payments for 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 nine months ended September 30, 2019 and 2018.

In the first nine months of 2019, free cash flow conversion was impacted by significant litigation-related charges and timing of associated payments, the impact from the deconsolidation of the Company's Venezuelan subsidiary, and the impact from the Company's gas and flame detection business divestiture gain. In the first nine 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.

(Millions)	Nine months ended September 30, 2019	Nine months ended September 30, 2018
Major GAAP Cash Flow Categories		
Net cash provided by (used in) operating activities	**$ 4,732**	$ 4,181
Net cash provided by (used in) investing activities	**(1,145)**	638
Net cash provided by (used in) financing activities	**1,327**	(4,549)
Free Cash Flow (non-GAAP measure)		
Net cash provided by (used in) operating activities	**$ 4,732**	$ 4,181
Purchases of property, plant and equipment (PP&E)	**(1,161)**	(1,046)
Free cash flow	**$ 3,571**	$ 3,135
Net income attributable to 3M	**$ 3,601**	$ 4,002
Free cash flow conversion	**99 %**	78 %

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 September 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.

PART II. Other Information

Item 1. <u>Legal Proceedings.</u>

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. <u>Risk Factors.</u>

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, including, for example, the recently completed acquisition of Acelity, Inc. and its KCI subsidiaries (a leading global medical technology company), future results will be affected by the Company's ability to integrate acquired businesses quickly and obtain the anticipated synergies. The Company realigned from five to four business segments, effective April 1, 2019, to better serve its global customers and markets. Successful execution of the realignment and the associated adjustments of our portfolio and business operating model, as well as other organizational changes, will be important to the Company's future results.

** The Company's future results may be affected by its operational execution, including scenarios where the Company generates fewer productivity improvements than estimated.* The Company's financial results depend on the successful execution of its business operating plans. The Company utilizes various tools, such as Lean Six Sigma, and engages in ongoing global business transformation. Business transformation is defined as changes in processes and internal/external service delivery across 3M to move to more efficient business models to improve operational efficiency and productivity, while allowing 3M to serve customers with greater speed and efficiency. This is enabled by the ongoing multi-year phased implementation of an 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, regulations of the U.S. Food and Drug Administration (FDA) and similar foreign agencies, U.S. federal healthcare program-related laws and regulations including the False Claims Act, anti-kickback laws, the Sunshine Act, or other matters.* 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
July 1-31, 2019	240,464	$ 173.41	240,358	$ 8,333
August 1-31, 2019	333,679	$ 161.29	332,239	$ 8,280
September 1-30, 2019	276,127	$ 166.25	276,127	$ 8,234
Total July 1-September 30, 2019	850,270	$ 166.33	848,724	$ 8,234
Total January 1-September 30, 2019	6,351,525	$ 183.17	6,345,657	$ 8,234

(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)	Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)
(101.SCH)	Inline XBRL Taxonomy Extension Schema Document
(101.CAL)	Inline XBRL Taxonomy Extension Calculation Linkbase Document
(101.DEF)	Inline XBRL Taxonomy Extension Definition Linkbase Document
(101.LAB)	Inline XBRL Taxonomy Extension Label Linkbase Document
(101.PRE)	Inline XBRL Taxonomy Extension Presentation Linkbase Document
(104)	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

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: October 25, 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.)

EXHIBIT 31.1

SARBANES-OXLEY SECTION 302 CERTIFICATION

I, Michael F. Roman, certify that:

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

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

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

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

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

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

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

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

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

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

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

/s/ Michael F. Roman

Michael F. Roman
Chief Executive Officer

October 25, 2019

EXHIBIT 31.2

SARBANES-OXLEY SECTION 302 CERTIFICATION

I, Nicholas C. Gangestad, certify that:

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

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

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

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

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

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

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

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

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

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

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

/s/ Nicholas C. Gangestad

Nicholas C. Gangestad
Chief Financial Officer

October 25, 2019

EXHIBIT 32.1

SARBANES-OXLEY SECTION 906 CERTIFICATION

In connection with the Quarterly Report of 3M Company (the “Company”) on Form 10-Q for the period ended September 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Michael F. Roman, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

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

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

/s/ Michael F. Roman

Michael F. Roman
Chief Executive Officer

October 25, 2019

EXHIBIT 32.2

SARBANES-OXLEY SECTION 906 CERTIFICATION

In connection with the Quarterly Report of 3M Company (the "Company") on Form 10-Q for the period ended September 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Nicholas C. Gangestad, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

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

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

/s/ Nicholas C. Gangestad

Nicholas C. Gangestad
Chief Financial Officer

October 25, 2019

EXHIBIT 95

MINE SAFETY DISCLOSURES

For the third quarter of 2019, the Company has the following mine safety information to report in accordance with Section 1503(a) of the Act, in connection with the Pittsboro, North Carolina mine, the Little Rock, Arkansas mine, the Corona, California mine, and the Wausau, Wisconsin mine (including Greystone Plant):

Mine or Operating Name/MSHA Identification Number	Section 104 S&S Citations (#)	Section 104(b) Orders (#)	Section 104(d) Citations and Orders (#)	Section 110(b)(2) Violations (#)	Section 107(a) Orders (#)	Total Dollar Value of MSHA Assessments Proposed ($)	Total Number of Mining Related Fatalities (#)	Received Notice of Pattern of Violations Under Section 104(e) (yes/no)	Received Notice of Potential to Have Pattern Under Section 104(e) (yes/no)	Legal Actions Pending as of Last Day of Period (#)	Aggregate Legal Actions Initiated During Period (#)	Aggregate Legal Actions Resolved During Period (#)
3M Pittsboro ID: 3102153	—	—	—	—	—	$ —	—	No	No	—		
3M Little Rock ID: 0300426	—	—	—	—	—	$ —	—	No	No	—		
3M Corona Plant ID: 0400191	1	—	—	—	—	$ —	—	No	No	—		
Greystone Plant ID: 4700119	—	—	—	—	—	$ —	—	No	No	—		
Wausau Plant ID: 4702918	—	—	—	—	—	$ 626	—	No	No	—		
Total	1	—	—	—	—	$ 626	—			—	—	—