THERMO FISHER SCIENTIFIC INC.
Form 10-Q
May 03, 2019

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

FORM 10-Q

ý Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the Quarter Ended March 30, 2019
¨ Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
Commission File Number 1-8002
THERMO FISHER SCIENTIFIC INC.
(Exact name of Registrant as specified in its charter)

Delaware	04-2209186
(State of incorporation or organization)	(I.R.S. Employer Identification No.)

168 Third Avenue	
Waltham, Massachusetts	02451
(Address of principal executive offices)	(Zip Code)

Registrant’s telephone number, including area code: (781) 622-1000
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, $1.00 par value	TMO	New York Stock Exchange
Floating Rate Notes due 2019	TMO 19A	New York Stock Exchange
Floating Rate Notes due 2020	TMO /20A	New York Stock Exchange
1.500% Notes due 2020	TMO 20A	New York Stock Exchange
2.150% Notes due 2022	TMO 22A	New York Stock Exchange
0.750% Notes due 2024	TMO 24A	New York Stock Exchange
2.000% Notes due 2025	TMO 25	New York Stock Exchange
1.400% Notes due 2026	TMO 26A	New York Stock Exchange
1.450% Notes due 2027	TMO 27	New York Stock Exchange
1.375% Notes due 2028	TMO 28	New York Stock Exchange
1.950% Notes due 2029	TMO 29	New York Stock Exchange
2.875% Notes due 2037	TMO 37	New York Stock 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 and (2) has been subject to such filing requirements for the past 90 days. Yes ý No o
Indicate by check mark whether the Registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files). Yes ý No o
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 ý Accelerated filer o Non-accelerated filer o
Smaller reporting company o Emerging growth company o

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. o

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

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 March 30, 2019
Common Stock, $1.00 par value	399,981,140

THERMO FISHER SCIENTIFIC INC.
QUARTERLY REPORT ON FORM 10-Q
FOR THE QUARTER ENDED MARCH 30, 2019

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THERMO FISHER SCIENTIFIC INC.

PART I FINANCIAL INFORMATION
Item 1. Financial Statements
CONSOLIDATED BALANCE SHEET
(Unaudited)

(In millions except share and per share amounts)	March 30, 2019	December 31, 2018
Assets		
Current Assets:		
Cash and cash equivalents	$1,106	$2,103
Accounts receivable, less allowances of $114 and $117	4,155	4,136
Inventories	3,124	3,005
Other current assets	1,554	1,381
Total current assets	9,939	10,625
Property, Plant and Equipment, Net	4,192	4,165
Acquisition-related Intangible Assets, Net	14,489	14,978
Other Assets	1,740	1,117
Goodwill	25,236	25,347
Total Assets	$55,596	$56,232
Liabilities and Shareholders' Equity		
Current Liabilities:		
Short-term obligations and current maturities of long-term obligations	$1,336	$1,271
Accounts payable	1,462	1,615
Accrued payroll and employee benefits	704	982
Contract liabilities	967	809
Other accrued expenses	1,429	1,470
Total current liabilities	5,898	6,147
Deferred Income Taxes	2,145	2,265
Other Long-term Liabilities	3,048	2,515
Long-term Obligations	16,812	17,719
Shareholders' Equity:		
Preferred stock, $100 par value, 50,000 shares authorized; none issued		
Common stock, $1 par value, 1,200,000,000 shares authorized; 432,856,849 and 431,566,561 shares issued	433	432
Capital in excess of par value	14,771	14,621
Retained earnings	19,439	18,696
Treasury stock at cost, 32,875,709 and 29,444,882 shares	(4,441)	(3,665)
Accumulated other comprehensive items	(2,509)	(2,498)
Total shareholders' equity	27,693	27,586

Total Liabilities and Shareholders' Equity	$55,596	$56,232

The accompanying notes are an integral part of these consolidated financial statements.

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THERMO FISHER SCIENTIFIC INC.

CONSOLIDATED STATEMENT OF INCOME
(Unaudited)

(In millions except per share amounts)	Three Months Ended March 30, 2019	March 31, 2018
Revenues		
Product revenues	$4,720	$4,528
Service revenues	1,405	1,325
Total revenues	6,125	5,853
Costs and Operating Expenses:		
Cost of product revenues	2,414	2,325
Cost of service revenues	1,004	948
Selling, general and administrative expenses	1,528	1,515
Research and development expenses	248	234
Restructuring and other costs, net	11	45
Total costs and operating expenses	5,205	5,067
Operating Income	920	786
Other Expense, Net	(103)	(152)
Income Before Income Taxes	817	634
Provision for Income Taxes	(2)	(55)
Net Income	$815	$579
Earnings per Share		
Basic	$2.04	$1.44
Diluted	$2.02	$1.43
Weighted Average Shares		
Basic	400	402
Diluted	403	406

The accompanying notes are an integral part of these consolidated financial statements.

THERMO FISHER SCIENTIFIC INC.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
(Unaudited)

(In millions)	Three Months Ended March 30, 2019	March 31, 2018
Comprehensive Income		
Net Income	$815	$579
Other Comprehensive Items:		
Currency translation adjustment (net of tax provision (benefit) of $45 and ($47))	(15)	47
Unrealized gains and losses on hedging instruments:		
Reclassification adjustment for losses included in net income (net of tax benefit of $1 and $1)	2	2
Pension and other postretirement benefit liability adjustments:		
Pension and other postretirement benefit liability adjustments arising during the period (net of tax provision (benefit) of $0 and ($1))	1	(2)
Amortization of net loss and prior service benefit included in net periodic pension cost (net of tax benefit of $1 and $1)	1	2
Total other comprehensive items	(11)	49
Comprehensive Income	$804	$628

The accompanying notes are an integral part of these consolidated financial statements.

THERMO FISHER SCIENTIFIC INC.

CONSOLIDATED STATEMENT OF CASH FLOWS
(Unaudited)

(In millions)	Three Months Ended March 30, 2019	March 31, 2018
Operating Activities		
Net income	$815	$579
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation of property, plant and equipment	133	131
Amortization of acquisition-related intangible assets	422	444
Change in deferred income taxes	(106)	(121)
Non-cash stock-based compensation	44	43
Other non-cash expenses, net	18	27
Changes in assets and liabilities, excluding the effects of acquisitions:		
Accounts receivable	(29)	(71)
Inventories	(140)	(124)
Other assets	(117)	(241)
Accounts payable	(129)	(94)
Other liabilities	(230)	(471)
Contributions to retirement plans	(32)	(24)
Net cash provided by operating activities	649	78
Investing Activities		
Acquisitions, net of cash acquired	(1)	(57)
Purchase of property, plant and equipment	(201)	(118)
Proceeds from sale of property, plant and equipment	6	2
Other investing activities, net	15	(6)
Net cash used in investing activities	(181)	(179)
Financing Activities		
Repayment of debt	(1)	(453)
Proceeds from issuance of commercial paper	100	1,306
Repayments of commercial paper	(787)	(1,124)
Purchases of company common stock	(750)	—
Dividends paid	(68)	(60)
Net proceeds from issuance of company common stock under employee stock plans	81	39
Other financing activities	—	(50)
Net cash used in financing activities	(1,425)	(342)
Exchange Rate Effect on Cash	(32)	57

Increase in Cash, Cash Equivalents and Restricted Cash	(989)	(386)
Cash, Cash Equivalents and Restricted Cash at Beginning of Period	2,117	1,361
Cash, Cash Equivalents and Restricted Cash at End of Period	$1,128	$975

The accompanying notes are an integral part of these consolidated financial statements.

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THERMO FISHER SCIENTIFIC INC.

CONSOLIDATED STATEMENT OF SHAREHOLDERS' EQUITY
(Unaudited)

(In millions)	Common Stock		Capital in Excess of Par Value	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Items	Total Shareholders' Equity
	Shares	Amount			Shares	Amount		
	Three Months Ended March 30, 2019							
Balance at December 31, 2018	432	$ 432	$ 14,621	$ 18,696	29	$ (3,665)	$ (2,498)	$ 27,586
Cumulative effect of accounting change	—	—	—	4	—	—	—	4
Issuance of shares under employees' and directors' stock plans	1	1	106	—	1	(26)	—	81
Stock-based compensation	—	—	44	—	—	—	—	44
Purchases of company common stock	—	—	—	—	3	(750)	—	(750)
Dividends declared ($0.19 per share)	—	—	—	(76)	—	—	—	(76)
Net income	—	—	—	815	—	—	—	815
Other comprehensive items	—	—	—	—	—	—	(11)	(11)
Balance at March 30, 2019	433	$ 433	$ 14,771	$ 19,439	33	$ (4,441)	$ (2,509)	$ 27,693
	Three Months Ended March 31, 2018							
Balance at December 31, 2017	428	$ 428	$ 14,177	$ 15,914	27	$ (3,103)	$ (2,003)	$ 25,413
Cumulative effect of accounting changes	—	—	—	118	—	—	(88)	30
Issuance of shares under employees' and directors' stock plans	1	1	72	—	—	(22)	—	51
Stock-based compensation	—	—	43	—	—	—	—	43
Dividends declared ($0.17 per share)	—	—	—	(69)	—	—	—	(69)
Net income	—	—	—	579	—	—	—	579
Other comprehensive items	—	—	—	—	—	—	49	49
Other	—	—	27	—	—	—	—	27
Balance at March 31, 2018	429	$ 429	$ 14,319	$ 16,542	27	$ (3,125)	$ (2,042)	$ 26,123

The accompanying notes are an integral part of these consolidated financial statements.

THERMO FISHER SCIENTIFIC INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 1. Nature of Operations and Summary of Significant Accounting Policies

Nature of Operations

Thermo Fisher Scientific Inc. (the company or Thermo Fisher) enables customers to make the world healthier, cleaner and safer by helping them accelerate life sciences research, solve complex analytical challenges, improve patient diagnostics, deliver medicines to market and increase laboratory productivity. Markets served include pharmaceutical and biotech, academic and government, industrial and applied, as well as healthcare and diagnostics.

Interim Financial Statements

The interim consolidated financial statements presented herein have been prepared by the company, are unaudited and, in the opinion of management, reflect all adjustments of a normal recurring nature necessary for a fair statement of the financial position at March 30, 2019, the results of operations for the three-month periods ended March 30, 2019 and March 31, 2018, and the cash flows for the three-month periods ended March 30, 2019 and March 31, 2018. Interim results are not necessarily indicative of results for a full year.

The consolidated balance sheet presented as of December 31, 2018, has been derived from the audited consolidated financial statements as of that date. The consolidated financial statements and notes are presented as permitted by Form 10-Q and do not contain all information that is included in the annual financial statements and notes thereto of the company. The consolidated financial statements and notes included in this report should be read in conjunction with the 2018 financial statements and notes included in the company’s Annual Report on Form 10-K filed with the Securities and Exchange Commission (SEC).

Note 1 to the consolidated financial statements for 2018 describes the significant accounting estimates and policies used in preparation of the consolidated financial statements. Except for the accounting for leases, as noted below, there have been no material changes in the company’s significant accounting policies during the three months ended March 30, 2019.

Leases

The company determines whether an arrangement is, or contains, a lease at inception. Prior to 2019, the company generally accounted for operating lease payments by charging them to expense as incurred. Beginning in 2019, operating leases that have commenced are included in other assets, other accrued expenses and other long-term liabilities in the consolidated balance sheet. Classification of operating lease liabilities as either current or noncurrent is based on the expected timing of payments due under the company’s obligations.

Right-of-use (ROU) assets represent the company’s right to use an underlying asset for the lease term and lease liabilities represent the company’s obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. Leases with an initial term of 12 months or less are not recorded on the consolidated balance sheet. The company recognizes lease expense for these leases on a straight-line basis over the lease term.

Because most of the company’s leases do not provide an implicit rate, the company estimates incremental borrowing rates based on the information available at the commencement date in determining the present value of lease payments. The company uses the implicit rate when readily determinable. Lease terms may include the effect of options to extend or terminate the lease when it is reasonably certain that the company will exercise that option. Operating lease expense is recognized on a straight-line basis over the lease term.

As a lessee, the company accounts for the lease and non-lease components as a single lease component.

See Note 9 additional information about the company's leases.

Contract-related Balances

Current contract assets and noncurrent contract assets are included within other current assets and other assets, respectively, in the accompanying balance sheet. Noncurrent contract liabilities are included within other long-term liabilities in the accompanying balance sheet. Contract asset and liability balances are as follows:

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THERMO FISHER SCIENTIFIC INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Unaudited)

(In millions)	March 30, 2019	December 31, 2018
Current Contract Assets, Net	$ 545	$ 459
Noncurrent Contract Assets, Net	15	15
Current Contract Liabilities	967	809
Noncurrent Contract Liabilities	497	355

In the first three months of 2019, the company recognized revenue of $336 million that was included in the contract liabilities balance at December 31, 2018. Contract liabilities increased during the first quarter of 2019 primarily due to an advance payment from a customer.

Warranty Obligations

The liability for warranties is included in other accrued expenses in the accompanying balance sheet. The changes in the carrying amount of standard product warranty obligations are as follows:

	Three Months Ended	
(In millions)	March 30, 2019	March 31, 2018
Beginning Balance	$ 92	$ 87
Provision charged to income	27	31
Usage	(28)	(28)
Adjustments to previously provided warranties, net	(1)	(1)
Currency translation	—	1
Ending Balance	$ 90	$ 90

Inventories

The components of inventories are as follows:

(In millions)	March 30, 2019	December 31, 2018
Raw Materials	$ 867	$ 812
Work in Process	472	430
Finished Goods	1,785	1,763
Inventories	$ 3,124	$ 3,005

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. In addition, significant estimates were made in estimating future cash flows to assess potential impairment of assets and in determining the fair value of acquired intangible assets (Note 2) and the ultimate loss from abandoning leases at facilities being exited (Note 14). Actual results could differ from those estimates.

Recent Accounting Pronouncements

In August 2018, the FASB issued new guidance to modify the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans. The company expects to adopt the guidance when it is effective in 2020 using a retrospective method. The adoption of this guidance is not expected to have a material impact on the company’s disclosures.

THERMO FISHER SCIENTIFIC INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Unaudited)

In August 2018, the FASB issued new guidance to modify the disclosure requirements on fair value measurements. The company expects to adopt the guidance when it is effective in 2020 with some items requiring a prospective method and others requiring a retrospective method. The adoption of this guidance is not expected to have a material impact on the company's disclosures.

In June 2016, the FASB issued new guidance to require a financial asset measured at amortized cost basis, such as accounts receivable, to be presented at the net amount expected to be collected based on relevant information about past events, including historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. During 2018, the FASB issued additional guidance and clarification. The company expects to adopt the guidance when it is effective in 2020 using a modified retrospective method. The adoption of this guidance is not expected to have a material impact on the company's consolidated financial statements.

In February 2016, the FASB issued new guidance which requires lessees to record most leases on their balance sheets as lease liabilities, initially measured at the present value of the future lease payments, with corresponding right-of-use assets. The new guidance also sets forth new disclosure requirements related to leases. During 2017 - 2019, the FASB issued additional guidance and clarification. The guidance became effective for the company in 2019. The company has elected to adopt the guidance using a modified retrospective method, by applying the transition approach as of the beginning of the period of adoption. Comparative periods have not been restated. As permitted upon transition, the company did not reassess whether any expired or existing contracts were or contained embedded leases, the lease classification for any expired or existing leases, initial direct costs for any leases, or whether land easements met the definition of a lease if they were not accounted for as leases under the prior guidance. Adoption of the new guidance impacted the company's Consolidated Balance Sheet as follows:

(In millions)	December 31, 2018 as Reported	Impact of Adopting New Lease Guidance	January 1, 2019 As Adopted
Other Assets	$ 1,117	$ 641	$ 1,758
Other Accrued Expenses	1,470	132	1,602
Other Long-term Liabilities	2,515	505	3,020
Retained Earnings	18,696	4	18,700

Note 2. Acquisitions and Dispositions

The company's acquisitions have historically been made at prices above the determined fair value of the acquired identifiable net assets, resulting in goodwill, due to expectations of the synergies that will be realized by combining the businesses. These synergies include the elimination of redundant facilities, functions and staffing; use of the company's existing commercial infrastructure to expand sales of the acquired businesses' products; and use of the commercial infrastructure of the acquired businesses to cost-effectively expand sales of company products. Acquisitions have been accounted for using the purchase method of accounting, and the acquired companies' results have been included in the accompanying financial statements from their respective dates of acquisition. Acquisition transaction costs are recorded in selling, general and administrative expenses as incurred.

On April 30, 2019, the company acquired, within the Laboratory Products and Services segment, Brammer Bio for approximately $1.7 billion in cash. Brammer Bio is a leading viral vector contract development and manufacturing organization for gene and cell therapies. Revenues of Brammer Bio were approximately $140 million in 2018. The company expects to determine the preliminary purchase price allocation prior to the end of the second quarter of 2019.

The company has entered into an agreement to acquire Gatan, Inc., a wholly owned subsidiary of Roper Technologies, Inc., for approximately $925 million in cash. Gatan is a leading manufacturer of instrumentation and software used to enhance and extend the operation and performance of electron microscopes. The transaction is subject to customary closing conditions, including regulatory approvals. Upon successful completion of the regulatory approval process, Gatan will become part of the Analytical Instruments segment.

Disposition

On January 28, 2019, the company entered into an agreement to sell its Anatomical Pathology business to PHC Holdings Corporation for approximately $1.14 billion. The business is part of the Specialty Diagnostics segment. Revenues in the first

THERMO FISHER SCIENTIFIC INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Unaudited)

three months of 2019 and the full year 2018 of the business to be sold were approximately $85 million and $344 million, respectively. The sale is subject to customary closing conditions and is expected to close in the second quarter of 2019. The assets and liabilities of the Anatomical Pathology business were as follows on March 30, 2019:

(In millions)	March 30, 2019
Current Assets	$ 85
Long-term Assets	540
Current Liabilities	32
Long-term Liabilities	33

Note 3. Revenue
Disaggregated Revenue
Revenue by type is as follows:

	Three Months Ended	
(In millions)	March 30, 2019	March 31, 2018
Revenues		
Consumables	$3,230	3,111
Instruments	1,490	1,417
Services	1,405	1,325
Consolidated revenues	$6,125	$5,853

Revenue by geographic region is as follows:

	Three Months Ended	
(In millions)	March 30, 2019	March 31, 2018
Revenues (a)		
North America	$3,059	$2,903
Europe	1,519	1,518
Asia-Pacific	1,363	1,264
Other regions	184	168
Consolidated revenues	$6,125	$5,853

(a) Revenues are attributed to regions based on customer location.

Each reportable segment earns revenues from consumables, instruments and services in North America, Europe, Asia-Pacific and other regions. See Note 4 for revenue by reportable segment and other geographic data.

Remaining Performance Obligations

The aggregate amount of the transaction price allocated to the remaining performance obligations for all open customer contracts as of March 30, 2019 was $5.57 billion. The company will recognize revenue for these performance obligations as they are satisfied, approximately 85% of which is expected to occur within the next twelve months.

THERMO FISHER SCIENTIFIC INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Unaudited)

Note 4. Business Segment and Geographical Information
The company’s management evaluates segment operating performance based on operating income before certain charges/credits to cost of revenues and selling, general and administrative expenses, principally associated with acquisition accounting; restructuring and other costs/income including costs arising from facility consolidations such as severance and abandoned lease expense and gains and losses from the sale of real estate and product lines as well as from significant litigation-related matters; and amortization of acquisition-related intangible assets. The company uses this measure because it helps management understand and evaluate the segments’ core operating results and facilitates comparison of performance for determining compensation.
Business Segment Information

(In millions)	Three Months Ended March 30, 2019	March 31, 2018
Revenues		
Life Sciences Solutions	$1,607	$1,499
Analytical Instruments	1,322	1,257
Specialty Diagnostics	957	947
Laboratory Products and Services	2,513	2,413
Eliminations	(274)	(263)
Consolidated revenues	6,125	5,853
Segment Income (a)		
Life Sciences Solutions	561	517
Analytical Instruments	282	246
Specialty Diagnostics	242	243
Laboratory Products and Services	285	280
Subtotal reportable segments (a)	1,370	1,286
Cost of revenues charges, net	(6)	(3)
Selling, general and administrative charges, net	(11)	(8)
Restructuring and other costs, net	(11)	(45)
Amortization of acquisition-related intangible assets	(422)	(444)
Consolidated operating income	920	786
Other expense, net (b)	(103)	(152)
Income from continuing operations before income taxes	$817	$634

(a) Represents operating income before certain charges to cost of revenues and selling, general and administrative expenses; restructuring and other costs, net; and amortization of acquisition-related intangibles.
(b) The company does not allocate other expense, net to its segments.

THERMO FISHER SCIENTIFIC INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Unaudited)

Geographical Information

(In millions)	Three Months Ended March 30, 2019	March 31, 2018
Revenues (c)		
United States	$2,918	$2,756
China	654	541
Other	2,553	2,556
Consolidated revenues	$6,125	$5,853

(c) Revenues are attributed to countries based on customer location.

Note 5. Other Expense, Net

The components of other expense, net, in the accompanying statement of income are as follows:

(In millions)	Three Months Ended March 30, 2019	March 31, 2018
Interest Income	$67	$20
Interest Expense	(189)	(163)
Other Items, Net	19	(9)
Other Expense, Net	$(103)	$(152)

Other Items, Net

In all periods, other items, net includes currency transaction gains and losses on monetary assets and liabilities and net periodic pension benefit cost/income, excluding the service cost component which is included in operating expenses on the accompanying statement of income.

THERMO FISHER SCIENTIFIC INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Unaudited)

Note 6. Income Taxes

The provision for income taxes in the accompanying statement of income differs from the provision calculated by applying the statutory federal income tax rate to income before provision for income taxes due to the following:

	Three Months Ended	
(In millions)	March 30, 2019	March 31, 2018
Statutory Federal Income Tax Rate	21 %	21 %
Provision for Income Taxes at Statutory Rate	$172	$133
Increases (Decreases) Resulting From:		
Foreign rate differential	(36)	(51)
Foreign exchange loss on inter-company debt refinancing	(62)	—
Income tax credits	(72)	(41)
Global intangible low-taxed income	70	32
Foreign-derived intangible income	(12)	(9)
Singapore tax holiday	(7)	(8)
Transition tax and other impacts of U.S. tax reform	(20)	70
Reversal of tax reserves, net	(5)	(49)
Excess tax benefits from stock options and restricted stock units	(36)	(25)
Other, net	10	3
Provision for income taxes	$2	$55

The company has operations and a taxable presence in approximately 50 countries outside the U.S. Some of these countries have lower tax rates than the U.S. The company's ability to obtain a benefit from lower tax rates outside the U.S. is dependent on its relative levels of income in countries outside the U.S. and on the statutory tax rates in those countries.

In the first quarter of 2019, the company recorded a $62 million income tax benefit related to a foreign exchange loss for tax purposes on certain intercompany financing arrangements. In addition, the company recorded a net tax benefit of $27 million in the first quarter of 2019, consisting of an incremental benefit of $20 million and a $7 million reduction of related unrecognized tax benefits, to adjust the impacts of U.S. tax reform based on final regulations issued by the U.S. Treasury in January 2019.

The company has significant activities in Singapore and has received considerable tax incentives. The local taxing authority granted the company pioneer company status which provides an incentive encouraging companies to undertake activities that have the effect of promoting economic or technological development in Singapore. This incentive equates to a tax exemption on earnings associated with most of the company's manufacturing activities in Singapore and continues through December 31, 2026. In 2019 and 2018, the impact of this tax holiday decreased the annual effective tax rates by 0.9 percentage points and 1.3 percentage points, respectively, and increased diluted earnings per share by approximately $0.02 and $0.02, respectively.

Unrecognized Tax Benefits

As of March 30, 2019, the company had $1.43 billion of unrecognized tax benefits substantially all of which, if recognized, would reduce the effective tax rate.

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THERMO FISHER SCIENTIFIC INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Unaudited)

A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows:

(In millions)	2019
Balance at Beginning of Year	$1,442
Additions for tax positions of current year	2
Reductions for tax positions of prior years	(7)
Settlements	(5)
Balance at End of Period	$1,432

Note 7. Earnings per Share

(In millions except per share amounts)	Three Months Ended March 30, 2019	March 31, 2018
Net Income	$815	$579
Basic Weighted Average Shares	400	402
Plus Effect of:		
Stock options and restricted units	3	4
Diluted Weighted Average Shares	403	406
Basic Earnings per Share	$2.04	$1.44
Diluted Earnings per Share	$2.02	$1.43
Antidilutive Stock Options Excluded from Diluted Weighted Average Shares	2	2

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Note 8. Debt and Other Financing Arrangements

(Dollars in millions)	Effective Interest Rate at March 30, 2019		March 30, 2019	December 31, 2018
Commercial Paper			$—	$693
Floating Rate 2-Year Senior Notes, Due 7/24/2019 (euro-denominated)	0.10	%	561	574
6.00% 10-Year Senior Notes, Due 3/1/2020	2.97	%	750	750
4.70% 10-Year Senior Notes, Due 5/1/2020	4.23	%	300	300
Floating Rate 2-Year Senior Notes, Due 8/7/2020 (euro-denominated)	0.17	%	673	688
1.50% 5-Year Senior Notes, Due 12/1/2020 (euro-denominated)	1.62	%	477	487
5.00% 10-Year Senior Notes, Due 1/15/2021	3.24	%	400	400
4.50% 10-Year Senior Notes, Due 3/1/2021	6.78	%	1,000	1,000
3.60% 10-Year Senior Notes, Due 8/15/2021	6.42	%	1,100	1,100
3.30% 7-Year Senior Notes, Due 2/15/2022	3.42	%	800	800
2.15% 7-Year Senior Notes, Due 7/21/2022 (euro-denominated)	2.28	%	561	574
3.15% 10-Year Senior Notes, Due 1/15/2023	3.30	%	800	800
3.00% 7-Year Senior Notes, Due 4/15/2023	6.63	%	1,000	1,000
4.15% 10-Year Senior Notes, Due 2/1/2024	4.16	%	1,000	1,000
0.75% 8-Year Senior Notes, Due 9/12/2024 (euro-denominated)	0.94	%	1,122	1,147
2.00% 10-Year Senior Notes, Due 4/15/2025 (euro-denominated)	2.09	%	718	734
3.65% 10-Year Senior Notes, Due 12/15/2025	3.77	%	350	350
1.40% 8.5-Year Senior Notes, Due 1/23/2026 (euro-denominated)	1.53	%	785	802
2.95% 10-Year Senior Notes, Due 9/19/2026	3.19	%	1,200	1,200
1.45% 10-Year Senior Notes, Due 3/16/2027 (euro-denominated)	1.65	%	561	574
3.20% 10-Year Senior Notes, Due 8/15/2027	3.39	%	750	750
1.375% 12-Year Senior Notes, Due 9/12/2028 (euro-denominated)	1.46	%	673	688
1.95% 12-Year Senior Notes, Due 7/24/2029 (euro-denominated)	2.08	%	785	802
2.875% 20-Year Senior Notes, Due 7/24/2037 (euro-denominated)	2.94	%	785	802
5.30% 30-Year Senior Notes, Due 2/1/2044	5.37	%	400	400
4.10% 30-Year Senior Notes, Due 8/15/2047	4.23	%	750	750
Other			19	21
Total Borrowings at Par Value			18,320	19,186
Fair Value Hedge Accounting Adjustments			(68)	(93)

Unamortized Discount, Net	(26)	(21)
Unamortized Debt Issuance Costs	(78)	(82)
Total Borrowings at Carrying Value	18,148	18,990
Less: Short-term Obligations and Current Maturities	1,336	1,271
Long-term Obligations	$16,812	$17,719

The effective interest rates for the fixed-rate debt include the stated interest on the notes, the accretion of any discount or amortization of any premium, the amortization of any debt issuance costs and, if applicable, adjustments related to hedging.

See Note 12 for fair value information pertaining to the company’s long-term obligations.

Credit Facilities

The company has a revolving credit facility with a bank group that provides for up to $2.50 billion of unsecured multi-currency revolving credit. The facility expires in July 2021. The agreement calls for interest at either a LIBOR-based rate, a EURIBOR-based rate (for funds drawn in Euro) or a rate based on the prime lending rate of the agent bank, at the company’s option. The agreement contains affirmative, negative and financial covenants, and events of default customary for facilities of

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this type. The covenants in our revolving credit facility (the Facility) include a Consolidated Leverage Ratio (total debt-to-Consolidated EBITDA) and a Consolidated Interest Coverage Ratio (Consolidated EBITDA to Consolidated Interest Expense), as such terms are defined in the Facility. Specifically, the company has agreed that, so long as any lender has any commitment under the Facility, any letter of credit is outstanding under the Facility, or any loan or other obligation is outstanding under the Facility, it will maintain a maximum Consolidated Leverage Ratio of 3.5:1.0. The company has also agreed that so long as any lender has any commitment under the Facility or any letter of credit is outstanding under the Facility, or any loan or other obligation is outstanding under the Facility, it will maintain a minimum Consolidated Interest Coverage Ratio of 3.0:1.0 as of the last day of any fiscal quarter. As of March 30, 2019, no borrowings were outstanding under the Facility, although available capacity was reduced by approximately $87 million as a result of outstanding letters of credit.

Commercial Paper Programs

The company has commercial paper programs pursuant to which it may issue and sell unsecured, short-term promissory notes (CP Notes). Under the U.S. program, a) maturities may not exceed 397 days from the date of issue and b) the CP Notes are issued on a private placement basis under customary terms in the commercial paper market and are not redeemable prior to maturity nor subject to voluntary prepayment. Under the euro program, maturities may not exceed 183 days and may be denominated in euro, U.S. dollars, Japanese yen, British pounds sterling, Swiss franc, Canadian dollars or other currencies. Under both programs, the CP Notes are issued at a discount from par (or premium to par, in the case of negative interest rates), or, alternatively, are sold at par and bear varying interest rates on a fixed or floating basis. As of March 30, 2019, there were no outstanding borrowings under these programs.

Senior Notes

Interest on the floating rate senior notes is payable quarterly. Interest is payable annually on the other euro-denominated senior notes and semi-annually on all other senior notes. Each of the notes may be redeemed at a redemption price of 100% of the principal amount plus a specified make-whole premium and accrued interest. The company is subject to certain affirmative and negative covenants under the indentures governing the senior notes, the most restrictive of which limits the ability of the company to pledge principal properties as security under borrowing arrangements.

In 2018, Thermo Fisher Scientific (Finance I) B.V., a wholly-owned finance subsidiary of the company, issued the Floating Rate Senior Notes due 2020 included in the table above. This subsidiary has no independent function other than financing activities. The Floating Rate Senior Notes due 2020 are fully and unconditionally guaranteed by the company and no other subsidiaries of the company have guaranteed the obligations.

Interest Rate Swap Arrangements and related Cross-currency Interest Rate Swap Arrangements

The company has entered into LIBOR-based interest rate swap arrangements with various banks on several of its outstanding senior notes. The aggregate amounts of the swaps are equal to the principal amounts of the notes and the payment dates of the swaps coincide with the interest payment dates of the notes. The swap contracts provide for the company to pay a variable interest rate and receive a fixed rate. The variable interest rates reset monthly. The swaps have been accounted for as fair value hedges of the notes. See Note 12 for additional information on the interest rate swap arrangements and related cross-currency interest rate swap arrangements. The following table summarizes the outstanding interest rate swap arrangements on the company's senior notes at March 30, 2019:

(Dollars in millions)	Aggregate Notional Amount	Pay Rate	Pay Rate as of March 30, 2019		Receive Rate	
4.50% Senior Notes due 2021 (a)	1,000	1-month LIBOR + 3.4420%	5.9313	%	4.50	%
3.60% Senior Notes due 2021	1,100	1-month LIBOR + 2.5150%	4.9988	%	3.60	%

3.00% Senior Notes due 2023 (a)	1,000	1-month LIBOR + 1.7640%	4.2478 %	3.00 %

(a) The payments on $1.8 billion notional value of these interest rate swaps are offset in part by cross-currency interest rate swaps which effectively reduced the pay rate as of March 30, 2019 from a weighted average of 4.93% to a weighted average of 1.86%.

The company has entered into $1.8 billion notional value of cross-currency interest rate swaps, which effectively convert a portion of the semi-annual payments related to the variable rate, U.S. dollar denominated, LIBOR-based interest rate swaps to payments on variable rate, euro denominated, EURIBOR-based cross-currency interest rate swaps.

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Note 9. Leases

As a lessee, the company leases certain logistics, office, and manufacturing facilities, as well as vehicles, copiers, and other equipment. These operating leases generally have remaining lease terms between 1 month and 30 years, and some include options to extend (generally for 1 to 10 years) or have options to terminate the arrangement within 1 year. The company’s finance leases are not material.

The company has guaranteed the residual value of three leased operating facilities with initial lease terms ending in 2019, 2020 and 2023. The company has agreed with the lessor to comply with certain financial covenants consistent with its other debt arrangements (Note 8). The aggregate maximum guarantee under these three lease arrangements is $147 million. Operating lease ROU assets and lease liabilities for these lease arrangements are recorded on the consolidated balance sheet as of March 30, 2019, but exclude any amounts for residual value guarantees.

As a lessee, the consolidated statement of income includes pre-tax operating lease costs and variable lease costs of $48 million and $9 million for the three months ended March 30, 2019. Lease costs arising from finance leases, short-term leases, and sublease income are not material.

Cash used in operating activities for payments of amounts included in the measurement of operating lease liabilities was $48 million in the three months ended March 30, 2019. Operating lease ROU assets of $13 million were obtained in exchange for new operating lease liabilities in the three months ended March 30, 2019.

The weighted-average remaining operating lease term was 6.2 years and the weighted average discount rate was 4.0% as of March 30, 2019.

ROU assets of $600 million as of March 30, 2019, are classified in other assets in the consolidated balance sheet. Operating lease liabilities of $156 million and $487 million as of March 30, 2019, are classified in other accrued expenses and other long-term liabilities, respectively, in the consolidated balance sheet.

As of March 30, 2019, future payments of operating lease liabilities are as follows:

(In millions)	
Remainder of 2019	$140
2020	158
2021	116
2022	84
2023	57
2024	39
2025 and Thereafter	134
Total Lease Payments	728
Less: Imputed Interest	85
Total Operating Lease Liability	$643

As a lessor, operating leases, sales-type leases and direct financing leases are not material.

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As previously disclosed in the company's 2018 Annual Report on Form 10-K and under previous lease accounting guidance, the following is a summary of annual future minimum lease and rental commitments under noncancelable operating leases as of December 31, 2018:

(In millions)	
2019	$192
2020	158
2021	118
2022	86
2023	58
2024 and Thereafter	177
	$789

Note 10. Commitments and Contingencies

Environmental Matters

The company is currently involved in various stages of investigation and remediation related to environmental matters. The company cannot predict all potential costs related to environmental remediation matters and the possible impact on future operations given the uncertainties regarding the extent of the required cleanup, the complexity and interpretation of applicable laws and regulations, the varying costs of alternative cleanup methods and the extent of the company’s responsibility. Expenses for environmental remediation matters related to the costs of installing, operating and maintaining groundwater-treatment systems and other remedial activities related to historical environmental contamination at the company’s domestic and international facilities were not material in any period presented. The company records accruals for environmental remediation liabilities, based on current interpretations of environmental laws and regulations, when it is probable that a liability has been incurred and the amount of such liability can be reasonably estimated. The company calculates estimates based upon several factors, including reports prepared by environmental specialists and management’s knowledge of and experience with these environmental matters. The company includes in these estimates potential costs for investigation, remediation and operation and maintenance of cleanup sites. At March 30, 2019, the company’s total environmental liability was approximately $66 million. While management believes the accruals for environmental remediation are adequate based on current estimates of remediation costs, the company may be subject to additional remedial or compliance costs due to future events such as changes in existing laws and regulations, changes in agency direction or enforcement policies, developments in remediation technologies or changes in the conduct of the company’s operations, which could have a material adverse effect on the company’s financial position, results of operations or cash flows.

Litigation and Related Contingencies

There are various lawsuits and claims pending against the company including matters involving product liability, intellectual property, employment and commercial issues. The company determines the probability and range of possible loss based on the current status of each of these matters. A liability is recorded in the financial statements if it is believed to be probable that a loss has been incurred and the amount of the loss can be reasonably estimated. The company establishes a liability that is an estimate of amounts expected to be paid in the future for events that have already occurred. The company accrues the most likely amount or at least the minimum of the range of probable loss when a range of probable loss can be estimated. The accrued liabilities are based on management’s judgment as to the probability of losses for asserted and unasserted claims and, where applicable, actuarially determined estimates. Accrual estimates are adjusted as additional information becomes known or payments are made. The amount of ultimate loss may differ from these estimates. Due to the inherent uncertainties associated with pending litigation or claims, the company cannot predict the outcome, nor, with respect to certain pending litigation or claims where no liability has been accrued, make a meaningful estimate of the reasonably possible loss or range of loss that could result from an unfavorable outcome. The company has no material accruals for pending litigation or claims for which accrual amounts are not disclosed below or in the company's 2018 financial statements and notes included in the company's Annual Report on Form 10-K filed with the SEC, nor are material losses deemed probable for such matters. It is reasonably possible, however, that an unfavorable outcome that exceeds the company’s current accrual estimate, if

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any, for one or more of the matters described below could have a material adverse effect on the company's results of operations, financial position and cash flows.

Product Liability, Workers Compensation and Other Personal Injury Matters

For product liability, workers compensation and other personal injury matters, the company accrues the most likely amount or at least the minimum of the range of possible loss when a range of possible loss can be estimated. The company records estimated amounts due from insurers related to certain product liabilities as an asset. Although the company believes that the amounts accrued and estimated recoveries are probable and appropriate based on available information, including actuarial studies of loss estimates, the process of estimating losses and insurance recoveries involves a considerable degree of judgment by management and the ultimate amounts could vary materially. Insurance contracts do not relieve the company of its primary obligation with respect to any losses incurred. The collectability of amounts due from its insurers is subject to the solvency and willingness of the insurer to pay, as well as the legal sufficiency of the insurance claims. Management monitors the payment history as well as the financial condition and ratings of its insurers on an ongoing basis.

Intellectual Property Matters

On June 3, 2013, Unisone Strategic IP filed a complaint against Life Technologies in the United States District Court for the Southern District of California alleging patent infringement by Life Technologies' supply chain management system software, which operates with product "supply centers" installed at customer sites. Plaintiff seeks damages for alleged willful infringement, attorneys' fees, costs, and injunctive relief. On August 24, 2017, Unisone filed an appeal from a decision by the Patent Trial and Appeal Board (PTAB) that found the challenged patent claims invalid. The United States Court of Appeals for the Federal Circuit upheld the PTAB's ruling finding the challenged claims in the Unisone patent invalid. Unisone had until March 11, 2019 to file an appeal with the United States Supreme Court. Unisone did not appeal that decision, and consequently the case before the United States District Court, which had been stayed pending the outcome of the PTAB decision, will resume with respect to similar Unisone patent claims that were not included in the PTAB proceeding.

Note 11. Comprehensive Income

Comprehensive income (loss) combines net income and other comprehensive items. Other comprehensive items represent certain amounts that are reported as components of shareholders' equity in the accompanying balance sheet. Changes in each component of accumulated other comprehensive items, net of tax are as follows:

(In millions)	Currency Translation Adjustment	Unrealized Losses on Hedging Instruments	Pension and Other Postretirement Benefit Liability Adjustment	Total
Balance at December 31, 2018	$ (2,243)	$ (52)	$ (203)	$ (2,498)
Other comprehensive income (loss) before reclassifications	(15)	—	1	(14)
Amounts reclassified from accumulated other comprehensive items	—	2	1	3
Net other comprehensive items	(15)	2	2	(11)
Balance at March 30, 2019	$ (2,258)	$ (50)	$ (201)	$ (2,509)

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Note 12. Fair Value Measurements and Fair Value of Financial Instruments
Fair Value Measurements
The company uses the market approach technique to value its financial instruments and there were no changes in valuation techniques during 2019. The company's financial assets and liabilities carried at fair value are primarily comprised of insurance contracts, investments in money market funds, derivative contracts, mutual funds holding publicly traded securities and other investments in unit trusts held as assets to satisfy outstanding deferred compensation and retirement liabilities; and acquisition-related contingent consideration.
The fair value accounting guidance requires that assets and liabilities carried at fair value be classified and disclosed in one of the following three categories:
Level 1: Quoted market prices in active markets for identical assets or liabilities that the company has the ability to access.
Level 2: Observable market based inputs or unobservable inputs that are corroborated by market data such as quoted prices, interest rates and yield curves.
Level 3: Inputs are unobservable data points that are not corroborated by market data.
The following tables present information about the company's financial assets and liabilities measured at fair value on a recurring basis as of March 30, 2019 and December 31, 2018:

(In millions)	March 30, 2019	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
Cash equivalents	$ 77	$ 77	$ —	$ —
Bank time deposits	2	2	—	—
Investments in common stock, mutual funds and other similar instruments	19	19	—	—
Warrants	6	—	6	—
Insurance contracts	120	—	120	—
Derivative contracts	75	—	75	—
Total Assets	$ 299	$ 98	$ 201	$ —
Liabilities				
Derivative contracts	$ 103	$ —	$ 103	$ —
Contingent consideration	37	—	—	37
Total Liabilities	$ 140	$ —	$ 103	$ 37

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(In millions)	December 31, 2018	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
Cash equivalents	$ 769	$ 769	$ —	$ —
Bank time deposits	2	2	—	—
Investments in mutual funds and other similar instruments	10	10	—	—
Warrants	8	—	8	—
Insurance contracts	113	—	113	—
Derivative contracts	31	—	31	—
Total Assets	$ 933	$ 781	$ 152	$ —
Liabilities				
Derivative contracts	$ 145	$ —	$ 145	$ —
Contingent consideration	37	—	—	37
Total Liabilities	$ 182	$ —	$ 145	$ 37

The company uses the Black-Scholes model to value its warrants. The company determines the fair value of its insurance contracts by obtaining the cash surrender value of the contracts from the issuer. The fair value of derivative contracts is the estimated amount that the company would receive/pay upon liquidation of the contracts, taking into account the change in interest rates and currency exchange rates. The company determines the fair value of acquisition-related contingent consideration based on the probability-weighted discounted cash flows associated with such future payments. Changes to the fair value of contingent consideration are recorded in selling, general and administrative expense. The following table provides a rollforward of the fair value, as determined by level 3 inputs, of the contingent consideration.

(In millions)	Three Months Ended March 30, 2019	March 31, 2018
Contingent Consideration		
Beginning Balance	$ 37	$ 35
Acquisitions	—	11
Payments	—	(5)
Ending Balance	$ 37	$ 41

Derivative Contracts

The following table provides the aggregate notional value of outstanding derivative contracts.

(In millions)	March 30, 2019	December 31, 2018
Notional Amount		
Interest rate swaps (described in Note 8)	$3,100	$ 3,100
Cross-currency interest rate swaps - designated as net investment hedges	1,800	1,500
Currency exchange contracts	3,879	3,424

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While certain derivatives are subject to netting arrangements with counterparties, the company does not offset derivative assets and liabilities within the consolidated balance sheet. The following tables present the fair value of derivative instruments in the consolidated balance sheet and statement of income.

	Fair Value – Assets		Fair Value – Liabilities	
(In millions)	March 30, 2019	December 31, 2018	March 30, 2019	December 31, 2018
Derivatives Designated as Hedging Instruments				
Interest rate swaps (a)	$—	$ —	$100	$ 129
Cross-currency interest rate swaps (b)	66	28	—	—
Derivatives Not Designated as Hedging Instruments				
Currency exchange contracts (c)	9	3	3	16
Total Derivatives	$75	$ 31	$103	$ 145

(a) The fair value of the interest rate swaps is included in the consolidated balance sheet under the caption other long-term liabilities.

(b) The fair value of the cross-currency interest rate swaps is included in the consolidated balance sheet under the caption other assets.

(c) The fair value of the currency exchange contracts is included in the consolidated balance sheet under the captions other current assets or other accrued expenses.

The following amounts related to cumulative basis adjustments for fair value hedges were included in the consolidated balance sheet under the caption long-term obligations:

	Carrying Amount of the Hedged Liability		Cumulative Amount of Fair Value Hedging Adjustment - Increase (Decrease) Included in Carrying Amount of Liability (d)	
(In millions)	March 30, 2019	December 31, 2018	March 30, 2019	December 31, 2018
Long-term Obligations	$3,317	$ 3,291	$(68)	$ (93)

(d) Includes increases in the carrying amount of $27 million and $30 million at March 30, 2019 and December 31, 2018, respectively, on discontinued hedging relationships.

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(In millions)	Gain (Loss) Recognized Three Months Ended March 30, 2019	March 31, 2018
Fair Value Hedging Relationships		
Interest rate swaps		
Hedged long-term obligations - included in other expense, net	$ (28)	$ 42
Derivatives designated as hedging instruments - included in other expense, net	29	(38)
Derivatives Designated as Cash Flow Hedges		
Interest rate swaps		
Amount reclassified from accumulated other comprehensive items to other expense, net	(3)	(3)
Derivatives Designated as Net Investment Hedges		
Foreign currency-denominated debt		
Included in currency translation adjustment within other comprehensive items	156	(200)
Cross-currency interest rate swaps		
Included in currency translation adjustment within other comprehensive items	37	—
Included in other expense, net	14	—
Derivatives Not Designated as Hedging Instruments		
Currency exchange contracts		
Included in cost of product revenues	2	(2)
Included in other expense, net	17	(8)

Gains and losses recognized on currency exchange contracts and the interest rate swaps designated as fair value hedges are included in the consolidated statement of income together with the corresponding, offsetting losses and gains on the underlying hedged transactions.

The company also uses foreign currency-denominated debt and cross-currency interest rate swaps to partially hedge its net investments in foreign operations against adverse movements in exchange rates. The majority of the company’s euro-denominated senior notes and cross-currency interest rate swaps have been designated as, and are effective as, economic hedges of part of the net investment in a foreign operation. Accordingly, foreign currency transaction gains or losses due to spot rate fluctuations on the euro-denominated debt instruments and contract fair value changes on the cross-currency interest rate swaps, excluding interest accruals, are included in currency translation adjustment within other comprehensive items and shareholders’ equity.

See Note 1 to the consolidated financial statements for 2018 included in the company's Annual Report on Form 10-K and Note 8 herein for additional information on the company's risk management objectives and strategies.

Fair Value of Other Financial Instruments

The carrying value and fair value of the company’s notes receivable and debt obligations are as follows:

	March 30, 2019		December 31, 2018	
(In millions)	Carrying Value	Fair Value	Carrying Value	Fair Value
Debt Obligations:				

Senior notes	$18,129	$18,781	$18,276	$18,322
Commercial paper	—	—	693	693
Other	19	19	21	21
	$18,148	$18,800	$18,990	$19,036

The fair value of debt obligations was determined based on quoted market prices and on borrowing rates available to the company at the respective period ends which represent level 2 measurements.

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Note 13. Supplemental Cash Flow Information

(In millions)	Three Months Ended March 30, 2019	March 31, 2018
Non-cash Investing and Financing Activities		
Declared but unpaid dividends	$77	$ 69
Issuance of stock upon vesting of restricted stock units	69	61

Cash, cash equivalents and restricted cash is included in the consolidated balance sheet as follows:

(In millions)	March 30, 2019	December 31, 2018
Cash and Cash Equivalents	$1,106	$ 2,103
Restricted Cash Included in Other Current Assets	21	12
Restricted Cash Included in Other Assets	1	2
Cash, Cash Equivalents and Restricted Cash	$1,128	$ 2,117

Amounts included in restricted cash represent funds held as collateral for bank guarantees and incoming cash in China awaiting government administrative clearance.

Note 14. Restructuring and Other Costs, Net

Restructuring and other costs, net, in the first three months of 2019 included continuing charges for headcount reductions and facility consolidations in an effort to streamline operations, including the closure and consolidation of operations within several facilities in the U.S. and Europe; third-party transaction/integration costs related to recently announced acquisitions and divestiture; and sales of inventories revalued at the date of acquisition. In the first three months of 2019, severance actions associated with facility consolidations and cost reduction measures affected less than 1% of the company’s workforce.

As of May 3, 2019, the company has identified restructuring actions that will result in additional charges of approximately $65 million, primarily in 2019 and 2020, and expects to identify additional actions during 2019 which will be recorded when specified criteria are met, such as communication of benefit arrangements or when the costs have been incurred.

First Three Months of 2019

During the first three months of 2019, the company recorded net restructuring and other costs by segment as follows:

(In millions)	Cost of Revenues	Selling, General and Administrative Expenses	Restructuring and Other Costs, Net	Total
Life Sciences Solutions	$ 6	$ —	$ 3	$ 9
Analytical Instruments	—	6	4	10
Specialty Diagnostics	—	4	1	5
Laboratory Products and Services	—	1	2	3

Corporate	—	—	1	1
	$ 6	$ 11	$ 11	$ 28

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The principal components of net restructuring and other costs by segment are as follows:

Life Sciences Solutions

In the first three months of 2019, the Life Sciences Solutions segment recorded $9 million of net restructuring and other costs, principally charges to cost of revenues of $6 million for the sales of inventory revalued at the date of acquisition. The segment also recorded $3 million of charges for severance and other costs associated with facility consolidations in the U.S. and Europe.

Analytical Instruments

In the first three months of 2019, the Analytical Instruments segment recorded $10 million of net restructuring and other charges, including $6 million of charges to selling, general, and administrative expense for third-party transaction costs related to the pending acquisition of Gatan. The segment also recorded $4 million of restructuring and other costs, primarily for employee severance and other costs associated with facility consolidations in the U.S. and Europe.

Specialty Diagnostics

In the first three months of 2019, the Specialty Diagnostics segment recorded $5 million of net restructuring and other charges, principally $4 million of charges to selling, general, and administrative expense for third-party transaction costs in connection with the planned sale of the Anatomical Pathology business. The segment also recorded $1 million of charges for severance and other costs associated with facility consolidations in the U.S. and Europe.

Laboratory Products and Services

In the first three months of 2019, the Laboratory Products and Services segment recorded $3 million of net restructuring and other charges. The segment recorded $1 million of charges to selling, general, and administrative expense for third-party transaction costs related to the acquisition of Brammer Bio. The segment also recorded $2 million of restructuring and other costs, primarily for employee severance.

Corporate

In the first three months of 2019, the company recorded $1 million of net restructuring and other costs for severance at its corporate operations.

The following table summarizes the cash components of the company’s restructuring plans. The non-cash components and other amounts reported as restructuring and other costs, net, in the accompanying statement of income have been summarized in the notes to the tables. Accrued restructuring costs are included in other accrued expenses in the accompanying balance sheet.

(In millions)	Severance	Abandonment of Excess Facilities	Other (a)	Total
Balance at December 31, 2018	$ 34	$ 42	$ 4	$ 80
Cumulative effect of accounting change (b)	—	(28)	—	(28)
Costs incurred in 2019	8	—	3	11
Reserves reversed (c)	(1)	—	—	(1)
Payments	(7)	(4)	(3)	(14)
Balance at March 30, 2019	$ 34	$ 10	$ 4	$ 48

(a) Other includes relocation and moving expenses associated with facility consolidations, as well as employee retention costs which are accrued ratably over the period through which employees must work to qualify for a payment.
(b) Impact of adopting new lease accounting guidance on January 1, 2019.
(c) Represents reductions in cost of plans.

The company expects to pay accrued restructuring costs primarily through 2019.

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Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations
Forward-looking statements, within the meaning of Section 21E of the Securities Exchange Act of 1934 are made throughout this Management’s Discussion and Analysis of Financial Condition and Results of Operations. Any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements, including without limitation statements regarding: projections of revenue, expenses, earnings, margins, tax rates, tax provisions, cash flows, pension and benefit obligations and funding requirements, our liquidity position; cost reductions, restructuring activities, new product and service developments, competitive strengths or market position, acquisitions or divestitures; growth, declines and other trends in markets we sell into; new or modified laws, regulations and accounting pronouncements; outstanding claims, legal proceedings, tax audits and assessments and other contingent liabilities; foreign currency exchange rates and fluctuations in those rates; general economic and capital markets conditions; the timing of any of the foregoing; assumptions underlying any of the foregoing; and any other statements that address events or developments that Thermo Fisher intends or believes will or may occur in the future. Without limiting the foregoing, the words "believes," "anticipates," "plans," "expects," "seeks," "estimates," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements are accompanied by such words. While the company may elect to update forward-looking statements in the future, it specifically disclaims any obligation to do so, even if the company’s estimates change, and readers should not rely on those forward-looking statements as representing the company’s views as of any date subsequent to the date of the filing of this Quarterly Report.
A number of important factors could cause the results of the company to differ materially from those indicated by such forward-looking statements, including those detailed under the heading "Risk Factors" in Part II, Item 1A of this report on Form 10-Q.
Overview
The company develops, manufactures and sells a broad range of products that are sold worldwide. The company expands the product lines and services it offers by developing and commercializing its own technologies and by making strategic acquisitions of complementary businesses. The company’s continuing operations fall into four business segments (see Note 4): Life Sciences Solutions, Analytical Instruments, Specialty Diagnostics and Laboratory Products and Services.
Recent Acquisitions
The company’s strategy is to augment internal growth at existing businesses with complementary acquisitions. The company’s principal recent acquisitions and divestitures are described below.
On October 25, 2018, the company acquired, within the Life Sciences Solutions segment, Becton Dickinson and Company's Advanced Bioprocessing business for $477 million in cash. This North America-based business adds complementary cell culture products that expand the segment's bioproduction offerings to help customers increase yield during production of biologic drugs. Revenues of the Advanced Bioprocessing business were $100 million in 2017.
Overview of Results of Operations and Liquidity

	Three Months Ended			
	March 30,		March 31,	
(Dollars in millions)	2019		2018	
Revenues				
Life Sciences Solutions	$1,607	26.2 %	$1,499	25.6 %
Analytical Instruments	1,322	21.6 %	1,257	21.5 %
Specialty Diagnostics	957	15.6 %	947	16.2 %
Laboratory Products and Services	2,513	41.0 %	2,413	41.2 %
Eliminations	(274)	(4.4)%	(263)	(4.5)%
	$6,125	100 %	$5,853	100 %

Sales in the first quarter of 2019 were $6.13 billion, an increase of $272 million from 2018. Sales increased $31 million due to acquisitions. The unfavorable effects of currency translation resulted in a decrease in revenues of $180 million in the first quarter of 2019. Aside from the effects of acquisitions and currency translation, revenues increased $421 million (7%) primarily due to increased demand in the quarter compared to the 2018 quarter. Sales to customers in each of the company's primary end markets grew. Sales growth was strong in each of the company's primary geographic areas, particularly Asia.

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AND RESULTS OF OPERATIONS
Overview of Results of Operations and Liquidity (continued)

In the first quarter of 2019, total company operating income and operating income margin were $920 million and 15.0%, respectively, compared with $786 million and 13.4%, respectively, in 2018. The increase in operating income was primarily due to profit on higher sales and, to a lesser extent, productivity improvements, net of inflationary cost increases, and lower restructuring and other costs, net. These increases were offset in part by strategic growth investments, unfavorable foreign currency exchange and unfavorable sales mix. The company’s references to strategic growth investments generally refer to targeted spending for enhancing commercial capabilities, including expansion of geographic sales reach and e-commerce platforms, marketing initiatives, expanded service and operational infrastructure, focused research projects and other expenditures to enhance the customer experience. The company’s references throughout this discussion to productivity improvements generally refer to improved cost efficiencies from its Practical Process Improvement (PPI) business system, reduced costs resulting from global sourcing initiatives, a lower cost structure following restructuring actions, including headcount reductions and consolidation of facilities, and low cost region manufacturing.

The company recorded a $2 million provision for income taxes in the first quarter of 2019. The company recorded a $62 million income tax benefit related to a foreign exchange loss for tax purposes on certain intercompany financing arrangements. In addition, the company recorded a net tax benefit of $27 million in the first quarter of 2019, to adjust the impacts of U.S. tax reform based on final regulations issued by the U.S. Treasury in January 2019. The company expects its effective tax rate for all of 2019 will be between 6% and 9% based on currently forecasted rates of profitability in the countries in which the company conducts business and expected generation of foreign tax credits. Due primarily to the non-deductibility of intangible asset amortization for tax purposes, the company’s cash payments for income taxes are higher than its income tax expense for financial reporting purposes and are expected to total $725 to $775 million in 2019.

The company recorded a $55 million provision for income taxes in the first quarter of 2018. In the first quarter of 2018, the company recorded a net tax provision of $21 million to adjust the estimated initial impacts of U.S. tax reform recorded in 2017, consisting of an incremental provision of $70 million offset in part by a $49 million reduction of related unrecognized tax benefits established in 2017. The adjustment was required based on new U.S. Treasury guidance released in the first quarter of 2018.

Net income increased to $815 million in the first quarter of 2019 from $579 million in the first quarter of 2018, primarily due to the increase in operating income in the 2019 period (discussed above) and, to a lesser extent, lower income taxes (discussed above).

During the first three months of 2019, the company’s cash flow from operations totaled $649 million compared with $78 million for 2018. The increase primarily resulted from higher income before amortization and depreciation in the 2019 period and lower investment in working capital in 2019.

As of March 30, 2019, the company’s short-term debt totaled $1.34 billion including $1.33 billion of senior notes due within the next twelve months. The company has a revolving credit facility with a bank group that provides up to $2.50 billion of unsecured multi-currency revolving credit. If the company borrows under this facility, it intends to leave undrawn an amount equivalent to outstanding commercial paper to provide a source of funds in the event that commercial paper markets are not available. As of March 30, 2019, no borrowings were outstanding under the company’s revolving credit facility, although available capacity was reduced by approximately $87 million as a result of outstanding letters of credit.

On April 30, 2019, the company completed the acquisition of Brammer Bio for approximately $1.7 billion in cash (Note 2). The acquisition was funded with a combination of existing cash balances and short-term borrowings. The company also expects to fund the acquisition of Gatan with a combination of existing cash balances and short-term borrowings. The company believes that its existing cash and cash equivalents of $1.11 billion as of March 30, 2019 and its future cash flow from operations together with available borrowing capacity under its revolving credit agreement will be sufficient to meet the cash requirements of its existing businesses for the foreseeable future, including at least the next 24 months.

Critical Accounting Policies and Estimates

The company's discussion and analysis of its financial condition and results of operations is based upon its financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses and related disclosure of contingent liabilities. On an on-going basis, management evaluates its estimates, including those related to intangible assets and goodwill, income taxes, contingencies and litigation, and pension costs. Management believes the most complex and sensitive judgments, because of their significance to the consolidated financial statements, result primarily from the need to make estimates about the effects of matters that are inherently uncertain. Management bases its estimates on historical experience, current market and economic

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conditions and other assumptions that management believes are reasonable. The results of these estimates form the basis for judgments about the carrying value of assets and liabilities where the values are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. Management's Discussion and Analysis and Note 1 to the Consolidated Financial Statements of the company's Form 10-K for 2018, describe the significant accounting estimates and policies used in preparation of the consolidated financial statements. While there have been no significant changes in the company's critical accounting policies during the first three months of 2019, as described in Note 1, the company changed the manner in which it accounts for leases under guidance that became effective January 1, 2019.

Results of Operations

First Quarter 2019 Compared With First Quarter 2018

(In millions)	Three Months Ended March 30, 2019	March 31, 2018	Total Change	Currency Translation	Acquisitions	Operations
Revenues						
Life Sciences Solutions	$1,607	$ 1,499	$ 108	$ (48)	$ 31	$ 125
Analytical Instruments	1,322	1,257	65	(38)	—	103
Specialty Diagnostics	957	947	10	(27)	—	37
Laboratory Products and Services	2,513	2,413	100	(72)	—	172
Eliminations	(274)	(263)	(11)	5	—	(16)
Consolidated Revenues	$6,125	$ 5,853	$ 272	$ (180)	$ 31	$ 421

Sales in the first quarter of 2019 were $6.13 billion, an increase of $272 million from the first quarter of 2018. Sales increased $31 million due to acquisitions. The unfavorable effects of currency translation resulted in a decrease in revenues of $180 million in 2019. Aside from the effects of acquisitions/divestitures and currency translation, revenues increased $421 million (7%) primarily due to increased demand in the quarter compared to the 2018 quarter. Sales to customers in each of the company's primary end markets grew. Sales growth was strong in each of the company's primary geographic areas, particularly Asia.

In the first quarter of 2019, total company operating income and operating income margin were $920 million and 15.0%, respectively, compared with $786 million and 13.4%, respectively, in 2018. The increase in operating income was primarily due to profit on higher sales and, to a lesser extent, productivity improvements, net of inflationary cost increases, and lower restructuring and other costs, net. These increases were offset in part by strategic growth investments, unfavorable foreign currency exchange and unfavorable sales mix.

In the first quarter of 2019, the company recorded restructuring and other costs, net, of $28 million, including $6 million of charges to cost of revenues for the sale of inventories revalued at the date of acquisition. The company recorded $11 million of charges to selling, general and administrative expenses for third-party transaction costs related to recently announced acquisitions and divestiture. The company also recorded $11 million of restructuring and other costs, net, primarily for employee severance and abandoned facilities costs associated with the closure and consolidation of facilities in the U.S. and Europe. See Note 14 for restructuring charges expected in future periods.

In the first quarter of 2018, the company recorded restructuring and other costs, net, of $56 million, including $3 million of charges to cost of revenues primarily for the sale of inventories revalued at the date of acquisition. The company recorded $8 million of charges to selling, general and administrative expenses, primarily for third-party transaction/integration costs related to the acquisition of Patheon. The company recorded $35 million of cash restructuring costs, including severance and abandoned facilities costs associated with the closure and consolidation of facilities in the U.S. and Europe. The company also recorded $10 million of other charges, net, principally for litigation-related matters, and hurricane response costs.

Segment Results

The company's management evaluates segment operating performance using operating income before certain charges/credits to cost of revenues and selling, general and administrative expenses, principally associated with acquisition-related activities; restructuring and other costs/income including costs arising from facility consolidations such as severance and abandoned lease expense and gains and losses from the sale of real estate and product lines; and amortization of acquisition-

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Results of Operations (continued)

related intangible assets. The company uses this measure because it helps management understand and evaluate the segments' core operating results and facilitate comparison of performance for determining compensation (Note 4). Accordingly, the following segment data is reported on this basis.

(Dollars in millions)	Three Months Ended March 30, 2019	March 31, 2018	Change
Revenues			
Life Sciences Solutions	$1,607	$1,499	7 %
Analytical Instruments	1,322	1,257	5 %
Specialty Diagnostics	957	947	1 %
Laboratory Products and Services	2,513	2,413	4 %
Eliminations	(274)	(263)	4 %
Consolidated Revenues	$6,125	$5,853	5 %
Segment Income			
Life Sciences Solutions	$561	$517	9 %
Analytical Instruments	282	246	15 %
Specialty Diagnostics	242	243	— %
Laboratory Products and Services	285	280	2 %
Subtotal Reportable Segments	1,370	1,286	7 %
Cost of Revenues Charges, Net	(6)	(3)	
Selling, General and Administrative Charges, Net	(11)	(8)	
Restructuring and Other Costs, Net	(11)	(45)	
Amortization of Acquisition-related Intangible Assets	(422)	(444)	
Consolidated Operating Income	$920	$786	17 %
Reportable Segments Operating Income Margin	22.4 %	22.0 %	
Consolidated Operating Income Margin	15.0 %	13.4 %	

Income from the company's reportable segments increased 7% to $1.37 billion in the first quarter of 2019 due primarily to profit on higher sales and, to a lesser extent, productivity improvements, net of inflationary cost increases, offset in part by strategic growth investments, unfavorable foreign currency exchange and unfavorable sales mix.

Life Sciences Solutions

(Dollars in millions)	Three Months Ended March 30, 2019	March 31, 2018	Change
Revenues	$1,607	$1,499	7 %

Operating Income Margin	34.9	%	34.5	%	0.4 pt

Sales in the Life Sciences Solutions segment increased $108 million to $1.61 billion in the first quarter of 2019. Sales increased $125 million (8%) due to higher revenues at existing businesses and $31 million due to an acquisition. The unfavorable effects of currency translation resulted in a decrease in revenues of $48 million. The increase in revenue at existing businesses was primarily due to increased demand in each of the segment's principal businesses with particular strength in sales of biosciences and bioproduction products.

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Operating income margin was 34.9% in the first quarter of 2019 compared to 34.5% in the first quarter of 2018. The increase resulted primarily from profit on higher sales offset in part by strategic growth investments, unfavorable sales mix and, to a lesser extent, unfavorable foreign currency exchange.

Analytical Instruments

	Three Months Ended			
	March 30,	March 31,		
(Dollars in millions)	2019	2018	Change	
Revenues	$1,322	$1,257	5	%
Operating Income Margin	21.3 %	19.6 %	1.7 pt	

Sales in the Analytical Instruments segment increased $65 million to $1.32 billion in the first quarter of 2019. Sales increased $103 million (8%) due to higher revenues at existing businesses. The unfavorable effects of currency translation resulted in a decrease in revenues of $38 million. The increase in revenue at existing businesses was due to increased demand for products sold by each of the segment's primary businesses.

Operating income margin was 21.3% in the first quarter of 2019 compared to 19.6% in the first quarter of 2018. The increase resulted primarily from profit on higher sales and, to a lesser extent, productivity improvements, net of inflationary cost increases and favorable foreign currency exchange offset in part by strategic growth investments and unfavorable sales mix.

Specialty Diagnostics

	Three Months Ended			
	March 30,	March 31,		
(Dollars in millions)	2019	2018	Change	
Revenues	$957	$947	1	%
Operating Income Margin	25.3 %	25.6 %	-0.3 pt	

Sales in the Specialty Diagnostics segment increased $10 million to $957 million in the first quarter of 2019. Sales increased $37 million (4%) due to higher revenues at existing businesses. The unfavorable effects of currency translation resulted in a decrease in revenues of $27 million. The increase in revenue at existing businesses was due to higher demand in each of the segment's principal businesses with particular strength in sales of clinical diagnostic products and immunodiagnostic products.

Operating income margin was 25.3% in the first quarter of 2019 and 25.6% in the first quarter of 2018. The decrease was primarily due to strategic growth investments offset in part by profit on higher sales and favorable sales mix.

Laboratory Products and Services

	Three Months Ended			
	March 30,	March 31,		
(Dollars in millions)	2019	2018	Change	
Revenues	$2,513	$2,413	4	%
Operating Income Margin	11.3 %	11.6 %	-0.3 pt	

Sales in the Laboratory Products and Services segment increased $100 million to $2.51 billion in the first quarter of 2019. Sales increased $172 million (7%) due to higher revenues at existing businesses. The unfavorable effects of currency translation resulted in a decrease in revenues of $72 million. The increase in revenue at existing businesses was primarily due to increased demand in each of the segment's principal businesses with particular strength in service offerings of its pharma services business and products sold through its research and safety market channel business.

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Results of Operations (continued)

Operating income margin was 11.3% in the first quarter of 2019 and 11.6% in the first quarter of 2018. The decrease was primarily due to strategic growth investments and unfavorable sales mix offset in part by profit on higher sales and productivity improvements, net of inflationary cost increases.

Other Expense, Net

The company reported other expense, net, of $103 million and $152 million in the first quarter of 2019 and 2018, respectively (Note 5). An increase in interest income of $47 million in 2019 was offset in part by an increase in interest expense of $26 million.

Provision for Income Taxes

The company recorded a $2 million provision for income taxes in the first quarter of 2019. The company recorded a $62 million income tax benefit related to a foreign exchange loss for tax purposes on certain intercompany financing arrangements. In addition, the company recorded a net tax benefit of $27 million in the first quarter of 2019, to adjust the impacts of U.S. tax reform based on final regulations issued by the U.S. Treasury in January 2019. The company expects its effective tax rate for all of 2019 will be between 6% and 9% based on currently forecasted rates of profitability in the countries in which the company conducts business and expected generation of foreign tax credits. Due primarily to the non-deductibility of intangible asset amortization for tax purposes, the company's cash payments for income taxes are higher than its income tax expense for financial reporting purposes and are expected to total $725 to $775 million in 2019.

The company recorded a $55 million provision for income taxes in the first quarter of 2018. In the first quarter of 2018, the company recorded a net tax provision of $21 million to adjust the estimated initial impacts of U.S. tax reform recorded in 2017, consisting of an incremental provision of $70 million offset in part by a $49 million reduction of related unrecognized tax benefits established in 2017. The adjustment was required based on new U.S. Treasury guidance released in the first quarter of 2018.

The company has operations and a taxable presence in approximately 50 countries outside the U.S. Some of these countries have lower tax rates than the U.S. The company's ability to obtain a benefit from lower tax rates outside the U.S. is dependent on its relative levels of income in countries outside the U.S. and on the statutory tax rates in those countries. Based on the dispersion of the company's non-U.S. income tax provision among many countries, the company believes that a change in the statutory tax rate in any individual country is not likely to materially affect the company's income tax provision or net income, aside from any resulting one-time adjustment to the company's deferred tax balances to reflect a new rate.

Recent Accounting Pronouncements

A description of recently issued accounting standards is included under the heading "Recent Accounting Pronouncements" in Note 1.

Contingent Liabilities

The company is contingently liable with respect to certain legal proceedings and related matters. An unfavorable outcome that differs materially from current accrual estimates, if any, for one or more of the matters described under the headings "Product Liability, Workers Compensation and Other Personal Injury Matters," "Intellectual Property Matters" and "Commercial Matters" in Note 10 could have a material adverse effect on the company's financial position as well as its results of operations and cash flows.

Liquidity and Capital Resources

Consolidated working capital (current assets less current liabilities) was $4.04 billion at March 30, 2019, compared with $4.48 billion at December 31, 2018. Included in working capital were cash and cash equivalents of $1.11 billion at March 30, 2019 and $2.10 billion at December 31, 2018.

First Three Months of 2019

Cash provided by operating activities was $649 million during the first three months of 2019. Cash provided by income was offset in part by investments in working capital. Increases in accounts receivable and inventories used cash of $29 million and $140 million, respectively, primarily to support growth in sales. An increase in other assets used cash of $117 million primarily due to the timing of customer billings and income tax refunds. Other liabilities decreased by $230 million primarily due to the timing of payments for incentive compensation. Cash payments for income taxes decreased to $221 million during the first three months of 2019, compared with $331 million in the first three months of 2018. The company made cash contributions to its pension and postretirement benefit plans totaling $32 million during the first three months of 2019.

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Liquidity and Capital Resources (continued)

Payments for restructuring actions, principally severance costs and lease and other expenses of real estate consolidation, used cash of $14 million during the first three months of 2019.

During the first three months of 2019, the company’s investing activities used $181 million of cash including the purchase of $201 million of property, plant and equipment. On April 30, 2019, the company completed the acquisition of Brammer Bio for approximately $1.7 billion in cash (Note 2). The acquisition was funded with a combination of existing cash balances and short-term borrowings. The company also expects to fund the acquisition of Gatan with a combination of existing cash balances and short-term borrowings.

The company’s financing activities used $1.43 billion of cash during the first three months of 2019. A net decrease in commercial paper obligations used cash of $687 million. The company’s financing activities also included the repurchase of $750 million of the company's common stock and the payment of $68 million in cash dividends, offset in part by $81 million of net proceeds from employee stock option exercises. On September 7, 2018, the Board of Directors authorized the repurchase of up to $2.00 billion of the company’s common stock. At May 3, 2019, authorization remained for $1.25 billion of future repurchases of the company’s common stock.

The company's commitments for purchases of property, plant and equipment, contractual obligations and other commercial commitments did not change materially between December 31, 2018 and March 30, 2019. The company expects that for all of 2019, expenditures for property, plant and equipment, net of disposals, will approximate $925 and $975 million.

As of March 30, 2019, the company’s short-term debt totaled $1.34 billion including $1.33 billion of senior notes due within the next twelve months. The company has a revolving credit facility with a bank group that provides up to $2.50 billion of unsecured multi-currency revolving credit. If the company borrows under this facility, it intends to leave undrawn an amount equivalent to outstanding commercial paper to provide a source of funds in the event that commercial paper markets are not available. As of March 30, 2019, no borrowings were outstanding under the company’s revolving credit facility, although available capacity was reduced by approximately $87 million as a result of outstanding letters of credit.

Approximately half of the company’s cash balances and cash flows from operations are from outside the U.S. The company uses its non-U.S. cash for needs outside of the U.S. including acquisitions and repayment of acquisition-related intercompany debt to the U.S. In addition, the company also transfers cash to the U.S. using non-taxable returns of capital as well as dividends where the related U.S. dividend received deduction or foreign tax credit equals any tax cost arising from the dividends. As a result of using such means of transferring cash to the U.S., the company does not expect any material adverse liquidity effects from its significant non-U.S. cash balances for the foreseeable future.

The company believes that its existing cash and cash equivalents of $1.11 billion as of March 30, 2019 and its future cash flow from operations together with available borrowing capacity under its revolving credit agreement will be sufficient to meet the cash requirements of its existing businesses for the foreseeable future, including at least the next 24 months.

First Three Months of 2018

Cash provided by operating activities was $78 million during the first three months of 2018. Cash provided by income was offset in part by investments in working capital. Increases in accounts receivable and inventories used cash of $71 million and $124 million, respectively, primarily to support growth in sales. An increase in other assets used cash of $241 million primarily due to the timing of income tax refunds and customer billings. Other liabilities decreased by $471 million primarily due to the timing of payments for incentive compensation and income taxes. Cash payments for income taxes totaled $331 million. The company made cash contributions to its pension and postretirement benefit plans totaling $24 million during the first three months of 2018. Payments for restructuring actions, principally severance costs and lease and other expenses of real estate consolidation, used cash of $23 million during the first three months of 2018.

During the first three months of 2018, the company's investing activities used $179 million of cash. Acquisitions used cash of $57 million. The company's investing activities also included the purchase of $118 million of property, plant and equipment.

The company's financing activities used $342 million of cash during the first three months of 2018. Repayment of senior notes used cash of $453 million. A net increase in commercial paper obligations provided cash of $182 million. The company's financing activities also included the payment of $60 million in cash dividends, offset in part by $39 million of net proceeds from employee stock option exercises.

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Item 3. Quantitative and Qualitative Disclosures About Market Risk

The company's exposure to market risk from changes in interest rates and currency exchange rates has not changed materially from its exposure at year-end 2018.

Item 4. Controls and Procedures

Management's Evaluation of Disclosure Controls and Procedures

The company's management, with the participation of the company's chief executive officer and chief financial officer, has evaluated the effectiveness of the company's disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. Based on such evaluation, the company's chief executive officer and chief financial officer concluded that, as of the end of such period, the company's disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There have been no changes in the company's internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) during the fiscal quarter ended March 30, 2019, that have materially affected or are reasonably likely to materially affect the company's internal control over financial reporting.

PART II OTHER INFORMATION

Item 1. Legal Proceedings

There are various lawsuits and claims against the company involving product liability, intellectual property, employment and commercial issues. See "Note 10 to our Consolidated Financial Statements – Commitments and Contingencies."

Item 1A. Risk Factors

Set forth below are the risks that we believe are material to our investors. This section contains forward-looking statements. You should refer to the explanation of the qualifications and limitations on forward-looking statements beginning on page 27.

We must develop new products, adapt to rapid and significant technological change and respond to introductions of new products by competitors to remain competitive. Our growth strategy includes significant investment in and expenditures for product development. We sell our products in several industries that are characterized by rapid and significant technological changes, frequent new product and service introductions and enhancements and evolving industry standards. Competitive factors include technological innovation, price, service and delivery, breadth of product line, customer support, e-business capabilities and the ability to meet the special requirements of customers. Our competitors may adapt more quickly to new technologies and changes in customers' requirements than we can. Without the timely introduction of new products, services and enhancements, our products and services will likely become technologically obsolete over time, in which case our revenue and operating results would suffer.

Many of our existing products and those under development are technologically innovative and require significant planning, design, development and testing at the technological, product and manufacturing-process levels. Our customers use many of our products to develop, test and manufacture their own products. As a result, we must anticipate industry trends and develop products in advance of the commercialization of our customers' products. If we fail to adequately predict our customers' needs and future activities, we may invest heavily in research and development of products and services that do not lead to significant revenue.

It may be difficult for us to implement our strategies for improving internal growth. Our growth depends in part on the growth of the markets which we serve. Any decline or lower than expected growth in our served markets could diminish demand for our products and services, which would adversely affect our results of operations and financial condition. To address this issue, we are pursuing a number of strategies to improve our internal growth, including:

- strengthening our presence in selected geographic markets;
- allocating research and development funding to products with higher growth prospects;

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Risk Factors (continued)

- developing new applications for our technologies;
- expanding our service offerings;
- continuing key customer initiatives;
- combining sales and marketing operations in appropriate markets to compete more effectively;
- finding new markets for our products; and
- continuing the development of commercial tools and infrastructure to increase and support cross-selling opportunities of products and services to take advantage of our depth in product offerings.

We may not be able to successfully implement these strategies, and these strategies may not result in the expected growth of our business.

Our business is affected by general economic conditions and related uncertainties affecting markets in which we operate. Our business is affected by general economic conditions, both inside and outside the U.S. If the global economy and financial markets, or economic conditions in Europe, the U.S. or other key markets, are unstable, it could adversely affect the business, results of operations and financial condition of the company and its customers, distributors, and suppliers, having the effect of

- reducing demand for some of our products;
- increasing the rate of order cancellations or delays;
- increasing the risk of excess and obsolete inventories;
- increasing pressure on the prices for our products and services;
- causing supply interruptions which could disrupt our ability to produce our products; and
- creating longer sales cycles and greater difficulty in collecting sales proceeds.

Demand for some of our products depends on capital spending policies of our customers and on government funding policies. Our customers include pharmaceutical and chemical companies, laboratories, universities, healthcare providers, government agencies and public and private research institutions. Many factors, including public policy spending priorities, available resources and product and economic cycles, have a significant effect on the capital spending policies of these entities.

Spending by some of these customers fluctuates based on budget allocations and the timely passage of the annual federal budget. An impasse in federal government budget decisions could lead to substantial delays or reductions in federal spending.

Economic, political, foreign currency and other risks associated with international sales and operations could adversely affect our results of operations. International markets contribute a substantial portion of our revenues, and we intend to continue expanding our presence in these regions. The exposure to fluctuations in currency exchange rates takes on different forms. International revenues and costs are subject to the risk that fluctuations in exchange rates could adversely affect our reported revenues and profitability when translated into U.S. dollars for financial reporting purposes. These fluctuations could also adversely affect the demand for products and services provided by us. As a multinational corporation, our businesses occasionally invoice third-party customers in currencies other than the one in which they primarily do business (the "functional currency"). Movements in the invoiced currency relative to the functional currency could adversely impact our cash flows and our results of operations. As our international sales grow, exposure to fluctuations in currency exchange rates could have a larger effect on our financial results. In the first three months of 2019, currency translation had an unfavorable effect of $180 million on revenues due to the strengthening of the U.S. dollar relative to other currencies in which the company sells products and services.

In addition, many of our employees, contract manufacturers, suppliers, job functions, outsourcing activities and manufacturing facilities are located outside the United States. Accordingly, our future results could be harmed by a variety of factors, including:

- interruption to transportation flows for delivery of parts to us and finished goods to our customers;
- changes in a specific country's or region's political, economic or other conditions;
-

changes in diplomatic and trade relationships, including new tariffs, trade protection measures, import or export licensing requirements, trade embargoes and sanctions and other trade barriers;

THERMO FISHER SCIENTIFIC INC.
Risk Factors (continued)

- tariffs imposed by the U.S. on goods from other countries and tariffs imposed by other countries on U.S. goods, including the tariffs recently adopted by the U.S. government on various imports from China and by the Chinese government on certain U.S. goods;
- negative consequences from changes in tax laws;
- difficulty in staffing and managing widespread operations;
- differing labor regulations;
- differing protection of intellectual property;
- unexpected changes in regulatory requirements; and
- geopolitical uncertainty or turmoil, including terrorism and war.

Significant developments stemming from the U.S. administration or the U.K.'s referendum on membership in the EU could have an adverse effect on us. The U.S. administration has called for substantial changes to trade agreements and is imposing significant increases on tariffs on goods imported into the United States. The administration has also indicated an intention to request Congress to make significant changes, replacement or elimination of the Patient Protection and Affordable Care Act, and government negotiation/regulation of drug prices paid by government programs. Changes in U.S. social, political, regulatory and economic conditions or laws and policies governing the health care system and drug prices, foreign trade, manufacturing, and development and investment in the territories and countries where we or our customers operate could adversely affect our operating results and our business.

Additionally, on June 23, 2016, the United Kingdom held a referendum and voted in favor of leaving the European Union, or EU. This referendum has created political and economic uncertainty, particularly in the United Kingdom and the EU, and this uncertainty may last for years. Our business could be affected during this period of uncertainty, and perhaps longer, by the impact of the United Kingdom's referendum. In addition, our business could be negatively affected by new trade agreements between the United Kingdom and other countries, including the United States, and by the possible imposition of trade or other regulatory barriers in the United Kingdom. These possible negative impacts, and others resulting from the United Kingdom's actual or threatened withdrawal from the EU, may adversely affect our operating results and our customers' businesses.

Our inability to protect our intellectual property could have a material adverse effect on our business. In addition, third parties may claim that we infringe their intellectual property, and we could suffer significant litigation or licensing expense as a result. We place considerable emphasis on obtaining patent and trade secret protection for significant new technologies, products and processes because of the length of time and expense associated with bringing new products through the development process and into the marketplace. Our success depends in part on our ability to develop patentable products and obtain and enforce patent protection for our products both in the United States and in other countries. We own numerous U.S. and foreign patents, and we intend to file additional applications, as appropriate, for patents covering our products. Patents may not be issued for any pending or future patent applications owned by or licensed to us, and the claims allowed under any issued patents may not be sufficiently broad to protect our technology. Any issued patents owned by or licensed to us may be challenged, invalidated or circumvented, and the rights under these patents may not provide us with competitive advantages. In addition, competitors may design around our technology or develop competing technologies. Intellectual property rights may also be unavailable or limited in some foreign countries, which could make it easier for competitors to capture increased market position. We could incur substantial costs to defend ourselves in suits brought against us or in suits in which we may assert our patent rights against others. An unfavorable outcome of any such litigation could materially adversely affect our business and results of operations.

We also rely on trade secrets and proprietary know-how with which we seek to protect our products, in part, by confidentiality agreements with our collaborators, employees and consultants. These agreements may be breached and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently developed by our competitors.

Third parties may assert claims against us to the effect that we are infringing on their intellectual property rights. In the event that a claim relating to intellectual property is asserted against us, or third parties not affiliated with us hold pending or issued patents that relate to our products or technology, we may seek licenses to such intellectual property or challenge those patents. However, we may be unable to obtain these licenses on commercially reasonable terms, if at all, and our challenge of the patents may be unsuccessful. Our failure to obtain the necessary licenses or other rights could prevent the sale, manufacture, or distribution of our products and, therefore, could have a material adverse effect on our business, financial condition and results of operations.

Changes in governmental regulations may reduce demand for our products or increase our expenses. We compete in many markets in which we and our customers must comply with federal, state, local and international regulations, such as environmental, health and safety and food and drug regulations. We develop, configure and market our products to meet customer needs created by those regulations. Any significant change in regulations could reduce demand for our products or increase our expenses. For example, many of our instruments are marketed to the pharmaceutical industry for use in discovering and developing drugs. Changes in the U.S. Food and Drug Administration's regulation of the drug discovery and development process could have an adverse effect on the demand for these products.

Our pharma services offerings are highly complex, and if we are unable to provide quality and timely offerings to our customers, our business could suffer. Our pharma services offerings are highly exacting and complex, due in part to strict quality and regulatory requirements. Our operating results in this business depend on our ability to execute and, when necessary, improve our quality management strategy and systems, and our ability to effectively train and maintain our employee base with respect to quality management. A failure of our quality control systems could result in problems with facility operations or preparation or provision of products. In each case, such problems could arise for a variety of reasons, including equipment malfunction, failure to follow specific protocols and procedures, problems with raw materials or environmental factors and damage to, or loss of, manufacturing operations. Such problems could affect production of a particular batch or series of batches of products, requiring the destruction of such products or a halt of facility production altogether.

In addition, our failure to meet required quality standards may result in our failure to timely deliver products to our customers, which in turn could damage our reputation for quality and service. Any such failure could, among other things, lead to increased costs, lost revenue, reimbursement to customers for lost drug product, registered intermediates, registered starting materials, and active pharmaceutical ingredients, other customer claims, damage to and possibly termination of existing customer relationships, time and expense spent investigating the cause and, depending on the cause, similar losses with respect to other batches or products. Production problems in our drug and biologic manufacturing operations could be particularly significant because the cost of raw materials for such manufacturing is often high. If problems in preparation or manufacture of a product or failures to meet required quality standards for that product are not discovered before such product is released to the market, we may be subject to adverse regulatory actions, including product recalls, product seizures, injunctions to halt manufacture and distribution, restrictions on our operations, civil sanctions, including monetary sanctions, and criminal actions. In addition, such problems or failures could subject us to litigation claims, including claims from our customers for reimbursement for the cost of lost or damaged active pharmaceutical ingredients, the cost of which could be significant.

We are subject to product and other liability risks for which we may not have adequate insurance coverage. We may be named as a defendant in product liability lawsuits, which may allege that products or services we have provided from our pharma services offerings have resulted or could result in an unsafe condition or injury to consumers. Additionally, products currently or previously sold by our environmental and process instruments and radiation measurement and security instruments businesses include fixed and portable instruments used for chemical, radiation and trace explosives detection. These products are used in airports, embassies, cargo facilities, border crossings and other high-threat facilities for the detection and prevention of terrorist acts. If any of these products were to malfunction, it is possible that explosive or radioactive material could fail to be detected by our product, which could lead to product liability claims. There are also many other factors beyond our control that could lead to liability claims, such as the reliability and competence of the customers' operators and the training of such operators.

Any such product liability claims brought against us could be significant and any adverse determination may result in liabilities in excess of our insurance coverage. Although we carry product liability insurance, we cannot be certain that our current insurance will be sufficient to cover these claims or that it can be maintained on acceptable terms, if at all.

Our inability to complete any pending acquisitions or to successfully integrate any new or previous acquisitions could have a material adverse effect on our business. Our business strategy includes the acquisition of technologies and businesses that complement or augment our existing products and services. Certain acquisitions may be difficult to complete for a number of reasons, including the need for antitrust and/or other regulatory approvals. Any acquisition we may complete may be made at a substantial premium over the fair value of the net identifiable assets of the acquired company. Further, we may not be able to integrate acquired businesses successfully into our existing businesses, make such businesses profitable, or realize anticipated cost savings or synergies, if any, from these acquisitions, which could adversely affect our business.

Moreover, we have acquired many companies and businesses. As a result of these acquisitions, we recorded significant goodwill and indefinite-lived intangible assets (primarily tradenames) on our balance sheet, which amount to approximately $25.24 billion and $1.26 billion, respectively, as of March 30, 2019. In addition, we have definite-lived intangible assets totaling $13.23 billion as of March 30, 2019. We assess the realizability of goodwill and indefinite-lived intangible assets annually as well as whenever events or changes in circumstances indicate that these assets may be impaired. We assess the realizability of definite-lived intangible assets whenever events or changes in circumstances indicate that these assets may be impaired. These events or circumstances would generally include operating losses or a significant decline in earnings associated with the acquired business or asset. Our ability to realize the value of the goodwill and intangible assets will depend on the future cash flows of these businesses. These cash flows in turn depend in part on how well we have integrated these businesses. If we are not able to realize the value of the goodwill and intangible assets, we may be required to incur material charges relating to the impairment of those assets.

We are subject to laws and regulations governing government contracts, and failure to address these laws and regulations or comply with government contracts could harm our business by leading to a reduction in revenue associated with these customers. We have agreements relating to the sale of our products to government entities and, as a result, we are subject to various statutes and regulations that apply to companies doing business with the government. The laws governing government contracts differ from the laws governing private contracts and government contracts may contain pricing terms and conditions that are not applicable to private contracts. We are also subject to investigation for compliance with the regulations governing government contracts. A failure to comply with these regulations could result in suspension of these contracts, criminal, civil and administrative penalties or debarment.

Because we compete directly with certain of our larger customers and product suppliers, our results of operations could be adversely affected in the short term if these customers or suppliers abruptly discontinue or significantly modify their relationship with us. Our largest customer in the laboratory products business is also a significant competitor. Our business may be harmed in the short term if our competitive relationship in the marketplace with certain of our large customers results in a discontinuation of their purchases from us. In addition, we manufacture products that compete directly with products that we source from third-party suppliers. We also source competitive products from multiple suppliers. Our business could be adversely affected in the short term if any of our large third-party suppliers abruptly discontinues selling products to us.

Because we rely heavily on third-party package-delivery services, a significant disruption in these services or significant increases in prices may disrupt our ability to ship products, increase our costs and lower our profitability. We ship a significant portion of our products to our customers through independent package delivery companies, such as Federal Express in the U.S. and DHL in Europe. We also maintain a small fleet of vehicles dedicated to the delivery of our products and ship our products through other carriers, including national and regional trucking firms, overnight carrier services and the U.S. Postal Service. If one or more of these third-party package-delivery providers were to experience a major work stoppage, preventing our products from being delivered in a timely fashion or causing us to incur additional shipping costs we could not pass on to our customers, our costs could increase and our relationships with certain of our customers could be adversely affected. In addition, if one or more of these third-party package-delivery providers were to increase prices, and we were not able to find comparable alternatives or make adjustments in our delivery network, our profitability could be adversely affected.

We are required to comply with a wide variety of laws and regulations, and are subject to regulation by various federal, state and foreign agencies. We are subject to various local, state, federal, foreign and transnational laws and regulations, which include the operating and security standards of the U.S. Federal Drug Administration (the FDA), the U.S. Drug Enforcement Agency (the DEA), various state boards of pharmacy, state health departments, the U.S. Department of Health and Human Services (the DHHS), the European Medicines Agency (the EMA), in Europe, the EU member states and other comparable agencies and, in the future, any changes to such laws and regulations could adversely affect us. In particular, we are subject to laws and regulations concerning current good manufacturing practices and drug safety. Our subsidiaries may be required to register for permits and/or licenses with, and may be required to comply with the laws and regulations of the DEA, the FDA, the DHHS, foreign agencies including the EMA, and other various state boards of pharmacy, state health departments and/or comparable state agencies as well as certain accrediting bodies depending upon the type of operations and location of product distribution, manufacturing and sale.

The manufacture, distribution and marketing of many of our products and services, including medical devices and pharma services, are subject to extensive ongoing regulation by the FDA, the DEA, the EMA, and other equivalent local, state, federal and non-U.S. regulatory authorities. In addition, we are subject to inspections by these regulatory authorities. Failure by us or by our customers to comply with the requirements of these regulatory authorities, including without limitation, remediating any inspectional observations to the satisfaction of these regulatory authorities, could result in warning letters, product recalls or seizures, monetary sanctions, injunctions to halt manufacture and distribution, restrictions on our operations, civil or criminal sanctions, or withdrawal of existing or denial of pending approvals, including those relating to products or facilities. In addition, such a failure could expose us to contractual or product liability claims, contractual claims from our customers, including claims for reimbursement for lost or damaged active pharmaceutical ingredients, as well as ongoing remediation and increased compliance costs, any or all of which could be significant. We are the sole manufacturer of a number of pharmaceuticals for many of our customers and a negative regulatory event could impact our customers' ability to provide products to their customers.

We are also subject to a variety of federal, state, local and international laws and regulations that govern, among other things, the importation and exportation of products, the handling, transportation and manufacture of substances that could be classified as hazardous, and our business practices in the U.S. and abroad such as anti-corruption, anti-competition and privacy and data protection laws. Any noncompliance by us with applicable laws and regulations or the failure to maintain, renew or obtain necessary permits and licenses could result in criminal, civil and administrative penalties and could have an adverse effect on our results of operations.

Our business could be adversely affected by disruptions at our sites. We rely upon our manufacturing operations to produce many of the products we sell and our warehouse facilities to store products, pending sale. Any significant disruption of those operations for any reason, such as strikes or other labor unrest, power interruptions, fire, hurricanes or other events beyond our control could adversely affect our sales and customer relationships and therefore adversely affect our business. We have significant operations in California, near major earthquake faults, which make us susceptible to earthquake risk. Although most of our raw materials are available from a number of potential suppliers, our operations also depend upon our ability to obtain raw materials at reasonable prices. If we are unable to obtain the materials we need at a reasonable price, we may not be able to produce certain of our products or we may not be able to produce certain of these products at a marketable price, which could have an adverse effect on our results of operations.

Fluctuations in our effective tax rate may adversely affect our results of operations and cash flows. As a global company, we are subject to taxation in numerous countries, states and other jurisdictions. In preparing our financial statements, we record the amount of tax that is payable in each of the countries, states and other jurisdictions in which we operate. Our future effective tax rate, however, may be lower or higher than experienced in the past due to numerous factors, including a change in the mix of our profitability from country to country, changes in accounting for income taxes and recently enacted and future changes in tax laws in jurisdictions in which we operate. Any of these factors could cause us to experience an effective tax rate significantly different from previous periods or our current expectations, which could have an adverse effect on our business, results of operations and cash flows.

We may incur unexpected costs from increases in fuel and raw material prices, which could reduce our earnings and cash flow. Our primary commodity exposures are for fuel, petroleum-based resins and steel. While we may seek to minimize the impact of price increases through higher prices to customers and various cost-saving measures, our earnings and cash flows could be adversely affected in the event these measures are insufficient to cover our costs.

A significant disruption in, or breach in security of, our information technology systems or violation of data privacy laws could adversely affect our business. As a part of our ongoing effort to upgrade our current information systems, we periodically implement new enterprise resource planning software and other software applications to manage certain of our business operations. As we implement and add functionality, problems could arise that we have not foreseen. Such problems could disrupt our ability to provide quotes, take customer orders and otherwise run our business in a timely manner. When we upgrade or change systems, we may suffer interruptions in service, loss of data or reduced functionality. In addition, if our new systems fail to provide accurate pricing and cost data our results of operations and cash flows could be adversely affected.

We also rely on our information technology systems to process, transmit and store electronic information (including sensitive data such as confidential business information and personally identifiable data relating to employees, customers and other business partners) and to manage or support a variety of critical business processes and activities (such as interacting with suppliers, selling our products and services, fulfilling orders and billing, collecting and making payments, shipping products, providing services and support to customers, tracking customer activity, fulfilling contractual obligations and otherwise conducting business). Our systems may be vulnerable to damage or interruption from natural disasters, power loss, telecommunication failures, terrorist attacks, computer hackers, computer viruses, ransomware, phishing, computer denial-of-service attacks, unauthorized access to customer or employee data or company trade secrets, and other attempts to harm our systems. Certain of our systems are not redundant, and our disaster recovery planning is not sufficient for every eventuality. Despite any precautions we may take, such problems could result in, among other consequences, interruptions in our services, which could harm our reputation and financial results. Any of the cyber-attacks, breaches or other disruptions or damage described above, if significant, could materially interrupt our operations, delay production and shipments, result in theft of our and our customers' intellectual property and trade secrets, damage customer, business partner and employee relationships and our reputation or result in defective products or services, legal claims and proceedings, liability and penalties under privacy laws and increased cost for security and remediation, each of which could adversely affect our business and financial results.

If we are unable to maintain reliable information technology systems and appropriate controls with respect to global data privacy and security requirements and prevent data breaches, we may suffer regulatory consequences in addition to business consequences. As a global organization, we are subject to data privacy and security laws, regulations, and customer-imposed controls in numerous jurisdictions as a result of having access to and processing confidential, personal and/or sensitive data in the course of our business. For example, in the United States, individual states regulate data breach and security requirements and multiple governmental bodies assert authority over aspects of the protection of personal privacy. European laws require us to have an approved legal mechanism to transfer personal data out of Europe, and the recently-enacted EU General Data Protection Regulation, which took effect in May 2018, imposes significantly stricter requirements in how we collect and process personal data. Several countries, such as China and Russia, have passed laws that require personal data relating to their citizens to be maintained on local servers and impose additional data transfer restrictions. Government enforcement actions can be costly and interrupt the regular operation of our business, and data breaches or violations of data privacy laws can result in fines, reputational damage and civil lawsuits, any of which may adversely affect our business, reputation and financial statements.

Our debt may restrict our investment opportunities or limit our activities. As of March 30, 2019, we had approximately $18.15 billion in outstanding indebtedness. In addition, we have availability to borrow under a revolving credit facility that provides for up to $2.50 billion of unsecured multi-currency revolving credit. We may also obtain additional long-term debt and lines of credit to meet future financing needs, which would have the effect of increasing our total leverage.

Our leverage could have negative consequences, including increasing our vulnerability to adverse economic and industry conditions, limiting our ability to obtain additional financing and limiting our ability to acquire new products and technologies through strategic acquisitions.

Our ability to make scheduled payments, refinance our obligations or obtain additional financing will depend on our future operating performance and on economic, financial, competitive and other factors beyond our control. Our business may not generate sufficient cash flow to meet our obligations. If we are unable to service our debt, refinance our existing debt or obtain additional financing, we may be forced to delay strategic acquisitions, capital expenditures or research and development expenditures.

Additionally, the agreements governing our debt require that we maintain certain financial ratios, and contain affirmative and negative covenants that restrict our activities by, among other limitations, limiting our ability to incur additional indebtedness, merge or consolidate with other entities, make investments, create liens, sell assets and enter into transactions with affiliates. The covenants in our revolving credit facility (the Facility) include a Consolidated Leverage Ratio (total debt-to-Consolidated EBITDA) and a Consolidated Interest Coverage Ratio (Consolidated EBITDA to Consolidated Interest Expense), as such terms are defined in the Facility. Specifically, the company has agreed that, so long as any lender has any commitment under the Facility, any letter of credit is outstanding under the Facility, or any loan or other obligation is outstanding under the Facility, it will maintain a maximum Consolidated Leverage Ratio of 3.5:1.0. The company has also agreed that so long as any lender has any commitment under the Facility or any letter of credit is outstanding under the Facility, or any loan or other obligation is outstanding under the Facility, it will maintain a minimum Consolidated Interest Coverage Ratio of 3.0:1.0 as of the last day of any fiscal quarter.

Our ability to comply with these financial restrictions and covenants is dependent on our future performance, which is subject to prevailing economic conditions and other factors, including factors that are beyond our control such as foreign exchange rates and interest rates. Our failure to comply with any of these restrictions or covenants may result in an event of default under the applicable debt instrument, which could permit acceleration of the debt under that instrument and require us to prepay that debt before its scheduled due date. Also, an acceleration of the debt under certain of our debt instruments would trigger an event of default under other of our debt instruments.

THERMO FISHER SCIENTIFIC INC.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds
Issuer Purchases of Equity Securities
A summary of the share repurchase activity for the company's first quarter of 2019 follows:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1)	Maximum Dollar Amount of Shares That May Yet Be Purchased Under the Plans or Programs (1) (in millions)
Fiscal January (Jan. 1 - Feb. 2)	3,329,466	$ 225.26	3,329,466	$ 1,250
Fiscal February (Feb. 3 - Mar. 2)	—		—	1,250
Fiscal March (Mar. 3 - Mar. 30)	—		—	1,250
Total First Quarter	3,329,466	$ 225.26	3,329,466	$ 1,250

(1) On September 7, 2018, the Board of Directors authorized the repurchase of up to $2.00 billion of the company’s common stock. All of the shares of common stock repurchased by the company during the first quarter of 2019 were purchased under this program.

Item 6. Exhibits
See Exhibit Index on page 43.

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.

Date: May 3, 2019 THERMO FISHER SCIENTIFIC INC.

/s/ Stephen Williamson
Stephen Williamson
Senior Vice President and Chief Financial Officer

/s/ Peter E. Hornstra
Peter E. Hornstra
Vice President and Chief Accounting Officer

THERMO FISHER SCIENTIFIC INC.
EXHIBIT INDEX

Exhibit Number	Description of Exhibit
10.1	Form of Performance Restricted Stock Unit Agreement effective February 26, 2019.*
10.2	Form of Performance Restricted Stock Unit Agreement for Marc Casper effective February 26, 2019.*
31.1	Certification of Chief Executive Officer required by Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer required by Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer required by Exchange Act Rules 13a-14(b) and 15d-14(b), as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.**
32.2	Certification of Chief Financial Officer required by Exchange Act Rules 13a-14(b) and 15d-14(b), as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.**
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Definition Linkbase Document.
101.LAB	XBRL Taxonomy Label Linkbase Document.
101.PRE	XBRL Taxonomy Presentation Linkbase Document.
	The Registrant agrees, pursuant to Item 601(b)(4)(iii)(A) of Regulation S-K, to furnish to the Commission, upon request, a copy of each instrument with respect to long-term debt of the Registrant or its consolidated subsidiaries.

*Indicates management contract or compensatory plan, contract or arrangement.
** Certification is not deemed "filed" for purposes of Section 18 of the Exchange Act or otherwise subject to the liability of that section. Such certification is not deemed to be incorporated by reference into any filing under the Securities Act or the Exchange Act except to the extent that the registrant specifically incorporates it by reference.
Attached as Exhibit 101 to this report are the following formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Balance Sheet at March 30, 2019 and December 31, 2018, (ii) Consolidated Statement of Income for the three months ended March 30, 2019 and March 31, 2018, (iii) Consolidated Statement of Comprehensive Income for the three months ended March 30, 2019 and March 31, 2018, (iv) Consolidated Statement of Cash Flows for the three months ended March 30, 2019 and March 31, 2018, (v) Consolidated Statement of Shareholders’ Equity for the three months ended March 30, 2019 and March 31, 2018 and (vi) Notes to Consolidated Financial Statements.