UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-Q

QUARTERLY REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended October 25, 2019

Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.
For the transition period from _____ to _____

Commission File Number 001-36820

MEDTRONIC PUBLIC LIMITED COMPANY
(Exact name of registrant as specified in its charter)

Ireland	**98-1183488**
(State of incorporation)	(I.R.S. Employer Identification No.)

20 On Hatch, Lower Hatch Street
Dublin 2, Ireland
(Address of principal executive offices) (Zip Code)
+353 1 438-1700
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Ordinary shares, par value $0.0001 per share	**MDT**	**New York Stock Exchange**
Floating Rate Notes due 2021	**MDT/21**	**New York Stock Exchange**
0.000% Senior Notes due 2021	**MDT/21A**	**New York Stock Exchange**
0.000% Senior Notes due 2022	**MDT/22B**	**New York Stock Exchange**
0.375% Senior Notes due 2023	**MDT/23B**	**New York Stock Exchange**
0.25% Senior Notes due 2025	**MDT/25**	**New York Stock Exchange**
1.125% Notes due 2027	**MDT/27**	**New York Stock Exchange**
1.625% Notes due 2031	**MDT/31**	**New York Stock Exchange**
1.00% Senior Notes due 2031	**MDT/31A**	**New York Stock Exchange**
2.250% Notes due 2039	**MDT/39A**	**New York Stock Exchange**
1.50% Senior Notes due 2039	**MDT/39B**	**New York Stock Exchange**
1.75% Senior Notes due 2049	**MDT/49**	**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 (or for such shorter period that the Registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes No

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

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

Large accelerated filer	Accelerated filer	Emerging growth company
Non-accelerated filer	Smaller Reporting Company	

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 1(a) of the Exchange Act.

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

As of November 27, 2019, 1,340,377,511 ordinary shares, par value $0.0001, and 1,872 A preferred shares, par value $1.00, of the registrant were outstanding.

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PART I — FINANCIAL INFORMATION

Item 1. Financial Statements

Medtronic plc
Consolidated Statements of Income
(Unaudited)

	Three months ended		Six months ended	
(in millions, except per share data)	**October 25, 2019**	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
Net sales	$ 7,706	$ 7,481	$ 15,199	$ 14,865
Costs and expenses:				
Cost of products sold	2,394	2,203	4,760	4,407
Research and development expense	603	590	1,190	1,175
Selling, general, and administrative expense	2,620	2,605	5,163	5,202
Amortization of intangible assets	441	445	881	891
Restructuring charges, net	27	24	74	86
Certain litigation charges	121	—	168	103
Other operating expense, net	149	70	127	221
Operating profit	1,351	1,544	2,836	2,780
Other non-operating income, net	(108)	(52)	(209)	(238)
Interest expense	165	241	774	483
Income before income taxes	1,294	1,355	2,271	2,535
Income tax provision	(77)	235	23	338
Net income	1,371	1,120	2,248	2,197
Net income attributable to noncontrolling interests	(7)	(5)	(20)	(7)
Net income attributable to Medtronic	$ 1,364	$ 1,115	$ 2,228	$ 2,190
Basic earnings per share	$ 1.02	$ 0.83	$ 1.66	$ 1.62
Diluted earnings per share	$ 1.01	$ 0.82	$ 1.65	$ 1.61
Basic weighted average shares outstanding	1,340.8	1,349.2	1,340.8	1,350.9
Diluted weighted average shares outstanding	1,351.4	1,360.9	1,351.6	1,363.0

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

Medtronic plc
Consolidated Statements of Comprehensive Income
(Unaudited)

	Three months ended		Six months ended	
(in millions)	**October 25, 2019**	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
Net income	$ 1,371	$ 1,120	$ 2,248	$ 2,197
Other comprehensive income (loss), net of tax:				
Unrealized gain (loss) on investment securities	17	(9)	73	(9)
Translation adjustment	(214)	(431)	(148)	(1,255)
Net investment hedge	53	—	152	—
Net change in retirement obligations	12	21	25	48
Unrealized gain (loss) on cash flow hedges	5	127	(2)	340
Other comprehensive (loss) income	(127)	(292)	100	(876)
Comprehensive income including noncontrolling interests	1,244	828	2,348	1,321
Comprehensive income attributable to noncontrolling interests	(7)	(2)	(20)	(4)
Comprehensive income attributable to Medtronic	$ 1,237	$ 826	$ 2,328	$ 1,317

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

Medtronic plc
Consolidated Balance Sheets
(Unaudited)

(in millions)	October 25, 2019	April 26, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 3,962	$ 4,393
Investments	6,436	5,455
Accounts receivable, less allowances of $198 and $190, respectively	6,118	6,222
Inventories, net	4,042	3,753
Other current assets	2,095	2,144
Total current assets	22,653	21,967
Property, plant, and equipment	11,364	10,920
Accumulated depreciation	(6,608)	(6,245)
Property, plant, and equipment, net	4,756	4,675
Goodwill	39,952	39,959
Other intangible assets, net	19,775	20,560
Tax assets	1,804	1,519
Other assets	2,113	1,014
Total assets	$ 91,053	$ 89,694
LIABILITIES AND EQUITY		
Current liabilities:		
Current debt obligations	$ 875	$ 838
Accounts payable	1,965	1,953
Accrued compensation	1,773	2,189
Accrued income taxes	442	567
Other accrued expenses	3,115	2,925
Total current liabilities	8,170	8,472
Long-term debt	24,752	24,486
Accrued compensation and retirement benefits	1,573	1,651
Accrued income taxes	2,705	2,838
Deferred tax liabilities	1,376	1,278
Other liabilities	1,758	757
Total liabilities	40,334	39,482
Commitments and contingencies (Note 17)		
Shareholders' equity:		
Ordinary shares— par value $0.0001, 2.6 billion shares authorized, 1,340,375,745 and 1,340,697,595 shares issued and outstanding, respectively	—	—
Additional paid-in capital	26,171	26,532
Retained earnings	27,018	26,270
Accumulated other comprehensive loss	(2,611)	(2,711)
Total shareholders' equity	50,578	50,091
Noncontrolling interests	141	121
Total equity	50,719	50,212
Total liabilities and equity	$ 91,053	$ 89,694

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

Medtronic plc
Consolidated Statements of Equity
(Unaudited)

(in millions)	Ordinary Shares Number	Ordinary Shares Par Value	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Shareholders' Equity	Noncontrolling Interests	Total Equity
April 26, 2019	1,341	$ —	$ 26,532	$ 26,270	$ (2,711)	$ 50,091	$ 121	$ 50,212
Net income	—	—	—	864	—	864	13	877
Other comprehensive income	—	—	—	—	227	227	—	227
Dividends to shareholders ($0.54 per ordinary share)	—	—	—	(724)	—	(724)	—	(724)
Issuance of shares under stock purchase and award plans	3	—	205	—	—	205	—	205
Repurchase of ordinary shares	(3)	—	(328)	—	—	(328)	—	(328)
Stock-based compensation	—	—	61	—	—	61	—	61
Cumulative effect of change in accounting principle[1]	—	—	—	(33)	—	(33)	—	(33)
July 26, 2019	1,341	$ —	$ 26,470	$ 26,377	$ (2,484)	$ 50,363	$ 134	$ 50,497
Net income	—	—	—	1,364	—	1,364	7	1,371
Other comprehensive (loss)	—	—	—	—	(127)	(127)	—	(127)
Dividends to shareholders ($$0.54 per ordinary share)	—	—	—	(723)	—	(723)	—	(723)
Issuance of shares under stock purchase and award plans	4	—	145	—	—	145	—	145
Repurchase of ordinary shares	(5)	—	(552)	—	—	(552)	—	(552)
Stock-based compensation		—	108	—	—	108	—	108
October 25, 2019	1,340	$ —	$ 26,171	$ 27,018	$ (2,611)	$ 50,578	$ 141	$ 50,719

(1) See Note 2 to the consolidated financial statements for discussion regarding the adoption of accounting standards during the first quarter fiscal year 2020. □

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

Medtronic plc
Consolidated Statements of Equity
(Unaudited)

(in millions)	Ordinary Shares Number	Ordinary Shares Par Value	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Shareholders' Equity	Noncontrolling Interests	Total Equity
April 27, 2018	1,354	$ —	$ 28,127	$ 24,379	$ (1,786)	$ 50,720	$ 102	$ 50,822
Net income	—	—	—	1,075	—	1,075	2	1,077
Other comprehensive (loss)	—	—	—	—	(584)	(584)	—	(584)
Dividends to shareholders ($0.50 per ordinary share)	—	—	—	(677)	—	(677)	—	(677)
Issuance of shares under stock purchase and award plans	7	—	446	—	—	446	—	446
Repurchase of ordinary shares	(9)	—	(820)	—	—	(820)	—	(820)
Stock-based compensation	—	—	64	—	—	64	—	64
Changes to noncontrolling ownership interests	—	—	—	—	—	—	1	1
Cumulative effect of change in accounting principle[1]	—	—	—	(47)	47	—	—	—
July 27, 2018	1,352	$ —	$ 27,817	$ 24,730	$ (2,323)	$ 50,224	$ 105	$ 50,329
Net income	—	—	—	1,115	—	1,115	5	1,120
Other comprehensive (loss)	—	—	—	—	(289)	(289)	(3)	(292)
Dividends to shareholders ($0.50 per ordinary share)	—	—	—	(674)	—	(674)	—	(674)
Issuance of shares under stock purchase and award plans	7	—	298	—	—	298	—	298
Repurchase of ordinary shares	(13)	—	(1,171)	—	—	(1,171)	—	(1,171)
Stock-based compensation	—	—	104	—	—	104	—	104
October 26, 2018	1,346	$ —	$ 27,048	$ 25,171	$ (2,612)	$ 49,607	$ 107	$ 49,714

(1) The cumulative effect of change in accounting principle during the first quarter of fiscal year 2019 resulted from the adoption of accounting guidance that requires equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income. As a result of the adoption, the Company reclassified $47 million from *accumulated other comprehensive loss* to the opening balance of *retained earnings* as of April 28, 2018.

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

Medtronic plc
Consolidated Statements of Cash Flows
(Unaudited)

(in millions)	Six months ended October 25, 2019	Six months ended October 26, 2018
Operating Activities:		
Net income	$ 2,248	$ 2,197
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	1,328	1,317
Provision for doubtful accounts	44	32
Deferred income taxes	(245)	(80)
Stock-based compensation	169	168
Loss on debt extinguishment	406	—
Other, net	119	55
Change in operating assets and liabilities, net of acquisitions and divestitures:		
Accounts receivable, net	39	(37)
Inventories, net	(267)	(312)
Accounts payable and accrued liabilities	(294)	24
Other operating assets and liabilities	(170)	(499)
Net cash provided by operating activities	3,377	2,865
Investing Activities:		
Acquisitions, net of cash acquired	(201)	(119)
Additions to property, plant, and equipment	(584)	(497)
Purchases of investments	(4,226)	(1,444)
Sales and maturities of investments	3,260	2,824
Other investing activities	(16)	—
Net cash (used in) provided by investing activities	(1,767)	764
Financing Activities:		
Change in current debt obligations, net	42	(700)
Issuance of long-term debt	5,568	1
Payments on long-term debt	(5,594)	(17)
Dividends to shareholders	(1,447)	(1,351)
Issuance of ordinary shares	432	800
Repurchase of ordinary shares	(962)	(2,047)
Other financing activities	(54)	11
Net cash used in financing activities	(2,015)	(3,303)
Effect of exchange rate changes on cash and cash equivalents	(26)	(84)
Net change in cash and cash equivalents	(431)	242
Cash and cash equivalents at beginning of period	4,393	3,669
Cash and cash equivalents at end of period	$ 3,962	$ 3,911
Supplemental Cash Flow Information		
Cash paid for:		
Income taxes	$ 494	$ 941
Interest	322	482

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

1. Basis of Presentation

The accompanying unaudited consolidated financial statements of Medtronic plc and its subsidiaries (Medtronic plc, Medtronic, or the Company) have been prepared in accordance with accounting principles generally accepted in the United States of America (U.S.) (U.S. GAAP) for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. In the opinion of management, the consolidated financial statements include all of the adjustments necessary for a fair statement in conformity with U.S. GAAP. Certain reclassifications have been made to prior year financial statements to conform to classifications used in the current year.

Operating results for interim periods are not necessarily indicative of results that may be expected for the fiscal year as a whole. The preparation of the financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses, and the related disclosures at the date of the financial statements and during the reporting period. Actual results could materially differ from these estimates.

The accompanying unaudited consolidated financial statements include the accounts of Medtronic plc, its wholly-owned subsidiaries, entities for which the Company has a controlling financial interest, and variable interest entities for which the Company is the primary beneficiary. Intercompany transactions and balances have been eliminated in consolidation.

The accompanying unaudited consolidated financial statements and related notes should be read in conjunction with the audited consolidated financial statements of the Company and related notes included in the Company's Annual Report on Form 10-K for the fiscal year ended April 26, 2019. The Company's fiscal years 2020, 2019, and 2018 will end or ended on April 24, 2020, April 26, 2019, and April 27, 2018, respectively.

2. New Accounting Pronouncements

Recently Adopted

Leases

In February 2016, the FASB issued guidance which requires lessees to recognize right-of-use assets and lease liabilities on the balance sheet. This guidance also requires additional qualitative and quantitative lease related disclosures in the notes to the consolidated financial statements. The Company adopted this guidance using the modified retrospective method in the first quarter of fiscal year 2020.

During the implementation of this recently adopted accounting standard, the Company elected the package of practical expedients available under the transition guidance that allowed an entity not to reassess whether any expired or existing contracts are or contain leases, the classification for any expired or existing leases or any initial direct costs for existing leases. Further, the Company made accounting policy elections to not apply the recognition requirements to short-term leases and to account for lease and nonlease components as a single lease component.

The adoption of this guidance resulted in the recognition of right-of-use assets and lease liabilities in an amount of approximately $1.0 billion, an immaterial cumulative-effect adjustment to retained earnings as of April 27, 2019, and expansion of lease related disclosures. The adoption of this guidance did not have a material impact on the Company's consolidated statements of income or consolidated statements of cash flows.

Others

In August 2017, the FASB issued guidance to better align an entity's risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. The Company adopted this guidance in the first quarter of fiscal year 2020. The adoption of this guidance resulted in expanded disclosures and did not have an impact on the Company's consolidated financial statements.

3. Revenue

The Company's revenues are principally derived from device-based medical therapies and services related to cardiac rhythm disorders, cardiovascular disease, renal disease, neurological disorders and diseases, spinal conditions and musculoskeletal trauma, chronic pain, urological and digestive disorders, ear, nose, and throat conditions, and diabetes conditions as well as advanced and general surgical care products, respiratory and monitoring solutions, and neurological surgery technologies. The Company's primary customers include hospitals, clinics, third-party health care providers, distributors, and other institutions, including governmental health care programs and group purchasing organizations.

The table below illustrates net sales by segment and division for the three and six months ended October 25, 2019 and October 26, 2018:

	Three months ended[1]		Six months ended[1]	
(in millions)	**October 25, 2019**	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
Cardiac Rhythm & Heart Failure	$ 1,426	$ 1,472	$ 2,807	$ 2,898
Coronary & Structural Heart	955	906	1,896	1,823
Aortic, Peripheral, & Venous	474	480	942	948
Cardiac and Vascular Group	2,855	2,858	5,645	5,669
Surgical Innovations	1,454	1,393	2,871	2,790
Respiratory, Gastrointestinal, & Renal	688	654	1,371	1,309
Minimally Invasive Therapies Group	2,142	2,047	4,242	4,099
Brain Therapies	772	701	1,512	1,375
Spine	692	656	1,349	1,308
Specialty Therapies	333	322	656	631
Pain Therapies	315	314	607	628
Restorative Therapies Group	2,112	1,993	4,124	3,942
Diabetes Group	596	583	1,188	1,155
Total	$ 7,706	$ 7,481	$ 15,199	$ 14,865

(1) Revenue amounts have intentionally been rounded to the nearest million and, therefore, may not sum.

During the first quarter of fiscal year 2020, the Company realigned its divisions within the Restorative Therapies Group, which included a movement of revenue from Transformative Solutions product lines previously included in Specialty Therapies to a product line under Brain Therapies. As a result, net sales for fiscal year 2019 have been recast to adjust for this realignment.

The table below illustrates net sales by market geography for each segment for the three and six months ended October 25, 2019 and October 26, 2018:

	U.S.[1][4]		Non-U.S. Developed Markets[2][4]		Emerging Markets[3][4]	
	Three months ended		Three months ended		Three months ended	
(in millions)	October 25, 2019	October 26, 2018	October 25, 2019	October 26, 2018	October 25, 2019	October 26, 2018
Cardiac and Vascular Group	$ 1,455	$ 1,482	$ 890	$ 895	$ 510	$ 481
Minimally Invasive Therapies Group	922	872	782	772	438	403
Restorative Therapies Group	1,440	1,357	416	412	256	224
Diabetes Group	311	334	226	203	59	46
Total	$ 4,129	$ 4,045	$ 2,315	$ 2,282	$ 1,262	$ 1,154

	U.S.[1][4]		Non-U.S. Developed Markets[2][4]		Emerging Markets[3][4]	
	Six months ended		Six months ended		Six months ended	
(in millions)	October 25, 2019	October 26, 2018	October 25, 2019	October 26, 2018	October 25, 2019	October 26, 2018
Cardiac and Vascular Group	$ 2,816	$ 2,871	$ 1,820	$ 1,842	$ 1,009	$ 956
Minimally Invasive Therapies Group	1,835	1,729	1,573	1,600	834	770
Restorative Therapies Group	2,778	2,651	842	840	504	451
Diabetes Group	618	658	457	406	113	91
Total	$ 8,046	$ 7,909	$ 4,692	$ 4,688	$ 2,460	$ 2,268

(1) U.S. includes the United States and U.S. territories.
(2) Non-U.S. developed markets include Japan, Australia, New Zealand, Korea, Canada, and the countries within Western Europe.
(3) Emerging markets include the countries of the Middle East, Africa, Latin America, Eastern Europe, and the countries of Asia that are not included in the non-U.S. developed markets, as defined above.
(4) Revenue amounts have intentionally been rounded to the nearest million and, therefore, may not sum.

The amount of revenue recognized is reduced by sales rebates and returns. Adjustments to rebates and returns reserves are recorded as increases or decreases of revenue. At October 25, 2019, $797 million of rebates were classified as *other accrued expenses* and $439 million of rebates were classified as a reduction of *accounts receivable* in the consolidated balance sheets. At April 26, 2019, $764 million of rebates were classified as *other accrued expenses* and $432 million of rebates were classified as a reduction of *accounts receivable* in the consolidated balance sheets. The Company includes obligations for returns in *other accrued expenses* in the consolidated balance sheets and the right-of-return asset in *other current assets* in the consolidated balance sheets. The right-of-return asset and liability at October 25, 2019 and April 26, 2019 were not material. For the three and six months ended October 25, 2019 and October 26, 2018, adjustments to rebate and return reserves recognized in revenue that were included in the rebate and return reserves at the beginning of the period were not material.

Deferred Revenue and Remaining Performance Obligations

The Company records a deferred revenue liability if a customer pays consideration before the Company transfers a good or service to the customer. Deferred revenue at October 25, 2019 and April 26, 2019 was $291 million and $315 million, respectively. At October 25, 2019 and April 26, 2019, $189 million and $211 million, respectively, was included in *other accrued expenses* and $102 million and $104 million, respectively, was included in *other liabilities.* During the six months ended October 25, 2019, the Company recognized $150 million of revenue that was included in deferred revenue as of April 26, 2019.

Remaining performance obligations include deferred revenue and amounts the Company expects to receive for goods and services that have not yet been delivered or provided under existing, noncancellable contracts with minimum purchase commitments. At October 25, 2019, the estimated revenue expected to be recognized in future periods related to performance obligations that are unsatisfied for executed contracts with an original duration of one year or more was approximately $1.1 billion. The Company expects to recognize revenue on the majority of these remaining performance obligations over the nextfour years.

4. Acquisitions

The Company had acquisitions during the three and six months ended October 25, 2019 and October 26, 2018 that were accounted for as business combinations. The assets and liabilities of the businesses acquired were recorded and consolidated on the acquisition date at their respective fair values. Goodwill resulting from business combinations is largely attributable to future yet to be defined technologies, new customer relationships, existing workforce of the acquired businesses, and synergies expected to arise after the Company's acquisition of these businesses. The pro forma impact of these acquisitions was not significant, either individually or in the aggregate, to the consolidated results of the Company for the three and six months ended October 25, 2019 and October 26, 2018. The results of operations of acquired businesses have been included in the Company's consolidated statements of income since the date each business was acquired.

Fiscal Year 2020

The acquisition date fair value of net assets acquired during the six months ended October 25, 2019 was $272 million, consisting of $324 million of assets acquired and $52 million of liabilities assumed. Based upon preliminary valuations, assets acquired were primarily comprised of $139 million of technology-based intangible assets and $26 million of customer-related intangible assets with estimated useful lives ranging from 8 to 16 years, $92 million of goodwill, and $40 million of inventory. The goodwill is not deductible for tax purposes. The Company recognized $65 million of contingent consideration liabilities in connection with business combinations during the six months ended October 25, 2019, which are comprised of revenue milestone-based payments. For the six months ended October 25, 2019, purchase price allocation adjustments were not significant.

Fiscal Year 2019

The acquisition date fair value of net assets acquired during the six months ended October 26, 2018 was $166 million, consisting of $187 million of assets acquired and $21 million of liabilities assumed. Assets acquired were primarily comprised of $60 million of goodwill and $100 million of technology-based intangible assets with estimated useful lives ranging from 4 to 15 years. The Company recognized $46 million of contingent consideration liabilities in connection with business combinations during the six months ended October 26, 2018. For the six months ended October 26, 2018, purchase price allocation adjustments were not significant.

Acquired In-Process Research & Development

In-process research and development (IPR&D) acquired outside of a business combination is expensed immediately. During the three and six months ended October 25, 2019, the Company acquired no IPR&D in connection with an asset acquisition. During the three and six months ended October 26, 2018, the Company acquired $15 million of IPR&D in connection with an asset acquisition, which was recognized in *other operating expense, net* in the consolidated statements of income.

Contingent Consideration

Certain of the Company’s business combinations involve potential payment of future consideration that is contingent upon the achievement of certain product development milestones and/or contingent on the acquired business reaching certain performance milestones. A liability is recorded for the estimated fair value of the contingent consideration on the acquisition date. The fair value of the contingent consideration is remeasured at each reporting period, and the change in fair value is recognized within *other operating expense, net* in the consolidated statements of income. Contingent consideration payments made soon after the acquisition date are classified as investing activities in the consolidated statements of cash flows. Contingent consideration payments not made soon after the acquisition date that are related to the acquisition date fair value are reported as financing activities in the consolidated statements of cash flows, and amounts paid in excess of the original acquisition date fair value are reported as operating activities in the consolidated statements of cash flows.

The fair value of contingent consideration at October 25, 2019 and April 26, 2019 was $260 million and $222 million, respectively. At October 25, 2019, $83 million was recorded in *other accrued expenses* and $177 million was recorded in *other liabilities* in the consolidated balance sheets. At April 26, 2019, $73 million was recorded in *other accrued expenses* and $149 million was recorded in *other liabilities* in the consolidated balance sheets.

The following table provides a reconciliation of the beginning and ending balances of contingent consideration:

	Three months ended		Six months ended	
(in millions)	**October 25, 2019**	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
Beginning balance	$ 269	$ 208	$ 222	$ 173
Purchase price contingent consideration	7	11	65	46
Payments	(15)	(1)	(29)	(7)
Change in fair value	(1)	(15)	2	(9)
Ending balance	$ 260	$ 203	$ 260	$ 203

The fair value of contingent consideration is measured using projected payment dates, discount rates, probabilities of payment, and projected revenues (for revenue-based consideration). Projected revenues are based on the Company's most recent internal operational budgets and long-range strategic plans. Changes in projected payment dates, discount rates, probabilities of payment, and projected revenues may result in adjustments to the fair value measurement. The recurring Level 3 fair value measurements of contingent consideration for which a liability is recorded include the following significant unobservable inputs:

(in millions)	**Fair Value at October 25, 2019**	**Valuation Technique**	**Unobservable Input**	**Range**
			Discount rate	11.5% - 32.5%
Revenue and other performance-based payments	$135	Discounted cash flow	Probability of payment	40% - 100%
			Projected fiscal year of payment	2020 - 2026
			Discount rate	5.5%
Product development and other milestone-based payments	$125	Discounted cash flow	Probability of payment	75% - 100%
			Projected fiscal year of payment	2020 - 2027

5. Restructuring

In the third quarter of fiscal year 2018, the Company announced its Enterprise Excellence restructuring program, which is expected to leverage the Company's global size and scale, as well as enhance the customer and employee experience, with a focus on three objectives: global operations, functional optimization, and commercial optimization. Primary activities of the restructuring program include integrating and enhancing global manufacturing and supply processes, systems and site presence, enhancing and leveraging global operating models across several enabling functions, and optimizing certain commercial processes, systems, and models.

The Company estimates that, in connection with its Enterprise Excellence restructuring program, it will recognize pre-tax exit and disposal costs and other costs across all segments of approximately $1.6 billion to $1.8 billion, the majority of which are expected to be incurred by the end of fiscal year 2022. Approximately half of the estimated charges are related to employee termination benefits. The remaining charges are costs associated with the restructuring program, such as salaries for employees supporting the program and consulting expenses. These charges are recognized within *restructuring charges, net, cost of products sold,* and *selling, general, and administrative expense* in the consolidated statements of income.

For the three and six months ended October 25, 2019, the Company recognized charges of $95 million and $231 million, respectively. Additionally, the Company incurred accrual adjustments of $1 million and $13 million for the three and six months ended October 25, 2019, respectively, related to certain employees identified for termination finding other positions within Medtronic. For the three and six months ended October 25, 2019, charges included $32 million and $67 million, respectively, recognized within *cost of products sold* and $35 million and $77 million, respectively, recognized within *selling, general, and administrative expense* in the consolidated statements of income.

For the three and six months ended October 26, 2018, the Company recognized charges of $75 million and $195 million, respectively. Additionally, the Company incurred accrual adjustments of $4 million and $2 million for the three and six months ended October 26, 2018, respectively, related to employee termination benefits being more than initially estimated. For the three and six months ended October 26, 2018, charges included $22 million and $37 million, respectively, recognized within

cost of products sold and $31 million and $54 million, respectively, recognized within *selling, general, and administrative expense* in the consolidated statements of income.

The following table summarizes the activity related to the Enterprise Excellence restructuring program for the six months ended October 25, 2019:

(in millions)	Employee Termination Benefits	Associated Costs[1]	Asset Write-Downs[2]	Other Costs	Total
April 26, 2019	$ 101	$ 9	$ —	$ 12	$ 122
Charges	79	139	6	7	231
Cash payments	(118)	(136)	—	(8)	(262)
Settled non-cash	—	—	(6)	—	(6)
Accrual adjustments	(6)	—	—	(7)	(13)
October 25, 2019	$ 56	$ 12	$ —	$ 4	$ 72

(1) Associated costs include costs incurred as a direct result of the restructuring program, such as salaries for employees supporting the program and consulting expenses.
(2) Recognized within *cost of products sold* in the consolidated statements of income.

6. Financial Instruments

Debt Securities

The Company holds investments in marketable debt securities that are classified and accounted for as available-for-sale and are remeasured on a recurring basis. For information regarding the valuation techniques and inputs used in the fair value measurements, refer to Note 1 to the consolidated financial statements included in the Company's Annual Report on Form 10-K for the fiscal year ended April 26, 2019.

The following tables summarize the Company's investments in available-for-sale debt securities by significant investment category and the related consolidated balance sheet classification at October 25, 2019 and April 26, 2019:

	October 25, 2019					
	Valuation				Balance Sheet Classification	
(in millions)	Cost	Unrealized Gains	Unrealized Losses	Fair Value	Investments	Other Assets
Level 1:						
U.S. government and agency securities	$ 565	$ 15	$ —	$ 580	$ 580	$ —
Level 2:						
Corporate debt securities	3,814	43	(16)	3,841	3,841	—
U.S. government and agency securities	858	—	(1)	857	857	—
Mortgage-backed securities	634	11	(13)	632	632	—
Non-U.S. government and agency securities	13	—	—	13	13	—
Other asset-backed securities	514	2	(3)	513	513	—
Total Level 2	5,833	56	(33)	5,856	5,856	—
Level 3:						
Auction rate securities	47	—	(3)	44	—	44
Total available-for-sale debt securities	$ 6,445	$ 71	$ (36)	$ 6,480	$ 6,436	$ 44

	April 26, 2019					
	Valuation				Balance Sheet Classification	
(in millions)	Cost	Unrealized Gains	Unrealized Losses	Fair Value	Investments	Other Assets
Level 1:						
U.S. government and agency securities	$ 529	$ 1	$ (7)	$ 523	$ 523	$ —
Level 2:						
Corporate debt securities	3,500	14	(21)	3,493	3,493	—
U.S. government and agency securities	387	1	(7)	381	381	—
Mortgage-backed securities	537	3	(20)	520	520	—
Non-U.S. government and agency securities	11	—	—	11	11	—
Other asset-backed securities	529	1	(3)	527	527	—
Total Level 2	4,964	19	(51)	4,932	4,932	—
Level 3:						
Auction rate securities	47	—	(3)	44	—	44
Total available-for-sale debt securities	$ 5,540	$ 20	$ (61)	$ 5,499	$ 5,455	$ 44

The following tables present the gross unrealized losses and fair values of the Company's available-for-sale debt securities that have been in a continuous unrealized loss position deemed to be temporary, aggregated by investment category at October 25, 2019 and April 26, 2019:

	October 25, 2019			
	Less than 12 months		More than 12 months	
(in millions)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. government and agency securities	$ 140	$ —	$ 180	$ (1)
Corporate debt securities	484	(9)	129	(7)
Mortgage-backed securities	91	(1)	89	(12)
Non-U.S. government and agency securities	2	—	—	—
Other asset-backed securities	167	(1)	156	(2)
Auction rate securities	—	—	44	(3)
Total	$ 884	$ (11)	$ 598	$ (25)

	April 26, 2019			
	Less than 12 months		More than 12 months	
(in millions)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. government and agency securities	$ 130	$ (1)	$ 649	$ (13)
Corporate debt securities	582	(5)	1,153	(16)
Mortgage-backed securities	73	(1)	250	(19)
Other asset-backed securities	290	(2)	85	(1)
Auction rate securities	—	—	44	(3)
Total	$ 1,075	$ (9)	$ 2,181	$ (52)

The Company reviews the fair value hierarchy classification on a quarterly basis. Changes in the ability to observe valuation inputs may result in a reclassification of levels for certain securities within the fair value hierarchy. The Company's policy is to recognize transfers into and out of levels within the fair value hierarchy at the end of the fiscal quarter in which the actual event or change in circumstances that caused the transfer occurs. There were no transfers between Level 1, Level 2, or Level 3 during the three and six months ended October 25, 2019 and October 26, 2018. When a determination is made to classify an asset or

liability within Level 3, the determination is based upon the significance of the unobservable inputs to the overall fair value measurement.

There were no purchases, sales, settlements, or gains or losses recognized in earnings or other comprehensive income for available-for-sale securities classified as Level 3 during the three and six months ended October 25, 2019 and October 26, 2018.

Activity related to the Company's debt securities portfolio is as follows:

	Three months ended		Six months Ended	
(in millions)	**October 25, 2019**	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
Proceeds from sales	$ 1,691	$ 804	$ 3,258	$ 1,916
Gross realized gains	4	2	8	8
Gross realized losses	(4)	(12)	(12)	(19)

Credit losses represent the difference between the present value of cash flows expected to be collected on certain mortgage-backed securities and auction rate securities and the amortized cost of these securities. Based on the Company's assessment of the credit quality of the underlying collateral and credit support available to each of the remaining securities in which the Company is invested, the Company believes it has recognized all necessary other-than-temporary impairments, as the Company does not have the intent to sell, nor is it more likely than not that the Company will be required to sell, before recovery of the amortized cost.

At October 25, 2019 and April 26, 2019, the credit loss portion of other-than-temporary impairments on debt securities wasnot significant. No available-for-sale securities were sold for significantly less than carrying value during the three and six months ended October 25, 2019 and October 26, 2018.

The October 25, 2019 balance of available-for-sale debt securities by contractual maturity is shown in the following table. Within the table, maturities of mortgage-backed securities have been allocated based upon timing of estimated cash flows assuming no change in the current interest rate environment. Actual maturities may differ from contractual maturities because the issuers of the securities may have the right to prepay obligations without prepayment penalties.

(in millions)	**October 25, 2019**
Due in one year or less	$ 1,975
Due after one year through five years	2,578
Due after five years through ten years	1,881
Due after ten years	46
Total	$ 6,480

Equity Securities, Equity Method Investments, and Other Investments

The Company holds investments in equity securities without readily determinable fair values, investments accounted for under the equity method, and other investments. Equity method investments and investments without readily determinable fair values are included within Level 3 of the fair value hierarchy due to the use of significant unobservable inputs to determine fair value. To determine the fair value of these investments, the Company uses all pertinent financial information available related to the investees, including financial statements, market participant valuations from recent and proposed equity offerings, and other third-party data.

The following table summarizes the Company's equity and other investments at October 25, 2019 and April 26, 2019, which are classified as*other assets* in the consolidated balance sheets:

(in millions)	**October 25, 2019**	**April 26, 2019**
Investments without readily determinable fair values	$ 366	$ 308
Equity method and other investments	66	64
Total equity and other investments	$ 432	$ 372

The table below includes activity related to the Company's portfolio of equity and other investments. Gains and losses on equity and other investments are recognized in *other non-operating income, net* in the consolidated statements of income.

	Three months ended		Six months ended	
(in millions)	October 25, 2019	October 26, 2018	October 25, 2019	October 26, 2018
Proceeds from sales	$ —	$ —	$ 2	$ 908
Gross gains	14	9	14	123
Gross losses	—	(13)	—	(29)
Impairment losses recognized	(2)	(12)	(3)	(12)

Net gains recognized for the three and six months ended October 25, 2019 were $14 million comprised of net unrealized gains on equity and other investments still held at October 25, 2019. Net losses recognized during the three months ended October 26, 2018 were $4 million comprised of net unrealized losses on equity and other investments still held at October 26, 2018. Net gains recognized during the six months ended October 26, 2018 were $94 million, comprised of $45 million of net realized gains on equity and other investments sold during the period and $49 million of net unrealized gains on equity and other investments still held at October 26, 2018.

7. Financing Arrangements

Commercial Paper

The Company maintains a commercial paper program that allows the Company to have a maximum of $3.5 billion in commercial paper outstanding. No commercial paper was outstanding at both October 25, 2019 and April 26, 2019. The issuance of commercial paper reduces the amount of credit available under the Company's existing Credit Facility, as defined below.

Line of Credit

The Company has a $3.5 billion five-year unsecured revolving credit facility (Credit Facility) which provides back-up funding for the commercial paper program described above. At October 25, 2019 and April 26, 2019, no amounts were outstanding under the Credit Facility.

Interest rates on advances on the Credit Facility are determined by a pricing matrix, based on the Company's long-term debt ratings, assigned by Standard & Poor's Ratings Services and Moody's Investors Service. Facility fees are payable on the Credit Facility and are determined in the same manner as the interest rates. The agreement also contains customary covenants, all of which the Company was in compliance with at October 25, 2019.

Debt Obligations

The Company's debt obligations consisted of the following:

(in millions)	Maturity by Fiscal Year	October 25, 2019	April 26, 2019
Current debt obligations	2020	$ 875	$ 838
Long-term debt			
0.000 percent two-year 2019 senior notes	2021	1,666	1,681
Floating rate two-year 2019 senior notes	2021	833	560
4.125 percent ten-year 2011 senior notes	2021	—	500
3.150 percent seven-year 2015 senior notes	2022	1,534	2,500
3.125 percent ten-year 2012 senior notes	2022	—	675
3.200 percent ten-year 2012 CIFSA senior notes	2023	650	650
0.375 percent four-year 2019 senior notes	2023	1,666	1,681
2.750 percent ten-year 2013 senior notes	2023	530	530
0.000 percent four-year 2019 senior notes	2023	833	—
2.950 percent ten-year 2013 CIFSA senior notes	2024	310	310
3.625 percent ten-year 2014 senior notes	2024	432	850
3.500 percent ten-year 2015 senior notes	2025	2,700	4,000
0.250 percent seven-year 2019 senior notes	2026	1,111	—
1.125 percent eight-year 2019 senior notes	2027	1,666	1,681
3.350 percent ten-year 2017 senior notes	2027	368	850
1.625 percent twelve-year 2019 senior notes	2031	1,111	1,121
1.000 percent thirteen-year 2019 senior notes	2032	1,111	—
4.375 percent twenty-year 2015 senior notes	2035	1,932	2,382
6.550 percent thirty-year 2007 CIFSA senior notes	2038	253	284
2.250 percent twenty-year 2019 senior notes	2039	1,111	1,121
6.500 percent thirty-year 2009 senior notes	2039	158	183
5.550 percent thirty-year 2010 senior notes	2040	224	306
1.500 percent twenty-year 2019 senior notes	2040	1,111	—
4.500 percent thirty-year 2012 senior notes	2042	105	129
4.000 percent thirty-year 2013 senior notes	2043	305	325
4.625 percent thirty-year 2014 senior notes	2044	127	177
4.625 percent thirty-year 2015 senior notes	2045	1,813	1,963
1.750 percent thirty-year 2019 senior notes	2050	1,111	—
Bank borrowings	2021 - 2022	80	83
Debt (discount) premium, net	2020 - 2050	(15)	29
Finance lease obligations	2021 - 2033	27	10
Interest rate swaps	N/A	—	9
Deferred financing costs	2020 - 2050	(111)	(104)
Long-term debt		$ 24,752	$ 24,486

Senior Notes

The Company has outstanding unsecured senior obligations, described as senior notes in the tables above (collectively, the Senior Notes). The Senior Notes rank equally with all other unsecured and unsubordinated indebtedness of the Company. The indentures under which the Senior Notes were issued contain customary covenants, all of which the Company remained in compliance with at October 25, 2019.

In June 2019, Medtronic Luxco issued six tranches of Euro-denominated Senior Notes with an aggregate principal of €5.0 billion, with maturities ranging from fiscal year 2021 to fiscal year 2050, resulting in cash proceeds of approximately $5.6 billion, net of discounts and issuance costs. The issuance included €250 million of floating rate Senior Notes due in fiscal year 2021, €750 million of 0.000 percent Senior Notes due in fiscal year 2023, €1.0 billion of 0.250 percent Senior Notes due in fiscal year 2026, €1.0 billion of 1.000 percent Senior Notes due in fiscal year 2032, €1.0 billion of 1.500 percent Senior Notes due in fiscal year 2040, and €1.0 billion of 1.750 percent Senior Notes due in fiscal year 2050. The Company used the net proceeds of the offering to fund the cash tender offer and early redemption, described below. The Euro-denominated debt is designated as a net investment hedge of certain of the Company's European operations. Refer to Note 8 for additional information regarding the net investment hedge.

The Company completed the cash tender offer of $4.6 billion of Medtronic Inc., CIFSA, and Medtronic Luxco Senior Notes for $5.0 billion of total consideration in July 2019. The Company recognized a loss on debt extinguishment of $413 million during the first quarter of fiscal year 2020, which primarily included cash premiums and accelerated amortization of deferred financing costs and debt discounts and premiums. The loss on debt extinguishment also included a $16 million charge for the estimated early redemption premium for $533 million of senior notes which were redeemed in August 2019. The loss on debt extinguishment was recognized in *interest expense* in the consolidated statements of income.

Financial Instruments Not Measured at Fair Value

At October 25, 2019, the estimated fair value of the Company's Senior Notes was $27.3 billion compared to a principal value of $25.3 billion. At April 26, 2019, the estimated fair value was $26.2 billion compared to a principal value of $25.0 billion. The fair value was estimated using quoted market prices for the publicly registered Senior Notes, which are classified as Level 2 within the fair value hierarchy. The fair values and principal values consider the terms of the related debt and exclude the impacts of debt discounts and hedging activity.

8. Derivatives and Currency Exchange Risk Management

The Company uses operational and economic hedges, including currency exchange rate derivative contracts and interest rate derivative instruments, to manage the impact of currency exchange and interest rate changes on earnings and cash flows. In addition, the Company uses cross currency interest rate swaps to manage currency risk related to certain debt. In order to minimize earnings and cash flow volatility resulting from currency exchange rate changes, the Company enters into derivative instruments, principally forward currency exchange rate contracts. These contracts are designed to hedge anticipated foreign currency transactions and changes in the value of specific assets and liabilities. At inception of the contract, the derivative is designated as either a freestanding derivative or a cash flow hedge. The primary currencies of the derivative instruments are the Euro, Japanese Yen, and British Pound. The Company does not enter into currency exchange rate derivative contracts for speculative purposes. The gross notional amount of all currency exchange rate derivative instruments outstanding was $10.9 billion and $11.1 billion at October 25, 2019 and April 26, 2019, respectively.

The Company also uses derivative and non-derivative instruments to manage the impact of currency exchange rate changes on net investments in foreign currency-denominated operations. The information that follows explains the various types of derivatives and financial instruments used by the Company, reasons the Company uses such instruments, and the impact such instruments have on the Company's consolidated balance sheets and statements of income.

Freestanding Derivative Contracts

Freestanding derivative contracts are primarily used to offset the Company's exposure to the change in value of specific foreign-currency-denominated assets and liabilities, and to offset variability of cash flows associated with forecasted transactions denominated in foreign currencies. The gross notional amount of the Company's currency exchange rate contracts outstanding at October 25, 2019 and April 26, 2019 was $4.3 billion. The Company's freestanding currency exchange rate contracts are not designated as hedges, and therefore, changes in the value of these contracts are recognized in earnings, thereby offsetting the current earnings effect of the related change in value of foreign-currency-denominated assets, liabilities, and cash flows.

The Company also uses total return swaps to hedge the liability of a non-qualified, deferred compensation plan. The gross notional amount of the Company's total return swaps outstanding at October 25, 2019 and April 26, 2019 was $191 million. The Company's total return swaps are not designated as hedges, and therefore, changes in the value of these instruments are recognized in earnings. The cash flows related to the Company's freestanding derivative contracts are reported as operating activities in the consolidated statements of cash flows.

The amounts and classification of the gains (losses) in the consolidated statements of income related to derivative instruments not designated as hedging instruments for the three and six months ended October 25, 2019 and October 26, 2018 were as follows:

		Three months ended		Six months ended	
(in millions)	**Classification**	**October 25, 2019**	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
Currency exchange rate contracts	Other operating expense, net	$ 12	$ 71	$ 6	$ 201
Total return swaps	Other operating expense, net	(1)	(11)	4	—
Total		$ 11	$ 60	$ 10	$ 201

Cash Flow Hedges

Forward contracts designated as cash flow hedges are designed to hedge the variability of cash flows associated with forecasted transactions denominated in a foreign currency that will take place in the future. The gross notional amount of these contracts, designated as cash flow hedges, outstanding at October 25, 2019 and April 26, 2019 was $6.5 billion and $6.8 billion, respectively, and will mature within the subsequent two-year period. For derivative instruments that are designated and qualify as a cash flow hedge, the gain or loss on the derivative instrument is reported as a component of *accumulated other comprehensive loss*. The gain or loss on the derivative instrument is reclassified into earnings and is included in *other operating expense, net* in the consolidated statements of income in the same period or periods during which the hedged transaction affects earnings. Amounts excluded from the measurement of hedge effectiveness are recognized in earnings in the current period. The cash flows related to all of the Company's derivative instruments designated as cash flow hedges are reported as operating activities in the consolidated statements of cash flows. No components of the hedge contracts were excluded in the measurement of hedge effectiveness, and no forward contracts designated as cash flow hedges were derecognized or discontinued during the three and six months ended October 25, 2019 and October 26, 2018.

The amount of the gains (losses) recognized in AOCI related to the currency exchange rate contract derivative instruments designated as cash flow hedges for the three and six months ended October 25, 2019 and October 26, 2018 were as follows:

	Three months ended		Six months ended	
(in millions)	**October 25, 2019**	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
Currency exchange rate contracts	$ 76	$ 174	$ 103	$ 444

The amount of the gains (losses) recognized in the consolidated statements of income related to derivative instruments designated as cash flow hedges for the three and six months ended October 25, 2019 and October 26, 2018 were as follows:

	Three months ended		Six months ended	
	October 25, 2019	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
(in millions)	**Other operating expense, net**	**Other operating expense, net**	**Other operating expense, net**	**Other operating expense, net**
Total amounts of income and expense line items presented in the consolidated statements of income in which the effects of cash flow hedges are recorded	$ 149	$ 70	$ 127	$ 221
Currency exchange rate contracts designated as cash flow hedges:				
Amount of gain (loss) reclassified from AOCI into income	68	11	125	8

Forecasted Debt Issuance Interest Rate Risk

Forward starting interest rate derivative instruments designated as cash flow hedges are designed to manage the exposure to interest rate volatility with regard to future issuances of fixed-rate debt. The gains or losses on forward starting interest rate derivative instruments that are designated and qualify as cash flow hedges are reported as a component of *accumulated other comprehensive loss*. Beginning in the period in which the planned debt issuance occurs and the related derivative instruments are terminated, the gains or losses are then reclassified into *interest expense* over the term of the related debt. For the three and six months ended October 25, 2019 and October 26, 2018, the reclassifications of net gains (losses) on forward starting interest rate derivative instruments from accumulated other comprehensive loss to interest expense were not significant.

At October 25, 2019 and April 26, 2019 the Company had $192 million and $194 million, respectively, in after-tax net unrealized gains associated with cash flow hedging instruments recorded in *accumulated other comprehensive loss*. The Company expects that $165 million of after-tax net unrealized gains at October 25, 2019 will be recognized in the consolidated statements of income over the next 12 months.

Fair Value Hedges

Interest rate derivative instruments designated as fair value hedges are designed to manage the exposure to interest rate movements and to reduce borrowing costs by converting fixed-rate debt into floating-rate debt. Under these agreements, the Company agrees to exchange, at specified intervals, the difference between fixed and floating interest amounts calculated by reference to an agreed-upon notional principal amount.

Changes in the fair value of the derivative instrument are recognized in *interest expense* and are offset by changes in the fair value of the underlying debt instrument. The gains (losses) from terminated interest rate swap agreements are recognized in *long-term debt*, increasing (decreasing) the outstanding balances of the debt, and amortized as a reduction of (addition to) *interest expense* over the remaining life of the related debt. The cash flows related to the Company's interest rate derivative instruments designated as fair value hedges are reported as operating activities in the consolidated statements of cash flows.

At October 25, 2019 the Company had no interest rate swaps outstanding designated as fair value hedges, as the Company terminated previously held swaps in connection with the tender and early redemption of the underlying senior notes during the first quarter of fiscal year 2020. At April 26, 2019, the Company had interest rate swaps in gross notional amounts of $1.2 billion, designated as fair value hedges of underlying fixed-rate senior note obligations, including the Company's $500 million 4.125 percent 2011 Senior Notes due fiscal year 2021 and the $675 million 3.125 percent 2012 Senior Notes due fiscal year 2022.

The gain recognized upon termination of interest rate swaps was not significant for the three and six months ended October 25, 2019. At April 26, 2019, the market value of outstanding interest rate swap agreements was an unrealized gain of $9 million which was recorded in *other assets*, with the offset recorded in *long-term debt* on the consolidated balance sheets. The Company did not recognize any gains or losses during the three or six months ended October 25, 2019 and October 26, 2018 on firm commitments that no longer qualify as fair value hedges.

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

(in millions)	Carrying Amount of Hedged Assets/(Liabilities)		Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Amount of the Hedged Assets/(Liabilities)	
Location on the Consolidated Balance Sheet	**October 25, 2019**	**April 26, 2019**	**October 25, 2019**	**April 26, 2019**
Long-term debt	$ —	$ (1,175)	$ —	$ 9

Net Investment Hedges

The Company has designated Euro-denominated debt as a net investment hedge of certain of its European operations to manage the exposure to currency and exchange rate movements for foreign currency-denominated net investments in foreign operations. At October 25, 2019, the Company had €12.0 billion, or $13.3 billion, of outstanding Euro-denominated debt designated as a hedge of its net investment in certain of its European operations, which will mature in fiscal years 2021 through 2050.

Additionally, during the first quarter of fiscal year 2020, the Company entered into and settled forward currency exchange rate contracts to manage the exposure to exchange rate movements in anticipation of the issuance of Euro-denominated senior notes. Certain of these forward currency exchange rate contracts were designated as a net investment hedge of certain of the Company's European operations. These contracts matured in conjunction with the issuance of Euro-denominated debt in the first quarter of fiscal year 2020.

For instruments that are designated and qualify as net investment hedges, the gains or losses are reported as a component of *accumulated other comprehensive loss*. The gains or losses are reclassified into earnings upon a liquidation event or deconsolidation of the foreign subsidiary. Amounts excluded from the assessment of effectiveness are recognized in *other operating expense, net*. The cash flows related to the Company's derivative instruments designated as net investment hedges are reported as investing activities in the consolidated statements of cash flows.

At October 25, 2019 and April 26, 2019 the Company had $17 million and $169 million, respectively, in after-tax unrealized losses associated with net investment hedges recorded in *accumulated other comprehensive loss*. The Company does not expect any of the after-tax unrealized losses at October 25, 2019 to be recognized in the consolidated statements of income over the next 12 months.

The Company did not recognize any gains or losses during the three or six months ended October 25, 2019 or October 26, 2018 on instruments that no longer qualify as net investment hedges.

The amount and classifications of the gains recognized in the consolidated statements of income for the portion of the net investment hedges excluded from the measurement of hedge effectiveness were as follows:

		Three months ended		Six months ended	
(in millions)	**Classification**	**October 25, 2019**	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
Net investment hedges	Other operating expense, net	$ —	$ —	$ (7)	$ —

The amount of the gains recognized in AOCI related to instruments designated as net investment hedges for the three and six months ended October 25, 2019 and October 26, 2018 were as follows:

	Three months ended		Six months ended	
(in millions)	**October 25, 2019**	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
Net investment hedges	$ 53	$ —	$ 152	$ —

Balance Sheet Presentation

The following tables summarize the balance sheet classification and fair value of derivative instruments included in the consolidated balance sheets at October 25, 2019 and April 26, 2019. The fair value amounts are presented on a gross basis, and are segregated between derivatives that are designated and qualify as hedging instruments and those that are not designated and do not qualify as hedging instruments and are further segregated by type of contract within those two categories.

	October 25, 2019			
	Derivative Assets		Derivative Liabilities	
(in millions)	**Balance Sheet Classification**	**Fair Value**	**Balance Sheet Classification**	**Fair Value**
Derivatives designated as hedging instruments				
Currency exchange rate contracts	Other current assets	$ 204	Other accrued expenses	$ 3
Currency exchange rate contracts	Other assets	86	Other liabilities	4
Total derivatives designated as hedging instruments		290		7
Derivatives not designated as hedging instruments				
Currency exchange rate contracts	Other current assets	21	Other accrued expenses	24
Total return swap	Other current assets	2	Other accrued expenses	—
Cross currency interest rate contracts	Other current assets	6	Other accrued expenses	—
Total derivatives not designated as hedging instruments		29		24
Total derivatives		$ 319		$ 31

	April 26, 2019			
	Derivative Assets		Derivative Liabilities	
(in millions)	Balance Sheet Classification	Fair Value	Balance Sheet Classification	Fair Value
Derivatives designated as hedging instruments				
Currency exchange rate contracts	Other current assets	$ 234	Other accrued expenses	$ 1
Interest rate contracts	Other assets	9	Other liabilities	—
Currency exchange rate contracts	Other assets	78	Other liabilities	1
Total derivatives designated as hedging instruments		321		2
Derivatives not designated as hedging instruments				
Currency exchange rate contracts	Other current assets	23	Other accrued expenses	17
Total return swaps	Other current assets	15	Other accrued expenses	—
Cross currency interest rate contracts	Other current assets	6	Other accrued expenses	—
Total derivatives not designated as hedging instruments		44		17
Total derivatives		$ 365		$ 19

The following table provides information by level for the derivative assets and liabilities that are measured at fair value on a recurring basis.

	October 25, 2019		April 26, 2019	
(in millions)	Level 1	Level 2	Level 1	Level 2
Derivative assets	$ 311	$ 8	$ 335	$ 30
Derivative liabilities	31	—	19	—

The Company has elected to present the fair value of derivative assets and liabilities within the consolidated balance sheets on a gross basis, even when derivative transactions are subject to master netting arrangements and may otherwise qualify for net presentation. The cash flows related to collateral posted and received are reported gross as investing and financing activities, respectively, in the consolidated statements of cash flows.

The following tables provide information as if the Company had elected to offset the asset and liability balances of derivative instruments, netted in accordance with various criteria as stipulated by the terms of the master netting arrangements with each of the counterparties. Derivatives not subject to master netting arrangements are not eligible for net presentation.

	October 25, 2019			
		Gross Amount Not Offset on the Balance Sheet		
(in millions)	Gross Amount of Recorded Assets (Liabilities)	Financial Instruments	Cash Collateral Posted (Received)	Net Amount
Derivative assets:				
Currency exchange rate contracts	$ 311	$ (29)	$ (10)	$ 272
Total return swaps	2	—	—	2
Cross currency interest rate contracts	6	—	—	6
	319	(29)	(10)	280
Derivative liabilities:				
Currency exchange rate contracts	(31)	29	—	(2)
Total return swaps	—	—	—	—
Total	$ 288	$ —	$ (10)	$ 278

	April 26, 2019			
		Gross Amount Not Offset on the Balance Sheet		
(in millions)	Gross Amount of Recorded Assets (Liabilities)	Financial Instruments	Cash Collateral Posted (Received)	Net Amount
Derivative assets:				
Currency exchange rate contracts	$ 335	$ (9)	$ (43)	$ 283
Interest rate contracts	9	—	(1)	8
Total return swaps	15	—	—	15
Cross currency interest rate contracts	6	—	—	6
	365	(9)	(44)	312
Derivative liabilities:				
Currency exchange rate contracts	(19)	9	—	(10)
	(19)	9	—	(10)
Total	$ 346	$ —	$ (44)	$ 302

9. **Inventories**

Inventory balances, net of reserves, were as follows:

(in millions)	October 25, 2019	April 26, 2019
Finished goods	$ 2,686	$ 2,476
Work in-process	594	572
Raw materials	762	705
Total	$ 4,042	$ 3,753

10. **Goodwill and Other Intangible Assets**

Goodwill

The following table presents the changes in the carrying amount of goodwill by segment:

(in millions)	Cardiac and Vascular Group	Minimally Invasive Therapies Group	Restorative Therapies Group	Diabetes Group	Total
April 26, 2019	$ 6,854	$ 20,381	$ 10,821	$ 1,903	$ 39,959
Goodwill as a result of acquisitions	—	11	65	16	92
Purchase accounting adjustments	9	2	(5)	—	6
Currency translation and other	(1)	(62)	(42)	—	(105)
October 25, 2019	$ 6,862	$ 20,332	$ 10,839	$ 1,919	$ 39,952

The Company assesses goodwill for impairment annually in the third quarter of the fiscal year and whenever an event occurs or circumstances change that would indicate that the carrying amount may be impaired. Impairment testing for goodwill is performed at the reporting unit level. The test for impairment of goodwill requires the Company to make several estimates about fair value, most of which are based on projected future cash flows. The Company calculates the excess of each reporting unit's fair value over its carrying amount, including goodwill, utilizing a discounted cash flow analysis. The Company did not recognize any goodwill impairment during the three and six months ended October 25, 2019 or October 26, 2018.

Intangible Assets

The following table presents the gross carrying amount and accumulated amortization of intangible assets:

	October 25, 2019		April 26, 2019	
(in millions)	**Gross Carrying Amount**	**Accumulated Amortization**	**Gross Carrying Amount**	**Accumulated Amortization**
Definite-lived:				
Customer-related	$ 16,967	$ (4,581)	$ 16,944	$ (4,095)
Purchased technology and patents	10,528	(3,990)	11,405	(4,570)
Trademarks and tradenames	464	(224)	570	(324)
Other	83	(53)	85	(59)
Total	$ 28,042	$ (8,848)	$ 29,004	$ (9,048)
Indefinite-lived:				
IPR&D	$ 581	$ —	$ 604	$ —

The Company assesses definite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying value of an intangible asset (asset group) may not be recoverable. When events or changes in circumstances indicate that the carrying value of an intangible asset may not be recoverable, the Company calculates the excess of an intangible asset's carrying value over its undiscounted future cash flows. If the carrying value is not recoverable, an impairment loss is recognized based on the amount by which the carrying value exceeds the fair value. The inputs used in the fair value analysis fall within Level 3 of the fair value hierarchy due to the use of significant unobservable inputs to determine fair value. The Company recognized $33 million of definite-lived intangible asset charges during the three and six months ended October 25, 2019 in connection with the exit of businesses within the Restorative Therapies Group segment. During the six months ended October 26, 2018, the Company recognized $61 million of definite-lived intangible asset charges in connection with the exit of a business within the Cardiac and Vascular Group segment. The Company did not recognize any definite-lived intangibles asset charges during the three months ended October 26, 2018. Intangible asset impairment charges are recognized in *other operating expense, net* in the consolidated statements of income.

The Company assesses indefinite-lived intangibles for impairment annually in the third quarter of the fiscal year and whenever an event occurs or circumstances change that would indicate that the carrying value may be impaired. The Company did not recognize any indefinite-lived intangible asset impairments during the three and six months ended October 25, 2019 or October 26, 2018. Due to the nature of IPR&D projects, the Company may experience future delays or failures to obtain regulatory approvals to conduct clinical trials, failures of clinical trials, delays or failures to obtain required market clearances, other failures to achieve a commercially viable product, or the discontinuation a certain projects, and as a result, may recognize impairment losses in the future.

Amortization Expense

Intangible asset amortization expense for the three and six months ended October 25, 2019 was $441 million and $881 million, respectively, as compared to $445 million and $891 million for the three and six months ended October 26, 2018, respectively.Estimated aggregate amortization expense by fiscal year based on the carrying value of definite-lived intangible assets at October 25, 2019, excluding any possible future amortization associated with acquired IPR&D which has not yet met technological feasibility, is as follows:

(in millions)	**Amortization Expense**
Remaining 2020	$ 868
2021	1,725
2022	1,684
2023	1,621
2024	1,592
2025	1,565

11. Income Taxes

The Company's effective tax rate for the three and six months ended October 25, 2019 was (6.0) percent and 1.0 percent, respectively, as compared to 17.3 percent and 13.3 percent for the three and six months ended October 26, 2018, respectively. The decrease in the effective tax rate for the three and six months ended October 25, 2019, as compared to the corresponding periods in the prior fiscal year, was primarily due to the impact of certain tax adjustments.

Certain Tax Adjustments

During the three months ended October 25, 2019, the net benefit from certain tax adjustments of $251 million, recognized in *income tax provision* in the consolidated statements of income, included the following:

- A benefit of $251 million related to tax legislative changes in Switzerland which abolished certain preferential tax regimes the Company benefited from and replaced them with a new set of internationally accepted measures. The legislation provided for higher effective tax rates but allowed for a transitional period whereby an amortizable asset was created for Swiss federal income tax purposes which will be amortized and deducted over a 10-year period.

During the six months ended October 25, 2019, the net benefit from certain tax adjustments of $281 million, recognized in *income tax provision* in the consolidated statements of income, included the following:

- A net benefit of $30 million related to U.S. Treasury's issuance of certain Final Regulations associated with U.S. Tax Reform. The primary impact of these regulations resulted in the Company re-establishing its permanently reinvested assertion on certain foreign earnings and reversing the previously accrued tax liability. This benefit was partially offset by additional tax associated with a previously executed internal reorganization of certain foreign subsidiaries.
- A benefit of $251 million related to tax legislative changes in Switzerland which abolished certain preferential tax regimes the Company benefited from and replaced them with a new set of internationally accepted measures. The legislation provided for higher effective tax rates but allowed for a transitional period whereby an amortizable asset was created for Swiss federal income tax purposes which will be amortized and deducted over a 10-year period.

During the three months ended October 26, 2018, the charge from certain tax adjustments of $58 million, recognized in *income tax provision* in the consolidated statements of income, included the following:

- A charge of $37 million associated with the transition tax liability recorded in connection with U.S. Tax Reform.
- A charge of $21 million related to the recognition of a prepaid tax expense resulting from the reduction in the U.S. statutory tax rate due to U.S. Tax Reform and the sale of U.S. manufactured inventory held as of April 27, 2018.

During the six months ended October 26, 2018, the net charge from certain tax adjustments of $29 million, recognized in *income tax provision* in the consolidated statements of income, included the following:

- A benefit of $13 million associated with the transition tax liability recorded in connection with U.S. Tax Reform.
- A charge of $42 million related to the recognition of a prepaid tax expense resulting from the reduction in the U.S. statutory tax rate due to U.S. Tax Reform and the sale of U.S. manufactured inventory held as of April 27, 2018.

At October 25, 2019 and April 26, 2019, the Company's gross unrecognized tax benefits were $1.8 billion. In addition, the Company had accrued gross interest and penalties of $196 million at October 25, 2019. If all of the Company's unrecognized tax benefits were recognized, approximately $1.8 billion would impact the Company's effective tax rate. At both October 25, 2019 and April 26, 2019, the total balance of the Company's gross unrecognized tax benefits was recorded as a noncurrent liability within *accrued income taxes* on the consolidated balance sheets. The Company recognizes interest and penalties related to income tax matters within *income tax provision* in the consolidated statements of income and records the liability within either current or noncurrent *accrued income taxes* on the consolidated balance sheets.

Refer to Note 17 to the consolidated financial statements for additional information regarding the status of current tax audits and proceedings.

12. Earnings Per Share

Earnings per share is calculated using the two-class method, as the Company's A Preferred Shares are considered participating securities. Accordingly, earnings are allocated to both ordinary shares and participating securities in determining earnings per ordinary share. Due to the limited number of A Preferred Shares outstanding, this allocation had no effect on ordinary earnings per share; therefore, it is not presented below. Basic earnings per share is computed based on the weighted average number of

ordinary shares outstanding. Diluted earnings per share is computed based on the weighted average number of ordinary shares outstanding, increased by the number of additional shares that would have been outstanding had the potentially dilutive ordinary shares been issued, and reduced by the number of shares the Company could have repurchased with the proceeds from issuance of the potentially dilutive shares. Potentially dilutive ordinary shares include stock-based awards granted under stock-based compensation plans and shares committed to be purchased under the employee stock purchase plan.

The table below sets forth the computation of basic and diluted earnings per share:

	Three months ended		Six months ended	
(in millions, except per share data)	**October 25, 2019**	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
Numerator:				
Net income attributable to ordinary shareholders	$ 1,364	$ 1,115	$ 2,228	$ 2,190
Denominator:				
Basic – weighted average shares outstanding	1,340.8	1,349.2	1,340.8	1,350.9
Effect of dilutive securities:				
Employee stock options	8.0	8.5	7.4	8.4
Employee restricted stock units	2.6	3.1	3.1	3.3
Other	—	0.1	0.3	0.4
Diluted – weighted average shares outstanding	1,351.4	1,360.9	1,351.6	1,363.0
Basic earnings per share	$ 1.02	$ 0.83	$ 1.66	$ 1.62
Diluted earnings per share	$ 1.01	$ 0.82	$ 1.65	$ 1.61

The calculation of weighted average diluted shares outstanding excludes options to purchase approximately4 million ordinary shares for both the three and six months ended October 25, 2019, and 7 million and 6 million ordinary shares for the three and six months ended October 26, 2018, respectively, because their effect would have been anti-dilutive on the Company's earnings per share.

13. **Stock-Based Compensation**

The following table presents the components and classification of stock-based compensation expense for stock options, restricted stock, and employee stock purchase plan shares recognized for the three and six months ended October 25, 2019 and October 26, 2018:

	Three months ended		Six months ended	
(in millions)	**October 25, 2019**	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
Stock options	$ 31	$ 33	$ 40	$ 51
Restricted stock	71	65	113	101
Employee stock purchase plan	6	6	16	16
Total stock-based compensation expense	$ 108	$ 104	$ 169	$ 168
Cost of products sold	$ 10	$ 12	$ 16	$ 18
Research and development expense	13	13	20	21
Selling, general, and administrative expense	85	79	133	129
Total stock-based compensation expense	108	104	169	168
Income tax benefits	(19)	(21)	(29)	(32)
Total stock-based compensation expense, net of tax	$ 89	$ 83	$ 140	$ 136

14. Retirement Benefit Plans

The Company sponsors various retirement benefit plans, including defined benefit pension plans, post-retirement medical plans, defined contribution savings plans, and termination indemnity plans, covering substantially all U.S. employees and many employees outside the U.S. The net periodic benefit cost of the defined benefit pension plans included the following components for the three months and six months ended October 25, 2019 and October 26, 2018:

	U.S.		Non-U.S.	
	Three months ended		Three months ended	
(in millions)	October 25, 2019	October 26, 2018	October 25, 2019	October 26, 2018
Service cost	$ 26	$ 27	$ 15	$ 15
Interest cost	32	33	7	7
Expected return on plan assets	(56)	(54)	(15)	(14)
Amortization of net actuarial loss	14	19	4	3
Net periodic benefit cost	$ 16	$ 25	$ 11	$ 11

	U.S.		Non-U.S.	
	Six months ended		Six months ended	
(in millions)	October 25, 2019	October 26, 2018	October 25, 2019	October 26, 2018
Service cost	$ 52	$ 54	$ 30	$ 30
Interest cost	64	66	14	14
Expected return on plan assets	(112)	(108)	(30)	(28)
Amortization of net actuarial loss	28	38	7	6
Net periodic benefit cost	$ 32	$ 50	$ 21	$ 22

Components of net periodic benefit cost other than the service component are recognized in *other non-operating income, net* in the consolidated statements of income.

15. Leases

The Company leases office, manufacturing, and research facilities and warehouses, as well as transportation, data processing, and other equipment. The Company determines whether a contract is a lease or contains a lease at inception date. Upon commencement, the Company recognizes a right-of-use asset and lease liability. Right-of-use assets represent the Company's right to use the underlying asset for the lease term. Lease liabilities are the Company's obligation to make the lease payments arising from a lease. As the Company's leases typically do not provide an implicit rate, the Company's lease liabilities are measured on a discounted basis using the Company's incremental borrowing rate. Lease terms used in the recognition of right-of-use assets and lease liabilities include only options to extend the lease that are reasonably certain to be exercised. Additionally, lease terms underlying the right-of-use assets and lease liabilities consider terminations that are reasonably certain to be executed.

The Company's lease agreements include leases that have both lease and associated nonlease components. The Company has elected to account for lease components and the associated nonlease components as a single lease component. The consolidated balance sheets do not include recognized assets or liabilities for leases that, at the commencement date, have a term of twelve months or less and do not include an option to purchase the underlying asset that is reasonably certain to be exercised. The Company recognizes such leases in the consolidated statements of income on a straight-line basis over the lease term. Additionally, the Company recognizes variable lease payments not included in its lease liabilities in the period in which the obligation for those payments is incurred. Variable lease payments for the three and six months ended October 25, 2019 were not material.

The Company's lease agreements include leases accounted for as operating leases and those accounted for as finance leases. The right-of-use assets, lease liabilities, lease costs, cash flows, and lease maturities associated with the Company's finance leases are not material to the consolidated financial statements at or for the three and six months ended October 25, 2019. Finance lease right-of-use assets are included in *property, plant, and equipment, net*, and finance lease liabilities are included in *current debt obligations* and *long-term debt* on the consolidated balance sheets.

Additionally, from time to time, the Company subleases portions of its real-estate property, resulting in sublease income. Sublease income and the related assets and cash flows were not material to the consolidated financial statements at or for the three and six months ended October 25, 2019.

The following table summarizes the balance sheet classification of the Company's operating leases and amounts of the right-of-use assets and lease liabilities at October 25, 2019:

(in millions)	Balance Sheet Classification	October 25, 2019
Right-of-use assets	Other assets	$ 989
Current liability	Other accrued expenses	176
Non-current liability	Other liabilities	834

The following table summarizes the weighted-average remaining lease term and weighted-average discount rate for the Company's operating leases at October 25, 2019:

	October 25, 2019
Weighted-average remaining lease term	7.7 years
Weighted-average discount rate	3.0%

The following table summarizes the components of total operating lease cost for the three and six months ended October 25, 2019:

	Three months ended	Six Months Ended
(in millions)	October 25, 2019	October 25, 2019
Operating lease cost	$ 56	$ 111
Short-term lease cost	11	22
Total operating lease cost	$ 67	$ 133

The following table summarizes the cash paid for amounts included in the measurement of operating lease liabilities and right-of-use assets obtained in exchange for operating lease liabilities for the six months ended October 25, 2019:

	Six months ended
(in millions)	October 25, 2019
Cash paid for amounts included in the measurement of operating lease liabilities	$ 110
Right-of-use assets obtained in exchange for operating lease liabilities	105

The following table summarizes the maturities of the Company's operating leases at October 25, 2019:

(in millions) Fiscal Year	Operating Leases
Remaining 2020	$ 105
2021	193
2022	161
2023	140
2024	117
Thereafter	451
Total expected lease payments	1,167
Less: Imputed interest	(157)
Total lease liability	$ 1,010

The Company makes certain products available to customers under lease arrangements, including arrangements whereby equipment is placed with customers who then purchase consumable products to accompany the use of the equipment. Income arising from arrangements where the Company is the lessor is recognized within *net sales* in the consolidated statements of

income and the Company's net investments in sales-type leases are included in *other current assets* and *other assets* in the consolidated balance sheets. Lessor income and the related assets and lease maturities were not material to the consolidated financial statements at or for the three and six months ended October 25, 2019.

As disclosed in the Company's Annual Report on Form 10-K for the fiscal year ended April 26, 2019, minimum payments under non-cancelable operating leases at April 26, 2019 were:

(in millions) Fiscal Year	Operating Leases
2020	$ 216
2021	157
2022	103
2023	61
2024	34
Thereafter	81
Total minimum lease payments	$ 652

16. Accumulated Other Comprehensive Loss

The following table provides changes in AOCI, net of tax, and by component:

(in millions)	Unrealized (Loss) Gain on Investment Securities	Cumulative Translation Adjustments	Net Investment Hedges	Net Change in Retirement Obligations	Unrealized Gain (Loss) on Cash Flow Hedges	Total Accumulated Other Comprehensive (Loss) Income
April 26, 2019	$ (45)	$ (1,383)	$ (169)	$ (1,308)	$ 194	$ (2,711)
Other comprehensive income (loss) before reclassifications	68	(148)	152	(1)	82	153
Reclassifications	5	—	—	26	(84)	(53)
Other comprehensive income (loss)	73	(148)	152	25	(2)	100
October 25, 2019	$ 28	$ (1,531)	$ (17)	$ (1,283)	$ 192	$ (2,611)

(in millions)	Unrealized (Loss) Gain on Investment Securities	Cumulative Translation Adjustment	Net Investment Hedges	Net Change in Retirement Obligations	Unrealized (Loss) Gain on Cash Flow Hedges	Total Accumulated Other Comprehensive (Loss) Income
April 27, 2018	$ (194)	$ (11)	$ (257)	$ (1,117)	$ (207)	$ (1,786)
Other comprehensive (loss) income before reclassifications	(19)	(1,252)	—	—	343	(928)
Reclassifications	10	—	—	48	(3)	55
Other comprehensive (loss) income	(9)	(1,252)	—	48	340	(873)
Cumulative effect of change in accounting principle[1]	47	—	—	—	—	47
October 26, 2018	$ (156)	$ (1,263)	$ (257)	$ (1,069)	$ 133	$ (2,612)

1) The cumulative effect of change in accounting principle during the first quarter of fiscal year 2019 resulted from the adoption of accounting guidance that requires equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income. As a result of the adoption, the Company reclassified $47 million from accumulated other comprehensive loss to the opening balance of retained earnings as of April 28, 2018.

The income tax on gains and losses on investment securities in other comprehensive income before reclassifications during the six months ended October 25, 2019 and October 26, 2018 was an expense of $1 million and a benefit of $1 million, respectively. During the six months ended October 25, 2019, realized gains and losses on investment securities reclassified from AOCI were reduced by income taxes of $2 million. There was no income tax on realized gains and losses on investment securities reclassified from AOCI for the six months ended October 26, 2018. When realized, gains and losses on investment

securities reclassified from AOCI are recognized within *other non-operating income, net*. Refer to Note 6 to the consolidated financial statements for additional information.

For the six months ended October 25, 2019, there was no income tax on cumulative translation adjustments. For the six months ended October 26, 2018, the income tax benefit on cumulative translation adjustments was $5 million.

During the six months ended October 25, 2019 and October 26, 2018, there were no tax impacts on net investment hedges. Refer to Note 8 to the consolidated financial statements for additional information.

The net change in retirement obligations in other comprehensive income includes amortization of net actuarial losses included in net periodic benefit cost. During the six months ended October 25, 2019 and October 26, 2018, there were no income tax impacts on the net change in retirement obligations in other comprehensive income before reclassifications. During the six months ended October 25, 2019 and October 26, 2018, the gains and losses on defined benefit and pension items reclassified from AOCI were reduced by income taxes of $6 million and $10 million, respectively. When realized, net gains and losses on defined benefit and pension items reclassified from AOCI are recognized within *other non-operating income, net*. Refer to Note 14 to the consolidated financial statements for additional information.

The income tax on unrealized gains and losses on cash flow hedges in other comprehensive income before reclassifications during the six months ended October 25, 2019 and October 26, 2018 was an expense of $21 million and $100 million, respectively. During the six months ended October 25, 2019 and October 26, 2018, gains and losses on cash flow hedges reclassified from AOCI were reduced by income taxes of $26 million and $3 million, respectively. When realized, gains and losses on currency exchange rate contracts reclassified from AOCI are recognized within *other operating expense, net,* and gains and losses on forward starting interest rate derivatives reclassified from AOCI are recognized within *interest expense.* Refer to Note 8 to the consolidated financial statements for additional information.

17. Commitments and Contingencies

Legal Matters

The Company and its affiliates are involved in a number of legal actions involving product liability, intellectual property and commercial disputes, shareholder related matters, environmental proceedings, income tax disputes, and governmental proceedings and investigations, including those described below. With respect to governmental proceedings and investigations, like other companies in our industry, the Company is subject to extensive regulation by national, state and local governmental agencies in the United States and in other jurisdictions in which the Company and its affiliates operate. As a result, interaction with governmental agencies is ongoing. The Company's standard practice is to cooperate with regulators and investigators in responding to inquiries. The outcomes of legal actions are not within the Company's complete control and may not be known for prolonged periods of time. In some actions, the enforcement agencies or private claimants seek damages, as well as other civil or criminal remedies (including injunctions barring the sale of products that are the subject of the proceeding), that could require significant expenditures, result in lost revenues, or limit the Company's ability to conduct business in the applicable jurisdictions.

The Company records a liability in the consolidated financial statements on an undiscounted basis for loss contingencies related to legal actions when a loss is known or considered probable and the amount may be reasonably estimated. If the reasonable estimate of a known or probable loss is a range, and no amount within the range is a better estimate than any other, the minimum amount of the range is accrued. If a loss is reasonably possible but not known or probable, and may be reasonably estimated, the estimated loss or range of loss is disclosed. When determining the estimated loss or range of loss, significant judgment is required. Estimates of probable losses resulting from litigation and governmental proceedings involving the Company are inherently difficult to predict, particularly when the matters are in early procedural stages, with incomplete scientific facts or legal discovery, involve unsubstantiated or indeterminate claims for damages, potentially involve penalties, fines or punitive damages, or could result in a change in business practice. The Company classifies litigation charges and gains related to significant legal matters as certain litigation charges. During the three and six months ended October 25, 2019, the Company recognized $121 million and $168 million, respectively, of certain litigation charges related to probable and estimable damages for significant legal matters. During the six months ended October 26, 2018, the Company recognized $103 million of certain litigation charges. There were 0 certain litigation charges recognized during the three months ended October 26, 2018. At October 25, 2019 and April 26, 2019, accrued litigation was approximately $ 0.6 billion and $0.5 billion, respectively. The ultimate cost to the Company with respect to accrued litigation could be materially different than the amount of the current estimates and accruals and could have a material adverse impact on the Company's consolidated earnings, financial position, and/or cash flows. The Company includes accrued litigation in *other accrued expenses* and *other liabilities* on the consolidated balance sheets. While it is not possible to predict the outcome for most of the legal matters discussed below, the Company believes it is possible that the costs associated

with these matters could have a material adverse impact on the Company's consolidated earnings, financial position, and/or cash flows.

Product Liability Matters

Pelvic Mesh Litigation

The Company is currently involved in litigation in various state and federal courts against manufacturers of pelvic mesh products alleging personal injuries resulting from the implantation of those products. Two subsidiaries of Covidien supplied pelvic mesh products to one of the manufacturers, C.R. Bard (Bard), named in the litigation. The litigation includes a federal multi-district litigation in the U.S. District Court for the Northern District of West Virginia and cases in various state courts and jurisdictions outside the U.S. Generally, complaints allege design and manufacturing claims, failure to warn, breach of warranty, fraud, violations of state consumer protection laws and loss of consortium claims. In fiscal year 2016, Bard paid the Company $121 million towards the settlement of 11,000 of these claims. In May 2017, the agreement with Bard was amended to extend the terms to apply to up to an additional 5,000 claims. That agreement does not resolve the dispute between the Company and Bard with respect to claims that do not settle, if any. As part of the agreement, the Company and Bard agreed to dismiss without prejudice their pending litigation with respect to Bard's obligation to defend and indemnify the Company. The Company estimates law firms representing approximately 15,800 claimants have asserted or may assert claims involving products manufactured by Covidien's subsidiaries. As of November 6, 2019, the Company had reached agreements to settle approximately 15,400 of these claims. The Company's accrued expenses for this matter are included within accrued litigation as discussed above.

Patent Litigation

Ethicon

On December 14, 2011, Ethicon filed an action against Covidien in the U.S. District Court for the Southern District of Ohio, alleging patent infringement and seeking monetary damages and injunctive relief. On January 22, 2014, the district court entered summary judgment in Covidien's favor, and the majority of this ruling was affirmed by the Federal Circuit on August 7, 2015. Following appeal, the case was remanded back to the District Court with respect to one patent. On January 21, 2016, Covidien filed a second action in the U.S. District Court for the Southern District of Ohio, seeking a declaration of non-infringement with respect to a second set of patents held by Ethicon. The court consolidated this second action with the remaining patent issues from the first action. Following consolidation of the cases, Ethicon dismissed six of the asserted patents, leaving a single asserted patent. In addition to claims of non-infringement, the Company asserts an affirmative defense of invalidity. The Company has not recognized an expense related to damages in connection with this matter, because any potential loss is not currently probable or reasonably estimable under U.S. GAAP. Additionally, the Company is unable to reasonably estimate the range of loss, if any, that may result from this matter.

Sasso

The Company is involved in litigation in Indiana relating to certain patent and royalty disputes with Dr. Sasso under agreements originally entered into in 1999 and 2001. On November 28, 2018, a jury in Indiana state court returned a verdict against the Company for approximately $112 million. The Company has strong arguments to appeal the verdict and has filed post-trial motions and appeals with the appropriate appellate courts. The Company's accrued expenses for this matter are included within accrued litigation as discussed above.

Shareholder Related Matters

Covidien Acquisition

On July 2, 2014, Lewis Merenstein filed a putative shareholder class action in Hennepin County, Minnesota, District Court seeking to enjoin the then-potential acquisition of Covidien. The lawsuit named Medtronic, Inc., Covidien, and each member of the Medtronic, Inc. Board of Directors at the time as defendants, and alleged that the directors breached their fiduciary duties to shareholders with regard to the then-potential acquisition. On August 21, 2014, Kenneth Steiner filed a putative shareholder class action in Hennepin County, Minnesota, District Court, also seeking an injunction to prevent the potential Covidien acquisition. In September 2014, the *Merenstein* and *Steiner* matters were consolidated and in December 2014, the plaintiffs filed a preliminary injunction motion seeking to enjoin the Covidien transaction. On March 20, 2015, the District Court issued an order and opinion granting Medtronic's motion to dismiss the case. In May of 2015, the plaintiffs filed an appeal, and, in January of 2016, the Minnesota State Court of Appeals affirmed in part, and reversed in part. On April 19, 2016 the Minnesota Supreme Court granted the Company's petition to review the issue of whether most of the original claims are properly characterized as direct or derivative under Minnesota law. In August of 2017, the Minnesota Supreme Court affirmed the

decision of the Minnesota State Court of Appeals, sending the matter back to the trial court for further proceedings, which are ongoing. The Company has not recognized an expense related to damages in connection with this matter, because any potential loss is not currently probable or reasonably estimable under U.S. GAAP. Additionally, the Company is unable to reasonably estimate the range of loss, if any, that may result from these matters.

Environmental Proceedings

The Company is involved in various stages of investigation and cleanup related to environmental remediation matters at a number of sites. These projects relate to a variety of activities, including removal of solvents, metals and other hazardous substances from soil and groundwater. The ultimate cost of site cleanup and timing of future cash flows is difficult to predict given uncertainties regarding the extent of the required cleanup, the interpretation of applicable laws and regulations, and alternative cleanup methods.

The Company is a successor to a company which owned and operated a chemical manufacturing facility in Orrington, Maine from 1967 until 1982, and is responsible for the costs of completing an environmental site investigation as required by the Maine Department of Environmental Protection (MDEP). MDEP served a compliance order on Mallinckrodt LLC and U.S. Surgical Corporation, subsidiaries of Covidien, in December 2008, which included a directive to remove a significant volume of soils at the site. After a hearing on the compliance order before the Maine Board of Environmental Protection (Maine Board) to challenge the terms of the compliance order, the Maine Board modified the MDEP order and issued a final order requiring removal of two landfills, capping of the remaining three landfills, installation of a groundwater extraction system and long-term monitoring of the site and the three remaining landfills.

The Company has proceeded with implementation of the investigation and remediation at the site in accordance with the MDEP order as modified by the Maine Board order.

Since the early 2000s, the Company or its predecessors have also been involved in a lawsuit filed in the U.S. District Court for the District of Maine by the Natural Resources Defense Council and the Maine People’s Alliance. Plaintiffs sought an injunction requiring the Company's predecessor to conduct extensive studies of mercury contamination of the Penobscot River and Bay and options for remediating such contamination, and to perform appropriate remedial activities, if necessary.

Following a trial in March 2002, the Court held that conditions in the Penobscot River and Bay may pose an imminent and substantial endangerment and that the Company’s predecessor was liable for the cost of performing a study of the River and Bay. Following a second trial in June 2014, the Court ordered that further engineering study and engineering design work was needed to determine the nature and extent of remediation in the Penobscot River and Bay. The Court also appointed an engineering firm to conduct such studies and issue a report on potential remediation alternatives. In connection with these proceedings, reports have been produced including a variety of cost estimates for a variety of potential remedial options. A third trial to determine the course of remediation to be pursued is scheduled to occur in fiscal year 2021.

The Company's accrued expenses for environmental proceedings are included within accrued litigation as discussed above.

Government Matters

Since 2017, the Company has been responding to requests from the Department of Justice and U.S. Department of Health and Human Services for information about business practices relating to a neurovascular product developed and first marketed by ev3 and Covidien. The Company has provided information in response to these requests and is cooperating with the inquiry. The Company has not recognized an expense in connection with any ongoing investigation, because any such potential loss is not currently probable or reasonably estimable under U.S. GAAP. Additionally, the Company is unable to reasonably estimate the range of loss, if any, that may result from the ongoing information requests.

Income Taxes

In March 2009, the IRS issued its audit report on Medtronic, Inc. for fiscal years 2005 and 2006. Medtronic, Inc. reached agreement with the IRS on some, but not all matters related to these fiscal years. The remaining unresolved issue for fiscal years 2005 and 2006 relates to the allocation of income between Medtronic, Inc. and its wholly-owned subsidiary operating in Puerto Rico, which is one of the Company's key manufacturing sites. The U.S. Tax Court reviewed this dispute, and on June 9, 2016, issued its opinion with respect to the allocation of income between the parties for fiscal years 2005 and 2006. The U.S. Tax Court generally rejected the IRS’s position, but also made certain modifications to the Medtronic, Inc. tax returns as filed. On April 21, 2017, the IRS filed their Notice of Appeal to the U.S. Court of Appeals for the 8th Circuit regarding the Tax Court Opinion. Oral argument for the Appeal occurred on March 14, 2018. The 8th Circuit Court of Appeals issued their opinion on August 16, 2018, and remanded the case back to the U.S. Tax Court for additional factual findings. U.S. Tax Court trial is scheduled to occur in April of 2020.

In October 2011, the IRS issued its audit report on Medtronic, Inc. for fiscal years 2007 and 2008. Medtronic, Inc. reached agreement with the IRS on some, but not all matters related to these fiscal years. The remaining unresolved issue for fiscal years 2007 and 2008 relates to the allocation of income between Medtronic, Inc. and its wholly-owned subsidiary operating in Puerto Rico for the businesses that are the subject of the U.S. Tax Court Case for fiscal years 2005 and 2006.

In April 2014, the IRS issued its audit report on Medtronic, Inc. for fiscal years 2009, 2010, and 2011. Medtronic, Inc. reached agreement with the IRS on some but not all matters related to these fiscal years. The remaining unresolved issue for fiscal years 2009, 2010, and 2011 relates to the allocation of income between Medtronic, Inc. and its wholly-owned subsidiary operating in Puerto Rico for the businesses that are the subject of the U.S. Tax Court Case for fiscal years 2005 and 2006.

In May 2017, the IRS issued its audit report on Medtronic, Inc. for fiscal years 2012, 2013, and 2014. Medtronic, Inc. reached agreement with the IRS on some but not all matters related to these fiscal years. The significant issues that remain unresolved relate to the allocation of income between Medtronic, Inc. and its wholly-owned subsidiary operating in Puerto Rico, and proposed adjustments associated with the utilization of certain net operating losses. The Company disagrees with the IRS and will attempt to resolve these matters at the IRS Appellate level.

Medtronic, Inc.'s fiscal years 2015 and 2016 U.S. federal income tax returns are currently being audited by the IRS.

Covidien and the IRS have concluded and reached agreement on its audit of Covidien's U.S. federal income tax returns for all tax years through 2012. The statute of limitations for Covidien's 2013 and 2014 U.S. federal income tax returns lapsed during the first quarter of fiscal years 2018 and 2019, respectively. Covidien's fiscal year 2015 U.S. federal income tax returns are currently being audited by the IRS.

While it is not possible to predict the outcome for most of the income tax matters discussed above, the Company believes it is possible that charges associated with these matters could have a material adverse impact on the Company's consolidated earnings, financial position, and/or cash flows.

Refer to Note 11 for additional discussion of income taxes.

Guarantees

As a result of the acquisition of Covidien, the Company has a guarantee commitment related to certain contingent tax liabilities as a party to the Tax Sharing Agreement that was entered into on June 29, 2007, between Covidien, Tyco International (now Johnson Controls), and Tyco Electronics (now TE Connectivity), associated with the spin-off from Tyco. The Tax Sharing Agreement covers certain income tax liabilities for periods prior to and including the spin-off. Medtronic's share of the income tax liabilities for these periods is 42 percent, with Johnson Controls and TE Connectivity share being 27 percent, and 31 percent, respectively. If Johnson Controls and TE Connectivity default on their obligations to the Company under the Tax Sharing Agreement, the Company would be liable for the entire amount of these liabilities. All costs and expenses associated with the management of these tax liabilities are being shared equally among the parties. The most significant amounts at risk under this Tax Sharing Agreement were resolved with the U.S. Tax Court and IRS Appeals resolutions reached in May 2016. However, the Tax Sharing Agreement remains in place with respect to income tax liabilities that are not the subject of such resolution, including certain state and international tax matters that remain open.

The Company has used available information to develop its best estimates for certain assets and liabilities related to periods prior to the 2007 separation, including amounts subject to or impacted by the provisions of the Tax Sharing Agreement. The actual amounts that the Company may be required to ultimately accrue or pay under the Tax Sharing Agreement, however, could vary depending upon the outcome of the unresolved tax matters. Final determination of the balances will be made in subsequent periods, primarily related to tax years that remain open for examination. These balances will also be impacted by the filing of final or amended income tax returns in certain jurisdictions where those returns include a combination of Tyco International, Covidien and/or Tyco Electronics legal entities for periods prior to the 2007 separation.

Refer to Note 1 to the consolidated financial statements included in the Company's Annual Report on Form 10-K for the fiscal year ended April 26, 2019 for additional information.

As part of the Company's sale of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses to Cardinal on July 29, 2017, the Company has indemnified Cardinal for certain contingent tax liabilities related to the divested businesses that existed prior to the date of divestiture. The actual amounts that the Company may be required to ultimately accrue or pay could vary depending upon the outcome of the unresolved tax matters.

In the normal course of business, the Company and/or its affiliates periodically enter into agreements that require one or more of the Company and/or its affiliates to indemnify customers or suppliers for specific risks, such as claims for injury or property damage arising as a result of the Company or its affiliates' products, the negligence of the Company's personnel, or claims alleging that the Company's products infringe on third-party patents or other intellectual property. The Company also offers warranties on various products. The Company's maximum exposure under these guarantees is unable to be estimated. Historically, the Company has not experienced significant losses on these types of guarantees.

The Company believes the ultimate resolution of the above guarantees is not expected to have a material effect on the Company's consolidated earnings, financial position, or cash flows.

18. Segment and Geographic Information

Segment disclosures are on a performance basis consistent with internal management reporting. Net sales of the Company's reportable segments include end-customer revenues from the sale of products the segment develops, manufactures, and distributes. There are certain corporate and centralized expenses that are not allocated to the segments.

The Company's management evaluates performance of the segments and allocates resources based on segment operating profit. Segment operating profit represents income before income taxes, excluding interest expense, amortization of intangible assets, centralized distribution costs, non-operating income or expense items, certain corporate charges, and other items not allocated to the segments. The financial information that is regularly reviewed by the Company's chief operating decision maker to assess performance and allocate resources changed during the first quarter of fiscal year 2020 to remove the impact of non-service pension and post-retirement benefit costs from segment results. This change did not have a material impact on the segment results reviewed. As a result of the change, the Company has revised the disclosure for the prior period to align with the current presentation.

The accounting policies of the reportable segments are the same as those described in the summary of significant accounting policies in Note 1 to the consolidated financial statements included in the Company's Annual Report on Form 10-K for the fiscal year ended April 26, 2019. Certain depreciable assets may be recorded by one segment, while the depreciation expense is allocated to another segment. The allocation of depreciation expense is based on the proportion of the assets used by each segment.

The following tables present reconciliations of financial information from the segments to the applicable line items in the Company's consolidated financial statements:

Net Sales

	Three months ended [1]		Six months ended [1]	
(in millions)	**October 25, 2019**	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
Cardiac and Vascular Group	$ 2,855	$ 2,858	$ 5,645	$ 5,669
Minimally Invasive Therapies Group	2,142	2,047	4,242	4,099
Restorative Therapies Group	2,112	1,993	4,124	3,942
Diabetes Group	596	583	1,188	1,155
Total	$ 7,706	$ 7,481	$ 15,199	$ 14,865

(1) The data in this schedule has been intentionally rounded to the nearest million and, therefore, may not sum.

Segment Operating Profit

	Three months ended		Six months ended	
(in millions)	**October 25, 2019**	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
Cardiac and Vascular Group	$ 1,128	$ 1,137	$ 2,183	$ 2,186
Minimally Invasive Therapies Group	823	792	1,593	1,568
Restorative Therapies Group	840	804	1,633	1,570
Diabetes Group	148	176	297	348
Segment operating profit	2,939	2,909	5,706	5,672
Interest expense	(165)	(241)	(774)	(483)
Other non-operating income, net	108	52	209	238
Amortization of intangible assets	(441)	(445)	(881)	(891)
Corporate	(350)	(342)	(657)	(645)
Centralized distribution costs	(424)	(482)	(768)	(928)
Restructuring and associated costs	(94)	(77)	(218)	(190)
Acquisition-related items	(27)	(4)	(46)	(40)
Certain litigation charges	(121)	—	(168)	(103)
IPR&D charges	—	(15)	—	(15)
Exit of businesses	(41)	—	(41)	(80)
Debt tender premium and other charges	—	—	7	—
Medical device regulations	(10)	—	(18)	—
Contribution to Medtronic Foundation	(80)	—	(80)	—
Income before income taxes	$ 1,294	$ 1,355	$ 2,271	$ 2,535

Geographic Information

Net sales are attributed to the country based on the location of the customer taking possession of the products or in which the services are rendered.The following table presents net sales for the three and six months ended October 25, 2019 and October 26, 2018 for the Company's country of domicile, countries with significant concentrations, and all other countries:

	Three months ended		Six months ended	
(in millions)	**October 25, 2019**	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
Ireland	$ 23	$ 22	$ 43	$ 44
United States	4,129	4,045	8,046	7,909
Rest of world	3,554	3,414	7,110	6,912
Total other countries, excluding Ireland	7,683	7,459	15,156	14,821
Total	$ 7,706	$ 7,481	$ 15,199	$ 14,865

19. **Guarantor Financial Information**

Medtronic plc and Medtronic Global Holdings S.C.A. (Medtronic Luxco), a wholly-owned subsidiary guarantor, each have provided full and unconditional guarantees of the obligations of Medtronic, Inc., a wholly-owned subsidiary issuer, under the Senior Notes (Medtronic Senior Notes) and full and unconditional guarantees of the obligations of Covidien International Finance S.A. (CIFSA), a wholly-owned subsidiary issuer, under the Senior Notes (CIFSA Senior Notes). The guarantees of the CIFSA Senior Notes are in addition to the guarantees of the CIFSA Senior Notes by Covidien Ltd. and Covidien Group Holdings Ltd., both of which are wholly-owned subsidiary guarantors of the CIFSA Senior Notes. Additionally, Medtronic plc and Medtronic, Inc. each have provided a full and unconditional guarantee of the obligations of Medtronic Luxco under the Medtronic Luxco Senior Notes. The following is a summary of these guarantees:

Guarantees of Medtronic Senior Notes
- Parent Company Guarantor - Medtronic plc
- Subsidiary Issuer - Medtronic, Inc.
- Subsidiary Guarantor - Medtronic Luxco

Guarantees of Medtronic Luxco Senior Notes
- Parent Company Guarantor - Medtronic plc
- Subsidiary Issuer - Medtronic Luxco
- Subsidiary Guarantor - Medtronic, Inc.

Guarantees of CIFSA Senior Notes
- Parent Company Guarantor - Medtronic plc
- Subsidiary Issuer - CIFSA
- Subsidiary Guarantors - Medtronic Luxco, Covidien Ltd., and Covidien Group Holdings Ltd. (CIFSA Subsidiary Guarantors)

The following presents the Company's consolidating statements of comprehensive income for the three and six months ended October 25, 2019 and October 26, 2018, condensed consolidating balance sheets at October 25, 2019 and April 26, 2019, and condensed consolidating statements of cash flows for the six months ended October 25, 2019 and October 26, 2018. The guarantees provided by the parent company guarantor and subsidiary guarantors are joint and several. Condensed consolidating financial information for Medtronic plc, Medtronic Luxco, Medtronic, Inc., CIFSA, and CIFSA Subsidiary Guarantors, on a stand-alone basis, is presented using the equity method of accounting for subsidiaries. Certain reclassifications have been made to prior year financial statements to conform to classifications used in the current year.

During the six months ended October 25, 2019, the Company undertook certain steps to reorganize ownership of various subsidiaries. The transactions were entirely among subsidiaries under the common control of Medtronic. This reorganization has been reflected as of the beginning of the earliest period presented.

Consolidating Statement of Comprehensive Income
Three Months Ended October 25, 2019
Medtronic Senior Notes and Medtronic Luxco Senior Notes

(in millions)	Medtronic plc	Medtronic, Inc.	Medtronic Luxco	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ 385	$ —	$ 7,706	$ (385)	$ 7,706
Costs and expenses:						
Cost of products sold	—	350	—	2,354	(310)	2,394
Research and development expense	—	178	—	425	—	603
Selling, general, and administrative expense	4	431	—	2,185	—	2,620
Amortization of intangible assets	—	3	—	438	—	441
Restructuring charges, net	—	7	—	20	—	27
Certain litigation charges	—	—	—	121	—	121
Other operating expense (income), net	13	(629)	—	852	(87)	149
Operating profit (loss)	(17)	45	—	1,311	12	1,351
Other non-operating (income) expense, net	—	(73)	(241)	(425)	631	(108)
Interest expense	139	345	119	193	(631)	165
Equity in net (income) loss of subsidiaries	(1,518)	(581)	(1,396)	—	3,495	—
Income (loss) before income taxes	1,362	354	1,518	1,543	(3,483)	1,294
Income tax provision	(2)	(30)	—	(45)	—	(77)
Net income (loss)	1,364	384	1,518	1,588	(3,483)	1,371
Net income attributable to noncontrolling interests	—	—	—	(7)	—	(7)
Net income (loss) attributable to Medtronic	1,364	384	1,518	1,581	(3,483)	1,364
Other comprehensive income (loss), net of tax	(127)	(76)	(127)	(192)	395	(127)
Comprehensive income attributable to noncontrolling interests	—	—	—	(7)	—	(7)
Total comprehensive income (loss)	$ 1,237	$ 308	$ 1,391	$ 1,389	$ (3,088)	$ 1,237

Medtronic plc
Notes to Consolidated Financial Statements
(Unaudited)

Consolidating Statement of Comprehensive Income
Six Months Ended October 25, 2019
Medtronic Senior Notes and Medtronic Luxco Senior Notes

(in millions)	Medtronic plc	Medtronic, Inc.	Medtronic Luxco	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ 811	$ —	$ 15,199	$ (811)	$ 15,199
Costs and expenses:						
Cost of products sold	—	676	—	4,705	(621)	4,760
Research and development expense	—	346	—	844	—	1,190
Selling, general, and administrative expense	7	809	—	4,347	—	5,163
Amortization of intangible assets	—	6	—	875	—	881
Restructuring charges, net	—	9	—	65	—	74
Certain litigation charges	—	5	—	163	—	168
Other operating expense (income), net	26	(1,067)	(7)	1,352	(177)	127
Operating profit (loss)	(33)	27	7	2,848	(13)	2,836
Other non-operating (income) expense, net	—	(134)	(486)	(829)	1,240	(209)
Interest expense	283	1,056	284	391	(1,240)	774
Equity in net (income) loss of subsidiaries	(2,540)	(1,192)	(2,331)	—	6,063	—
Income (loss) before income taxes	2,224	297	2,540	3,286	(6,076)	2,271
Income tax provision	(4)	(159)	—	186	—	23
Net income (loss)	2,228	456	2,540	3,100	(6,076)	2,248
Net income attributable to noncontrolling interests	—	—	—	(20)	—	(20)
Net income (loss) attributable to Medtronic	2,228	456	2,540	3,080	(6,076)	2,228
Other comprehensive income (loss), net of tax	100	(29)	100	(83)	12	100
Comprehensive income attributable to noncontrolling interests	—	—	—	(20)	—	(20)
Total comprehensive income (loss)	$ 2,328	$ 427	$ 2,640	$ 2,997	$ (6,064)	$ 2,328

Consolidating Statement of Comprehensive Income
Three Months Ended October 26, 2018
Medtronic Senior Notes and Medtronic Luxco Senior Notes

(in millions)	Medtronic plc	Medtronic, Inc.	Medtronic Luxco	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ 364	$ —	$ 7,481	$ (364)	$ 7,481
Costs and expenses:						
Cost of products sold	—	280	—	2,162	(239)	2,203
Research and development expense	—	176	—	414	—	590
Selling, general, and administrative expense	4	413	—	2,188	—	2,605
Amortization of intangible assets	—	2	—	443	—	445
Restructuring charges, net	—	1	—	23	—	24
Other operating expense (income), net	24	(672)	—	834	(116)	70
Operating profit (loss)	(28)	164	—	1,417	(9)	1,544
Other non-operating (income) expense, net	—	(138)	(175)	(429)	690	(52)
Interest expense	108	482	113	228	(690)	241
Equity in net (income) loss of subsidiaries	(1,249)	(762)	(1,187)	—	3,198	—
Income (loss) before income taxes	1,113	582	1,249	1,618	(3,207)	1,355
Income tax provision	(2)	(15)	—	252	—	235
Net income (loss)	1,115	597	1,249	1,366	(3,207)	1,120
Net income attributable to noncontrolling interests	—	—	—	(5)	—	(5)
Net income (loss) attributable to Medtronic	1,115	597	1,249	1,361	(3,207)	1,115
Other comprehensive income (loss), net of tax	(289)	(194)	(289)	(310)	790	(292)
Comprehensive income attributable to noncontrolling interests	—	—	—	(2)	—	(2)
Total comprehensive income (loss)	$ 826	$ 403	$ 960	$ 1,054	$ (2,417)	$ 826

Medtronic plc
Notes to Consolidated Financial Statements
(Unaudited)

Consolidating Statement of Comprehensive Income
Six Months Ended October 26, 2018
Medtronic Senior Notes and Medtronic Luxco Senior Notes

(in millions)	Medtronic plc	Medtronic, Inc.	Medtronic Luxco	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ 726	$ —	$ 14,865	$ (726)	$ 14,865
Costs and expenses:						
Cost of products sold	—	553	—	4,330	(476)	4,407
Research and development expense	—	344	—	831	—	1,175
Selling, general, and administrative expense	6	781	—	4,415	—	5,202
Amortization of intangible assets	—	4	—	887	—	891
Restructuring charges, net	—	11	—	75	—	86
Certain litigation charges	—	78	—	25	—	103
Other operating expense (income), net	25	(931)	—	1,349	(222)	221
Operating profit (loss)	(31)	(114)	—	2,953	(28)	2,780
Other non-operating (income) expense, net	—	(297)	(339)	(934)	1,332	(238)
Interest expense	208	946	216	445	(1,332)	483
Equity in net (income) loss of subsidiaries	(2,425)	(1,568)	(2,302)	—	6,295	—
Income (loss) before income taxes	2,186	805	2,425	3,442	(6,323)	2,535
Income tax provision	(4)	(119)	—	461	—	338
Net income (loss)	2,190	924	2,425	2,981	(6,323)	2,197
Net income attributable to noncontrolling interests	—	—	—	(7)	—	(7)
Net income (loss) attributable to Medtronic	2,190	924	2,425	2,974	(6,323)	2,190
Other comprehensive income (loss), net of tax	(873)	(702)	(873)	(914)	2,486	(876)
Comprehensive income attributable to noncontrolling interests	—	—	—	(4)	—	(4)
Total comprehensive income (loss)	$ 1,317	$ 222	$ 1,552	$ 2,063	$ (3,837)	$ 1,317

Condensed Consolidating Balance Sheet
October 25, 2019
Medtronic Senior Notes and Medtronic Luxco Senior Notes

(in millions)	Medtronic plc	Medtronic, Inc.	Medtronic Luxco	Subsidiary Non-guarantors	Consolidating Adjustments	Total
ASSETS						
Current assets:						
Cash and cash equivalents	$ —	$ 20	$ 204	$ 3,738	$ —	$ 3,962
Investments	—	—	—	6,436	—	6,436
Accounts receivable, net	—	—	—	6,118	—	6,118
Inventories, net	—	200	—	4,079	(237)	4,042
Intercompany receivable	109	9,352	5	32,385	(41,851)	—
Other current assets	7	183	2	1,903	—	2,095
Total current assets	116	9,755	211	54,659	(42,088)	22,653
Property, plant, and equipment, net	—	1,527	—	3,229	—	4,756
Goodwill	—	2,009	—	37,943	—	39,952
Other intangible assets, net	—	93	—	19,682	—	19,775
Tax assets	—	520	—	1,284	—	1,804
Investment in subsidiaries	66,705	73,122	67,007	—	(206,834)	—
Intercompany loans receivable	3,000	21	30,240	25,120	(58,381)	—
Other assets	—	350	—	1,763	—	2,113
Total assets	$ 69,821	$ 87,397	$ 97,458	$ 143,680	$ (307,303)	$ 91,053
LIABILITIES AND EQUITY						
Current liabilities:						
Current debt obligations	$ —	$ 500	$ —	$ 375	$ —	$ 875
Accounts payable	—	494	—	1,471	—	1,965
Intercompany payable	—	21,687	10,697	9,467	(41,851)	—
Accrued compensation	6	728	—	1,039	—	1,773
Accrued income taxes	—	—	—	442	—	442
Other accrued expenses	21	337	70	2,687	—	3,115
Total current liabilities	27	23,746	10,767	15,481	(41,851)	8,170
Long-term debt	—	9,783	13,552	1,417	—	24,752
Accrued compensation and retirement benefits	—	1,001	—	572	—	1,573
Accrued income taxes	10	722	—	1,973	—	2,705
Intercompany loans payable	19,206	9,011	13,459	16,705	(58,381)	—
Deferred tax liabilities	—	—	—	1,376	—	1,376
Other liabilities	—	265	—	1,493	—	1,758
Total liabilities	19,243	44,528	37,778	39,017	(100,232)	40,334
Shareholders' equity	50,578	42,869	59,680	104,522	(207,071)	50,578
Noncontrolling interests	—	—	—	141	—	141
Total equity	50,578	42,869	59,680	104,663	(207,071)	50,719
Total liabilities and equity	$ 69,821	$ 87,397	$ 97,458	$ 143,680	$ (307,303)	$ 91,053

Condensed Consolidating Balance Sheet
April 26, 2019
Medtronic Senior Notes and Medtronic Luxco Senior Notes

(in millions)	Medtronic plc	Medtronic, Inc.	Medtronic Luxco	Subsidiary Non-guarantors	Consolidating Adjustments	Total
ASSETS						
Current assets:						
Cash and cash equivalents	$ —	$ 18	$ 1	$ 4,374	$ —	$ 4,393
Investments	—	—	—	5,455	—	5,455
Accounts receivable, net	—	—	—	6,222	—	6,222
Inventories, net	—	188	—	3,792	(227)	3,753
Intercompany receivable	40	9,407	6	19,170	(28,623)	—
Other current assets	10	190	3	1,941	—	2,144
Total current assets	50	9,803	10	40,954	(28,850)	21,967
Property, plant, and equipment, net	—	1,480	—	3,195	—	4,675
Goodwill	—	2,009	—	37,950	—	39,959
Other intangible assets, net	—	99	—	20,461	—	20,560
Tax assets	—	568	—	951	—	1,519
Investment in subsidiaries	64,352	71,129	65,012	—	(200,493)	—
Intercompany loans receivable	3,000	21	27,858	35,398	(66,277)	—
Other assets	—	216	—	798	—	1,014
Total assets	$ 67,402	$ 85,325	$ 92,880	$ 139,707	$ (295,620)	$ 89,694
LIABILITIES AND EQUITY						
Current liabilities:						
Current debt obligations	$ —	$ 500	$ —	$ 338	$ —	$ 838
Accounts payable	—	481	—	1,472	—	1,953
Intercompany payable	—	11,971	7,200	9,452	(28,623)	—
Accrued compensation	3	913	—	1,273	—	2,189
Accrued income taxes	—	—	—	567	—	567
Other accrued expenses	20	331	53	2,521	—	2,925
Total current liabilities	23	14,196	7,253	15,623	(28,623)	8,472
Long-term debt	—	14,418	8,621	1,447	—	24,486
Accrued compensation and retirement benefits	—	1,069	—	582	—	1,651
Accrued income taxes	10	692	—	2,136	—	2,838
Intercompany loans payable	17,278	12,613	19,682	16,704	(66,277)	—
Deferred tax liabilities	—	—	—	1,278	—	1,278
Other liabilities	—	133	—	624	—	757
Total liabilities	17,311	43,121	35,556	38,394	(94,900)	39,482
Shareholders' equity	50,091	42,204	57,324	101,192	(200,720)	50,091
Noncontrolling interests	—	—	—	121	—	121
Total equity	50,091	42,204	57,324	101,313	(200,720)	50,212
Total liabilities and equity	$ 67,402	$ 85,325	$ 92,880	$ 139,707	$ (295,620)	$ 89,694

Condensed Consolidating Statement of Cash Flows
Six Months Ended October 25, 2019
Medtronic Senior Notes and Medtronic Luxco Senior Notes

(in millions)	Medtronic plc	Medtronic, Inc.	Medtronic Luxco	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Operating Activities:						
Net cash provided by (used in) operating activities	$ 49	$ (967)	$ 295	$ 4,000	$ —	$ 3,377
Investing Activities:						
Acquisitions, net of cash acquired	—	—	—	(201)	—	(201)
Additions to property, plant, and equipment	—	(158)	—	(426)	—	(584)
Purchases of investments	—	—	—	(4,226)	—	(4,226)
Sales and maturities of investments	—	—	—	3,260	—	3,260
Other investing activities	—	—	(5)	(11)	—	(16)
Net cash provided by (used in) investing activities	—	(158)	(5)	(1,604)	—	(1,767)
Financing Activities:						
Change in current debt obligations, net	—	—	—	42	—	42
Issuance of long-term debt	—	—	5,567	1	—	5,568
Payments on long-term debt	—	(5,016)	(515)	(63)	—	(5,594)
Dividends to shareholders	(1,447)	—	—	—	—	(1,447)
Issuance of ordinary shares	432	—	—	—	—	432
Repurchase of ordinary shares	(962)	—	—	—	—	(962)
Net intercompany loan borrowings (repayments)	1,928	6,143	(5,105)	(2,966)	—	—
Other financing activities	—	—	(34)	(20)	—	(54)
Net cash provided by (used in) financing activities	(49)	1,127	(87)	(3,006)	—	(2,015)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	(26)	—	(26)
Net change in cash and cash equivalents	—	2	203	(636)	—	(431)
Cash and cash equivalents at beginning of period	—	18	1	4,374	—	4,393
Cash and cash equivalents at end of period	$ —	$ 20	$ 204	$ 3,738	$ —	$ 3,962

Condensed Consolidating Statement of Cash Flows
Six Months Ended October 26, 2018
Medtronic Senior Notes and Medtronic Luxco Senior Notes

(in millions)	Medtronic plc	Medtronic, Inc.	Medtronic Luxco	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Operating Activities:						
Net cash provided by (used in) operating activities	$ 147	$ (1,335)	$ 123	$ 3,930	$ —	$ 2,865
Investing Activities:						
Acquisitions, net of cash acquired	—	—	—	(119)	—	(119)
Additions to property, plant, and equipment	—	(133)	—	(364)	—	(497)
Purchases of investments	—	—	—	(1,444)	—	(1,444)
Sales and maturities of investments	—	76	—	2,748	—	2,824
Capital contribution paid	(18)	(32)	—	—	50	—
Net cash provided by (used in) investing activities	(18)	(89)	—	821	50	764
Financing Activities:						
Change in current debt obligations, net	—	—	(696)	(4)	—	(700)
Issuance of long-term debt	—	—	—	1	—	1
Payments on long-term debt	—	—	—	(17)	—	(17)
Dividends to shareholders	(1,351)	—	—	—	—	(1,351)
Issuance of ordinary shares	800	—	—	—	—	800
Repurchase of ordinary shares	(2,047)	—	—	—	—	(2,047)
Net intercompany loan borrowings (repayments)	2,469	1,428	1,067	(4,964)	—	—
Capital contribution received	—	—	—	50	(50)	—
Other financing activities	—	—	—	11	—	11
Net cash provided by (used in) financing activities	(129)	1,428	371	(4,923)	(50)	(3,303)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	(84)	—	(84)
Net change in cash and cash equivalents	—	4	494	(256)	—	242
Cash and cash equivalents at beginning of period	—	20	1	3,648	—	3,669
Cash and cash equivalents at end of period	$ —	$ 24	$ 495	$ 3,392	$ —	$ 3,911

Consolidating Statement of Comprehensive Income
Three Months Ended October 25, 2019
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ —	$ —	$ 7,706	$ —	$ 7,706
Costs and expenses:						
Cost of products sold	—	—	—	2,394	—	2,394
Research and development expense	—	—	—	603	—	603
Selling, general, and administrative expense	4	—	1	2,615	—	2,620
Amortization of intangible assets	—	—	—	441	—	441
Restructuring charges, net	—	—	—	27	—	27
Certain litigation charges	—	—	—	121	—	121
Other operating expense (income), net	13	—	—	136	—	149
Operating profit (loss)	(17)	—	(1)	1,369	—	1,351
Other non-operating (income) expense, net	—	(32)	(248)	(362)	534	(108)
Interest expense	139	191	119	250	(534)	165
Equity in net (income) loss of subsidiaries	(1,518)	(1,220)	(1,390)	—	4,128	—
Income (loss) before income taxes	1,362	1,061	1,518	1,481	(4,128)	1,294
Income tax provision	(2)	—	—	(75)	—	(77)
Net income (loss)	1,364	1,061	1,518	1,556	(4,128)	1,371
Net income attributable to noncontrolling interests	—	—	—	(7)	—	(7)
Net income (loss) attributable to Medtronic	1,364	1,061	1,518	1,549	(4,128)	1,364
Other comprehensive income (loss), net of tax	(127)	(95)	(127)	(180)	402	(127)
Comprehensive income attributable to noncontrolling interests	—	—	—	(7)	—	(7)
Total comprehensive income (loss)	$ 1,237	$ 966	$ 1,391	$ 1,369	$ (3,726)	$ 1,237

Medtronic plc
Notes to Consolidated Financial Statements
(Unaudited)

Consolidating Statement of Comprehensive Income
Six Months Ended October 25, 2019
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ —	$ —	$ 15,199	$ —	$ 15,199
Costs and expenses:						
Cost of products sold	—	—	—	4,760	—	4,760
Research and development expense	—	—	—	1,190	—	1,190
Selling, general, and administrative expense	7	—	1	5,155	—	5,163
Amortization of intangible assets	—	—	—	881	—	881
Restructuring charges, net	—	—	—	74	—	74
Certain litigation charges	—	—	—	168	—	168
Other operating expense (income), net	26	—	(7)	108	—	127
Operating profit (loss)	(33)	—	6	2,863	—	2,836
Other non-operating (income) expense, net	—	(95)	(501)	(760)	1,147	(209)
Interest expense	283	412	284	942	(1,147)	774
Equity in net (income) loss of subsidiaries	(2,540)	(2,188)	(2,317)	—	7,045	—
Income (loss) before income taxes	2,224	1,871	2,540	2,681	(7,045)	2,271
Income tax provision	(4)	—	—	27	—	23
Net income (loss)	2,228	1,871	2,540	2,654	(7,045)	2,248
Net income attributable to noncontrolling interests	—	—	—	(20)	—	(20)
Net income (loss) attributable to Medtronic	2,228	1,871	2,540	2,634	(7,045)	2,228
Other comprehensive income (loss), net of tax	100	(11)	100	(53)	(36)	100
Comprehensive income attributable to noncontrolling interests	—	—	—	(20)	—	(20)
Total comprehensive income (loss)	$ 2,328	$ 1,860	$ 2,640	$ 2,581	$ (7,081)	$ 2,328

Consolidating Statement of Comprehensive Income
Three Months Ended October 26, 2018
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ —	$ —	$ 7,481	$ —	$ 7,481
Costs and expenses:						
Cost of products sold	—	—	—	2,203	—	2,203
Research and development expense	—	—	—	590	—	590
Selling, general, and administrative expense	4	—	1	2,600	—	2,605
Amortization of intangible assets	—	—	—	445	—	445
Restructuring charges, net	—	—	—	24	—	24
Other operating expense, net	24	—	—	46	—	70
Operating profit (loss)	(28)	—	(1)	1,573	—	1,544
Other non-operating (income) expense, net	—	(9)	(183)	(150)	290	(52)
Interest expense	108	22	113	288	(290)	241
Equity in net (income) loss of subsidiaries	(1,249)	(629)	(1,180)	—	3,058	—
Income (loss) before income taxes	1,113	616	1,249	1,435	(3,058)	1,355
Income tax provision	(2)	—	—	237	—	235
Net income (loss)	1,115	616	1,249	1,198	(3,058)	1,120
Net income attributable to noncontrolling interests	—	—	—	(5)	—	(5)
Net income (loss) attributable to Medtronic	1,115	616	1,249	1,193	(3,058)	1,115
Other comprehensive income (loss), net of tax	(289)	(91)	(289)	(295)	672	(292)
Comprehensive income attributable to noncontrolling interests	—	—	—	(2)	—	(2)
Total comprehensive income (loss)	$ 826	$ 525	$ 960	$ 901	$ (2,386)	$ 826

Medtronic plc
Notes to Consolidated Financial Statements
(Unaudited)

Consolidating Statement of Comprehensive Income
Six Months Ended October 26, 2018
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ —	$ —	$ 14,865	$ —	$ 14,865
Costs and expenses:						
Cost of products sold	—	—	—	4,407	—	4,407
Research and development expense	—	—	—	1,175	—	1,175
Selling, general, and administrative expense	6	—	1	5,195	—	5,202
Amortization of intangible assets	—	—	—	891	—	891
Restructuring charges, net	—	—	—	86	—	86
Certain litigation charges	—	—	—	103	—	103
Other operating expense, net	25	—	—	196	—	221
Operating profit (loss)	(31)	—	(1)	2,812	—	2,780
Other non-operating (income) expense, net	—	(19)	(352)	(424)	557	(238)
Interest expense	208	43	216	573	(557)	483
Equity in net (income) loss of subsidiaries	(2,425)	(1,602)	(2,290)	—	6,317	—
Income (loss) before income taxes	2,186	1,578	2,425	2,663	(6,317)	2,535
Income tax provision	(4)	—	—	342	—	338
Net income (loss)	2,190	1,578	2,425	2,321	(6,317)	2,197
Net income attributable to noncontrolling interests	—	—	—	(7)	—	(7)
Net income (loss) attributable to Medtronic	2,190	1,578	2,425	2,314	(6,317)	2,190
Other comprehensive income (loss), net of tax	(873)	(132)	(873)	(879)	1,881	(876)
Comprehensive loss attributable to non-controlling interests	—	—	—	(4)	—	(4)
Total comprehensive income (loss)	$ 1,317	$ 1,446	$ 1,552	$ 1,438	$ (4,436)	$ 1,317

Condensed Consolidating Balance Sheet
October 25, 2019
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
ASSETS						
Current assets:						
Cash and cash equivalents	$ —	$ —	$ 204	$ 3,758	$ —	$ 3,962
Investments	—	—	—	6,436	—	6,436
Accounts receivable, net	—	—	—	6,118	—	6,118
Inventories, net	—	—	—	4,042	—	4,042
Intercompany receivable	109	—	1,387	10,725	(12,221)	—
Other current assets	7	—	2	2,086	—	2,095
Total current assets	116	—	1,593	33,165	(12,221)	22,653
Property, plant, and equipment, net	—	—	—	4,756	—	4,756
Goodwill	—	—	—	39,952	—	39,952
Other intangible assets, net	—	—	—	19,775	—	19,775
Tax assets	—	—	—	1,804	—	1,804
Investment in subsidiaries	66,705	58,863	65,631	—	(191,199)	—
Intercompany loans receivable	3,000	3,798	30,240	40,585	(77,623)	—
Other assets	—	—	—	2,113	—	2,113
Total assets	$ 69,821	$ 62,661	$ 97,464	$ 142,150	$ (281,043)	$ 91,053
LIABILITIES AND EQUITY						
Current liabilities:						
Current debt obligations	$ —	$ —	$ —	$ 875	$ —	$ 875
Accounts payable	—	—	—	1,965	—	1,965
Intercompany payable	—	1,322	10,698	201	(12,221)	—
Accrued compensation	6	—	—	1,767	—	1,773
Accrued income taxes	—	—	—	442	—	442
Other accrued expenses	21	11	75	3,008	—	3,115
Total current liabilities	27	1,333	10,773	8,258	(12,221)	8,170
Long-term debt	—	1,309	13,552	9,891	—	24,752
Accrued compensation and retirement benefits	—	—	—	1,573	—	1,573
Accrued income taxes	10	—	—	2,695	—	2,705
Intercompany loans payable	19,206	27,126	13,458	17,833	(77,623)	—
Deferred tax liabilities	—	—	—	1,376	—	1,376
Other liabilities	—	—	1	1,757	—	1,758
Total liabilities	19,243	29,768	37,784	43,383	(89,844)	40,334
Shareholders' equity	50,578	32,893	59,680	98,626	(191,199)	50,578
Noncontrolling interests	—	—	—	141	—	141
Total equity	50,578	32,893	59,680	98,767	(191,199)	50,719
Total liabilities and equity	$ 69,821	$ 62,661	$ 97,464	$ 142,150	$ (281,043)	$ 91,053

Condensed Consolidating Balance Sheet
April 26, 2019
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
ASSETS						
Current assets:						
Cash and cash equivalents	$ —	$ —	$ 1	$ 4,392	$ —	$ 4,393
Investments	—	—	—	5,455	—	5,455
Accounts receivable, net	—	—	—	6,222	—	6,222
Inventories, net	—	—	—	3,753	—	3,753
Intercompany receivable	40	—	1,374	7,212	(8,626)	—
Other current assets	10	—	3	2,131	—	2,144
Total current assets	50	—	1,378	29,165	(8,626)	21,967
Property, plant, and equipment, net	—	—	—	4,675	—	4,675
Goodwill	—	—	—	39,959	—	39,959
Other intangible assets, net	—	—	—	20,560	—	20,560
Tax assets	—	—	—	1,519	—	1,519
Investment in subsidiaries	64,352	39,557	63,651	—	(167,560)	—
Intercompany loans receivable	3,000	4,119	27,858	29,002	(63,979)	—
Other assets	—	—	—	1,014	—	1,014
Total assets	$ 67,402	$ 43,676	$ 92,887	$ 125,894	$ (240,165)	$ 89,694
LIABILITIES AND EQUITY						
Current liabilities:						
Current debt obligations	$ —	$ —	$ —	$ 838	$ —	$ 838
Accounts payable	—	—	—	1,953	—	1,953
Intercompany payable	—	1,308	7,199	119	(8,626)	—
Accrued compensation	3	—	—	2,186	—	2,189
Accrued income taxes	—	—	—	567	—	567
Other accrued expenses	20	11	60	2,834	—	2,925
Total current liabilities	23	1,319	7,259	8,497	(8,626)	8,472
Long-term debt	—	1,354	8,621	14,511	—	24,486
Accrued compensation and retirement benefits	—	—	—	1,651	—	1,651
Accrued income taxes	10	—	—	2,828	—	2,838
Intercompany loans payable	17,278	9,320	19,682	17,699	(63,979)	—
Deferred tax liabilities	—	—	—	1,278	—	1,278
Other liabilities	—	—	1	756	—	757
Total liabilities	17,311	11,993	35,563	47,220	(72,605)	39,482
Shareholders' equity	50,091	31,683	57,324	78,553	(167,560)	50,091
Noncontrolling interests	—	—	—	121	—	121
Total Equity	50,091	31,683	57,324	78,674	(167,560)	50,212
Total liabilities and equity	$ 67,402	$ 43,676	$ 92,887	$ 125,894	$ (240,165)	$ 89,694

Condensed Consolidating Statement of Cash Flows
Six Months Ended October 25, 2019
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Operating Activities:						
Net cash provided by (used in) operating activities	$ 49	$ (319)	$ 309	$ 3,338	$ —	$ 3,377
Investing Activities:						
Acquisitions, net of cash acquired	—	—	—	(201)	—	(201)
Additions to property, plant, and equipment	—	—	—	(584)	—	(584)
Purchases of investments	—	—	—	(4,226)	—	(4,226)
Sales and maturities of investments	—	—	—	3,260	—	3,260
Capital contribution paid	—	(43)	—	—	43	—
Other investing activities	—	—	(5)	(11)	—	(16)
Net cash provided by (used in) investing activities	—	(43)	(5)	(1,762)	43	(1,767)
Financing Activities:						
Change in current debt obligations, net	—	—	—	42	—	42
Issuance of long-term debt	—	—	5,567	1	—	5,568
Payments on long-term debt	—	(44)	(515)	(5,035)	—	(5,594)
Dividends to shareholders	(1,447)	—	—	—	—	(1,447)
Issuance of ordinary shares	432	—	—	—	—	432
Repurchase of ordinary shares	(962)	—	—	—	—	(962)
Net intercompany loan borrowings (repayments)	1,928	406	(5,119)	2,785	—	—
Capital contribution received	—	—	—	43	(43)	—
Other financing activities	—	—	(34)	(20)	—	(54)
Net cash provided by (used in) financing activities	(49)	362	(101)	(2,184)	(43)	(2,015)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	(26)	—	(26)
Net change in cash and cash equivalents	—	—	203	(634)	—	(431)
Cash and cash equivalents at beginning of period	—	—	1	4,392	—	4,393
Cash and cash equivalents at end of period	$ —	$ —	$ 204	$ 3,758	$ —	$ 3,962

Condensed Consolidating Statement of Cash Flows
Six Months Ended October 26, 2018
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Operating Activities:						
Net cash provided by (used in) operating activities	$ 147	$ (35)	$ 136	$ 2,617	$ —	$ 2,865
Investing Activities:						
Acquisitions, net of cash acquired	—	—	—	(119)	—	(119)
Additions to property, plant, and equipment	—	—	—	(497)	—	(497)
Purchases of investments	—	—	—	(1,444)	—	(1,444)
Sales and maturities of investments	—	—	—	2,824	—	2,824
Capital contributions paid	(18)	(187)	—	—	205	—
Net cash provided by (used in) investing activities	(18)	(187)	—	764	205	764
Financing Activities:						
Change in current debt obligations, net	—	—	(697)	(3)	—	(700)
Issuance of long-term debt	—	—	—	1	—	1
Payments on long-term debt	—	—	—	(17)	—	(17)
Dividends to shareholders	(1,351)	—	—	—	—	(1,351)
Issuance of ordinary shares	800	—	—	—	—	800
Repurchase of ordinary shares	(2,047)	—	—	—	—	(2,047)
Net intercompany loan borrowings (repayments)	2,469	222	1,056	(3,747)	—	—
Capital contributions received	—	—	—	205	(205)	—
Other financing activities	—	—	—	11	—	11
Net cash provided by (used in) financing activities	(129)	222	359	(3,550)	(205)	(3,303)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	(84)	—	(84)
Net change in cash and cash equivalents	—	—	495	(253)	—	242
Cash and cash equivalents at beginning of period	—	—	1	3,668	—	3,669
Cash and cash equivalents at end of period	$ —	$ —	$ 496	$ 3,415	$ —	$ 3,911

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

UNDERSTANDING OUR FINANCIAL INFORMATION

The following discussion and analysis provides information management believes to be relevant to understanding the financial condition and results of operations of Medtronic plc and its subsidiaries (Medtronic plc, Medtronic, or the Company, or we, us, or our). For a full understanding of financial condition and results of operations, you should read this discussion along with management's discussion and analysis of financial condition and results of operations in our Annual Report on Form 10-K for the fiscal year ended April 26, 2019. In addition, you should read this discussion along with our consolidated financial statements and related notes thereto at and for the three and six months ended October 25, 2019.

Financial Trends

Throughout this Management's Discussion and Analysis, we present certain financial measures that we use to evaluate the operational performance of the Company and as a basis for strategic planning; however, such financial measures are not presented in our financial statements prepared in accordance with accounting principles generally accepted in the United States (U.S.) (U.S. GAAP). These financial measures are considered "non-GAAP financial measures" and are intended to supplement, and should not be considered as superior to, financial measures presented in accordance with U.S. GAAP. We generally use non-GAAP financial measures to facilitate management's review of the operational performance of the Company and as a basis for strategic planning. We believe that non-GAAP financial measures provide information useful to investors in understanding the Company's underlying operational performance and trends and may facilitate comparisons with the performance of other companies in the medical technologies industry.

As presented in the GAAP to Non-GAAP Reconciliations section below, our non-GAAP financial measures exclude the impact of certain charges or gains that contribute to or reduce earnings and that may affect financial trends, and include certain charges or benefits that result from transactions or events that we believe may or may not recur with similar materiality or impact to our operations in future periods (Non-GAAP Adjustments).

In the event there is a Non-GAAP Adjustment recognized in our operating results, the tax cost or benefit attributable to that item is separately calculated and reported. Because the effective rate can be significantly impacted by the Non-GAAP Adjustments that take place during the period, we often refer to our tax rate using both the effective rate and the non-GAAP nominal tax rate (Non-GAAP Nominal Tax Rate). The Non-GAAP Nominal Tax Rate is calculated as the income tax provision, adjusted for the impact of Non-GAAP Adjustments, as a percentage of income before income taxes, excluding Non-GAAP Adjustments.

Free cash flow is a non-GAAP financial measure calculated by subtracting property, plant, and equipment additions from operating cash flows.

Refer to the "GAAP to Non-GAAP Reconciliations," "Income Taxes," and "Free Cash Flow" sections for reconciliations of the non-GAAP financial measures to their most directly comparable financial measures prepared in accordance with U.S. GAAP.

EXECUTIVE LEVEL OVERVIEW

Medtronic is among the world's largest medical technology, services, and solutions companies - alleviating pain, restoring health, and extending life for millions of people around the world. Our primary products include those for cardiac rhythm disorders, cardiovascular disease, advanced and general surgical care, respiratory and monitoring solutions, renal care, neurological disorders, spinal conditions and musculoskeletal trauma, urological and digestive disorders, and ear, nose, and throat, and diabetes conditions.

The table below presents net income attributable to Medtronic and our diluted earnings per share for the three and six months ended October 25, 2019 and October 26, 2018:

	Three months ended			Six months ended		
(in millions, except per share data)	**October 25, 2019**	**October 26, 2018**	**% Change**	**October 25, 2019**	**October 26, 2018**	**% Change**
Net income attributable to Medtronic	$ 1,364	$ 1,115	22 %	$ 2,228	$ 2,190	2 %
Diluted earnings per share	$ 1.01	$ 0.82	23 %	$ 1.65	$ 1.61	2 %

The increase in net income attributable to Medtronic and diluted earnings per share (EPS) for the three months ended October 25, 2019, as compared to the corresponding period in the prior fiscal year, was primarily attributable to a $251 million tax benefit related to tax reform in Switzerland and a decrease in interest expense, partially offset by increases in certain litigation charges and other operating expense, net, which included an $80 million charge for our commitment to the Medtronic Foundation.

The increase in net income attributable to Medtronic and diluted EPS for the six months ended October 25, 2019, as compared to the corresponding period in the prior fiscal years, was primarily attributable to a $251 million tax benefit related to tax reform in Switzerland and a decrease in other operating expense, net, offset by the increase in interest expense due to the tender and early redemption of senior notes during the period. Refer to the "Costs and Expenses" section of this Management's Discussion and Analysis for more information on the items impacting net income attributable to Medtronic and diluted EPS during the three and six months ended October 25, 2019.

GAAP to Non-GAAP Reconciliations The tables below present our GAAP to Non-GAAP reconciliations for the three and six months ended October 25, 2019 and October 26, 2018:

	Three months ended October 25, 2019				
(in millions, except per share data)	**Income Before Income Taxes**	**Income Tax Provision**	**Net Income Attributable to Medtronic**	**Diluted EPS[1]**	**Effective Tax Rate**
GAAP	$ 1,294	$ (77)	$ 1,364	$ 1.01	(6.0) %
Non-GAAP Adjustments:					
Restructuring and associated costs [2]	94	16	78	0.06	17.0
Acquisition-related items [3]	27	4	23	0.02	14.8
Certain litigation charges	121	28	93	0.07	23.1
(Gain)/loss on minority investments [4]	(12)	(2)	(10)	(0.01)	16.7
Medical device regulations [5]	10	1	9	0.01	10.0
Exit of businesses [6]	41	6	35	0.03	14.6
Contribution to the Medtronic Foundation	80	18	62	0.05	22.5
Amortization of intangible assets	441	67	374	0.28	15.2
Certain tax adjustments, net [7]	—	251	(251)	(0.19)	—
Non-GAAP	$ 2,096	$ 312	$ 1,777	$ 1.31	14.9 %

	Three months ended October 26, 2018				
(in millions, except per share data)	**Income Before Income Taxes**	**Income Tax Provision**	**Net Income Attributable to Medtronic**	**Diluted EPS[1]**	**Effective Tax Rate**
GAAP	$ 1,355	$ 235	$ 1,115	$ 0.82	17.3 %
Non-GAAP Adjustments:					
Restructuring and associated costs [2]	77	12	65	0.05	15.6
Acquisition-related items	4	1	3	—	25.0
(Gain)/loss on minority investments [4]	25	(1)	26	0.02	(4.0)
IPR&D charges [8]	15	—	15	0.01	—
Amortization of intangible assets	445	67	378	0.28	15.1
Certain tax adjustments, net [9]	—	(58)	58	0.04	—
Non-GAAP	$ 1,921	$ 256	$ 1,660	$ 1.22	13.3 %

(1) Amounts in this column have been intentionally rounded to the nearest $0.01 and, therefore, may not sum.
(2) Associated costs include costs incurred as a direct result of the restructuring program, such as salaries for employees supporting the program and consulting expenses.
(3) The charges primarily include costs incurred in connection with legacy-Covidien enterprise resource planning deployment activities, business combination related costs, and changes in the fair value of contingent consideration.
(4) We exclude unrealized and realized gains and losses on our minority investments as we do not believe that these components of income or expense have a direct correlation to our ongoing or future business operations.
(5) The charges represent incremental costs of complying with the new European Union medical device regulations for previously registered products and primarily include charges for contractors supporting the project and other direct third-party expenses.
(6) The net charge relates to the exit of businesses and is primarily comprised of intangible asset impairments.
(7) The net benefit primarily relates to the impact of tax reform in Switzerland.
(8) The charge represents acquired IPR&D in connection with an asset acquisition.
(9) The charges relate to the impact of tax reform in the United States.

(in millions, except per share data)	Six months ended October 25, 2019				
	Income Before Income Taxes	Income Tax Provision	Net Income Attributable to Medtronic	Diluted EPS[1]	Effective Tax Rate
GAAP	$ 2,271	$ 23	$ 2,228	$ 1.65	1.0 %
Non-GAAP Adjustments:					
Restructuring and associated costs [2]	218	31	187	0.14	14.2
Acquisition-related items [3]	46	6	40	0.03	13.0
Certain litigation charges	168	32	136	0.10	19.0
(Gain)/loss on minority investments [4]	(11)	(2)	(9)	(0.01)	18.2
Debt tender premium and other charges [5]	406	86	320	0.24	21.2
Medical device regulations [6]	18	2	16	0.01	11.1
Exit of businesses [7]	41	6	35	0.03	14.6
Contribution to the Medtronic Foundation	80	18	62	0.05	22.5
Amortization of intangible assets	881	135	746	0.55	15.3
Certain tax adjustments, net [8]	—	281	(281)	(0.21)	—
Non-GAAP	$ 4,118	$ 618	$ 3,480	$ 2.57	15.0 %

(in millions, except per share data)	Six months ended October 26, 2018				
	Income Before Income Taxes	Income Tax Provision	Net Income Attributable to Medtronic	Diluted EPS[1]	Effective Tax Rate
GAAP	$ 2,535	$ 338	$ 2,190	$ 1.61	13.3 %
Non-GAAP Adjustments:					
Restructuring and associated costs [2]	190	28	162	0.12	14.7
Acquisition-related items	40	8	32	0.02	20.0
Certain litigation charges	103	12	91	0.07	11.7
(Gain)/loss on minority investments [4]	(85)	(8)	(77)	(0.06)	9.4
IPR&D charges [9]	15	—	15	0.01	—
Exit of businesses [7]	80	18	62	0.05	22.5
Amortization of intangible assets	891	134	757	0.56	15.0
Certain tax adjustments, net [10]	—	(29)	29	0.02	—
Non-GAAP	$ 3,769	$ 501	$ 3,261	$ 2.39	13.3 %

(1) Amounts in this column have been intentionally rounded to the nearest $0.01 and, therefore, may not sum.
(2) Associated costs include costs incurred as a direct result of the restructuring program, such as salaries for employees supporting the program and consulting expenses.
(3) The charges primarily include costs incurred in connection with legacy-Covidien enterprise resource planning deployment activities, business combination related costs, and changes in the fair value of contingent consideration.
(4) We exclude unrealized and realized gains and losses on our minority investments as we do not believe that these components of income or expense have a direct correlation to our ongoing or future business operations.
(5) The charges, which include $413 million recognized in *interest expense* and ($7 million) recognized in *other operating expense, net,* primarily relate to the early redemption of approximately $5.2 billion of senior notes.
(6) The charges represent incremental costs of complying with the new European Union medical device regulations for previously registered products and primarily include charges for contractors supporting the project and other direct third-party expenses.
(7) The net charges relate to the exit of businesses and are primarily comprised of intangible asset impairments.
(8) The net benefit primarily relates to the impact of tax reform in Switzerland and the United States.
(9) The charges represent acquired IPR&D in connection with an asset acquisition.
(10) The net charge relates to the impact of tax reform in the United States.

NET SALES

Segment and Division

The table below illustrates net sales by segment and division for the three and six months ended October 25, 2019 and October 26, 2018:

	Three months ended[1]			Six months ended[1]		
(in millions)	**October 25, 2019**	**October 26, 2018**	**% Change**	**October 25, 2019**	**October 26, 2018**	**% Change**
Cardiac Rhythm & Heart Failure	$ 1,426	$ 1,472	(3) %	$ 2,807	$ 2,898	(3) %
Coronary & Structural Heart	955	906	5	1,896	1,823	4
Aortic, Peripheral, & Venous	474	480	(1)	942	948	(1)
Cardiac and Vascular Group	2,855	2,858	—	5,645	5,669	—
Surgical Innovations	1,454	1,393	4	2,871	2,790	3
Respiratory, Gastrointestinal, & Renal	688	654	5	1,371	1,309	5
Minimally Invasive Therapies Group	2,142	2,047	5	4,242	4,099	4
Brain Therapies	772	701	10	1,512	1,375	10
Spine	692	656	5	1,349	1,308	3
Specialty Therapies	333	322	3	656	631	4
Pain Therapies	315	314	—	607	628	(3)
Restorative Therapies Group	2,112	1,993	6	4,124	3,942	5
Diabetes Group	596	583	2	1,188	1,155	3
Total	$ 7,706	$ 7,481	3 %	$ 15,199	$ 14,865	2 %

(1) Revenue amounts have intentionally been rounded to the nearest million and, therefore, may not sum.

Our performance displays our continued execution against our three growth strategies: therapy innovation, globalization, and economic value. We continue to allocate our capital to higher growth markets and new opportunities that create competitive advantages and capitalize on the long-term trends in healthcare: namely, the desire to improve clinical outcomes; the growing demand for expanded access to care; and the optimization of cost and efficiency within healthcare systems.

We continue to see an acceleration in our innovation cycle within our therapy innovation growth strategy. Our segments invest in a pipeline of groundbreaking medical technology, with several recent product launches and adoption of new therapies contributing to net sales growth. We remain focused on our globalization strategy, as net sales in emerging markets grew 9 percent and 8 percent during the three and six months ended October 25, 2019, respectively, as compared to the corresponding periods in the prior fiscal year. Our emerging market performance continues to benefit from geographic diversification, with strong, balanced results in these markets around the world. Finally, in our third growth strategy, economic value, we continue to execute our value-based healthcare signature programs and aggressively develop unique, value-based healthcare solutions that directly link our therapies to improving outcomes and deliver improved economic value to the payers and providers. We remain focused on leading the shift to healthcare payment systems that reward value and improved patient outcomes over volume.

During the first quarter of fiscal year 2020, we realigned our divisions within the Restorative Therapies Group, which included a movement of revenue from Transformative Solutions product lines previously included in Specialty Therapies to a product line under Brain Therapies. As a result, the fiscal year 2019 results have been recast to adjust for this realignment.

Segment and Market Geography

The table below includes net sales by market geography for each of our segments for the three and six months ended October 25, 2019 and October 26, 2018:

	U.S.[1][4]			Non-U.S. Developed Markets[2][4]			Emerging Markets[3][4]		
	Three months ended			Three months ended			Three months ended		
(in millions)	October 25, 2019	October 26, 2018	% Change	October 25, 2019	October 26, 2018	% Change	October 25, 2019	October 26, 2018	% Change
Cardiac and Vascular Group	$ 1,455	$ 1,482	(2) %	$ 890	$ 895	(1) %	$ 510	$ 481	6 %
Minimally Invasive Therapies Group	922	872	6	782	772	1	438	403	9
Restorative Therapies Group	1,440	1,357	6	416	412	1	256	224	14
Diabetes Group	311	334	(7)	226	203	11	59	46	28
Total	$ 4,129	$ 4,045	2 %	$ 2,315	$ 2,282	1 %	$ 1,262	$ 1,154	9 %

	U.S.[1][4]			Non-U.S. Developed Markets[2][4]			Emerging Markets[3][4]		
	Six months ended			Six months ended			Six months ended		
(in millions)	October 25, 2019	October 26, 2018	% Change	October 25, 2019	October 26, 2018	% Change	October 25, 2019	October 26, 2018	% Change
Cardiac and Vascular Group	$ 2,816	$ 2,871	(2) %	$ 1,820	$ 1,842	(1) %	$ 1,009	$ 956	6 %
Minimally Invasive Therapies Group	1,835	1,729	6	1,573	1,600	(2)	834	770	8
Restorative Therapies Group	2,778	2,651	5	842	840	—	504	451	12
Diabetes Group	618	658	(6)	457	406	13	113	91	24
Total	$ 8,046	$ 7,909	2 %	$ 4,692	$ 4,688	— %	$ 2,460	$ 2,268	8 %

(1) U.S. includes the United States and U.S. territories.
(2) Non-U.S. developed markets include Japan, Australia, New Zealand, Korea, Canada, and the countries within Western Europe.
(3) Emerging markets include the countries of the Middle East, Africa, Latin America, Eastern Europe, and the countries of Asia that are not included in the non-U.S. developed markets, as defined above.
(4) Revenue amounts have intentionally been rounded to the nearest million and, therefore, may not sum.

Net sales increases in the U.S. for the three and six months ended October 25, 2019 were primarily attributable to strong growth in our Minimally Invasive Therapies Group and Restorative Therapies Group, partially offset by declines in our Cardiac and Vascular Group and Diabetes Group. Currency had an unfavorable effect on net sales in non-U.S. developed markets and emerging markets of $97 million and $243 million for the three and six months ended October 25, 2019, respectively. Net sales remained nearly flat in non-U.S. developed markets for the three and six months ended October 25, 2019, attributable to sales declines in Western Europe, offset by net sales growth in Japan. Net sales growth in emerging markets continues to reflect our broad diversification as we experienced strong performance across the market geography in each of our segments.

Looking ahead, our segments are likely to face competitive product launches and pricing pressure, geographic macro-economic risks, reimbursement challenges, impacts from changes in the mix of our product offerings and timing of product registration approvals, replacement cycle challenges, and fluctuations in currency exchange rates. Additionally, changes in procedural volumes could affect our Cardiac and Vascular, Minimally Invasive Therapies, and Restorative Therapies Groups.

Cardiac and Vascular Group

The Cardiac and Vascular Group's products include pacemakers, insertable and external cardiac monitors, cardiac resynchronization therapy devices (CRT-D), implantable cardioverter defibrillators (ICD), leads and delivery systems, ventricular assist systems, ablation products, electrophysiology catheters, products for the treatment of atrial fibrillation, information systems for the management of patients with Cardiac Rhythm & Heart Failure devices, products designed to reduce surgical site infections, coronary and peripheral stents and related delivery systems, balloons and related delivery systems, endovascular stent graft systems, heart valve replacement technologies, cardiac tissue ablation systems, and open heart and coronary bypass grafting surgical products. The Cardiac and Vascular Group also includes Care Management Services and Cath Lab Managed Services (CLMS) within the Cardiac Rhythm & Heart Failure division. The Cardiac and Vascular Group's net sales for the three and six months ended October 25, 2019 were $2.9 billion and $5.6 billion, respectively, which is comparable

to the corresponding periods in the prior fiscal year. Currency had an unfavorable impact on net sales for the three and six months ended October 25, 2019 of $39 million and $98 million, respectively. The Cardiac and Vascular Group's net sales for the three and six months ended October 25, 2019, as compared to the corresponding periods in the prior fiscal year, were primarily driven by higher sales in Coronary & Structural Heart offset by decreases in Cardiac Rhythm & Heart Failure and Aortic, Peripheral, & Venous.

Cardiac Rhythm & Heart Failure net sales for the three and six months ended October 25, 2019 were $1.4 billion and $2.8 billion, respectively, a decrease of 3 percent in each period. Cardiac Rhythm & Heart Failure net sales decline for the three and six months ended October 25, 2019 was driven by Heart Failure and CLMS. The decline in Heart Failure was driven by the CRT-D and Tachy replacement cycles and LVAD headwinds primarily due to competitive pressures in the U.S. For the three months ended October 25, 2019, we also experienced temporary manufacturing challenges related to our TYRX product. These declines were partially offset by growth in Pacing and AF Solutions within Arrhythmia Management. The growth in Pacing was due to the continued strong adoption of the Micra transcatheter pacing system. The growth in AF Solutions was driven by Artic Front cryoblation products.

Coronary & Structural Heart net sales for the three and six months ended October 25, 2019 were $955 million and$1.9 billion, respectively, an increase of 5 percent and 4 percent, respectively, as compared to the corresponding periods in the prior fiscal year. Coronary & Structural Heart net sales growth for the three and six months ended October 25, 2019 was driven by transcathether aortic valves, reflecting expansion into the low risk patient population, as well as growth of our guide catheters, partially offset by declines in coronary stents sales.

Aortic, Peripheral, & Venous net sales for the three and six months ended October 25, 2019 were $474 million and $942 million, respectively, a decrease of 1 percent when compared to the corresponding periods in the prior fiscal year, with growth in Aortic and Venous offsetting declines in Peripheral. Aortic net sales growth for the three and six months ended October 25, 2019 was driven by the continued momentum from the launch of the Valiant Navion thoracic stent graft system. Venous net sales growth for the three and six months ended October 25, 2019 was driven by ongoing adoption of the VenaSeal vein closure system. Peripheral net sales decline for the three and six months ended October 25, 2019 was due to drug-coated balloons, as uncertainty around Paclitaxel continues to impact the market.

Looking ahead, we expect our Cardiac and Vascular Group could be affected by the following:

- Continued acceptance and growth from penetration of the self-expanding CoreValve Evolut transcatheter aortic valve replacement platform into intermediate risk indication globally.
- Acceptance and growth of the self-expanding CoreValve Evolut transcatheter aortic valve replacement platform for the treatment of patients determined to be at low risk with surgery.
- Changes to the U.S. Medicare national coverage determination for transcatheter aortic valve replacement that will allow approximately 30% more U.S. centers to offer the therapy to patients.
- Continued acceptance and growth from Evolut PRO, which provides industry-leading hemodynamics, reliable delivery, and advanced sealing with an excellent safety profile, as well as acceptance of our next generation Evout Pro Plus TAVR valve which launched late in the current quarter.
- Continued acceptance and growth of the CRT-P quadripolar pacing system.
- Continued acceptance and growth of the Claria MRI CRT-D system with EffectivCRT Diagnostic and Effective CRT during AF algorithm.
- Continued growth of our Micra transcatheter pacing system.
- Continued acceptance and growth from the Azure XT and S SureScan pacing systems. Azure pacemakers feature Medtronic-exclusive BlueSync technology, which enables automatic, secure wireless remote monitoring with increased device longevity.

- Continued acceptance of the HVAD System as a Destination Therapy for patients with advanced heart failure who are not candidates for heart transplants. The HVAD System, a left ventricular assist device or LVAD, helps the heart pump and increases the amount of blood that flows through the body. In the U.S., we received FDA approval for the Destination Therapy indication in September 2017 and the thoracotomy indication in July 2018, which allows for a less-invasive implant via a small surgical incision between the patient's ribs on the left side of the chest. We expect that future LVAD net sales will continue to be impacted by a competitor's product launch and the impact of changes in the U.S. heart transplant guidelines.

- Continued growth, adoption, and utilization of the TYRX Envelope for implantable devices driven by the favorable results of the WRAP-IT clinical study.

- Continued acceptance of Care Management Services as post-acute care services become even more critical in bundled payment models for different interventions or therapies.

- Continued acceptance and growth from the VenaSeal vein closure system in the United States, for which reimbursement payment was established in January 2018 and payer coverage has been gradually increasing. The VenaSeal system is a unique non-thermal solution to address superficial venous disease that provides improved patient comfort, reduces the recovery time, and eliminates the risk of thermal nerve injury.

- Continued acceptance and growth from the Valiant family of thoracic stent grafts, including the Valiant Navion which received U.S. FDA approval in October 2018 and CE Mark approval in November 2018.

- Ongoing impact of Paclitaxel safety concerns affecting our drug coated balloons.

Minimally Invasive Therapies Group

The Minimally Invasive Therapies Group’s products span the entire continuum of patient care from diagnosis to recovery, with a focus on diseases of the gastrointestinal tract, lungs, pelvic region, kidneys, obesity, and preventable complications. The products include those for advanced and general surgical products including surgical stapling devices, vessel sealing instruments, wound closure, electrosurgery products, hernia mechanical devices, mesh implants, advanced ablation, interventional lung, ventilators, capnography, airway products, sensors, dialysis, and monitors. The Minimally Invasive Therapies Group’s net sales for the three and six months ended October 25, 2019 were $2.1 billion and $4.2 billion, respectively, an increase of 5 percent and 4 percent, respectively, as compared to the corresponding periods in the prior fiscal year. Currency had an unfavorable impact on net sales for the three and six months ended October 25, 2019 of $30 million and $80 million, respectively.

Surgical Innovations net sales for the three and six months ended October 25, 2019 were $1.5 billion and $2.9 billion, respectively, an increase of 4 percent and 3 percent, respectively, as compared to the corresponding periods in the prior fiscal year. Surgical Innovations net sales growth was driven by strong sales in Advanced Stapling and Advanced Energy, led by the LigaSure vessel sealing instruments with nano-coating, LigaSure Exact Dissector and L-Hook Laparoscopic Sealer/Divider, Valleylab FT10 energy platform, Tri-Staple 2.0 endo stapling specialty reloads, and the EEA circular stapler.

Respiratory, Gastrointestinal, & Renal net sales for the three and six months ended October 25, 2019 were $688 million and $1.4 billion, respectively, increases of 5 percent as compared to the corresponding periods in the prior fiscal year. Respiratory, Gastrointestinal, & Renal net sales growth was driven by strength in Patient Monitoring, including the continued adoption of MicroStream capnography monitoring products, Nellcor pulse oximetry and BIS brain monitoring consumables, along with growth in Respiratory Interventions, including the continued adoption of ventilators and video laryngoscopy products. Also driving growth for fiscal year 2020 was growth in GI & Hepatology, including PillCam capsule endoscopy systems, Bravo calibration-free reflux testing systems, and EndoFLIP imaging systems, and strength in renal access products.

Looking ahead, we expect our Minimally Invasive Therapies Group could be affected by the following:

- Continued acceptance and future growth of Open-to-MIS techniques and tools supported by our efforts to transition open surgery to MIS. The Open-to-MIS initiative focuses on furthering our presence in and working to optimize open surgery globally, while capturing the market opportunity that exists in transitioning open procedures to MIS, whether through traditional MIS, or advanced technologies including robotics.

- Continued acceptance and future growth of powered stapling and energy platform, along with our ability to execute ongoing strategies to develop, gain regulatory approval, and commercialize new products including our surgical soft tissue robotics platform.

- The July 29, 2017 divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses. We have entered into Transition Manufacturing Agreements (TMAs) with Cardinal Health, Inc. (Cardinal). The TMAs will contribute to net sales and are designed to ensure and facilitate an orderly transfer of business operations for a transition period of two to five years, with the ability to extend upon mutual agreement of the parties.
- Our ability to execute ongoing strategies in order to address the competitive pressure of reprocessing of our vessel sealing disposables in the U.S.
- Our ability to create markets and drive product and procedures into emerging markets. We have high quality and cost-effective surgical products designed for customers in emerging markets such as the ValleyLab LS10 single channel vessel sealing generator, which is compatible with our line of LigaSure instruments and designed for simplified use and affordability.
- Continued acceptance and growth within the end stage renal disease market. The population of patients treated for end stage renal disease globally is expected to double over the next decade. We plan to grow our therapy innovation with scalable and affordable dialysis delivery while investing in vascular creation and maintenance technologies. In addition, the HD multi-pass system reduces infrastructure by requiring less water, less start-up costs, and offers high quality ultrapure dialysate treatment. We are expecting regulatory filing in early fiscal year 2021, with launch following regulatory clearance in targeted countries.
- Continued elevation of the standard of care for respiratory compromise, a progressive condition impacting a patient's ability to breathe effectively which leverages our market leading MicroStream capnography technology.
- Continued acceptance and growth in patient monitoring, airway, and ventilation management. Key products in this area include the Puritan Bennett 980 ventilator, Microstream Capnography, Nellcor pulse oximetry system with OxiMax technology, Shiley tracheostomy and endotracheal tubes, and McGRATH MAC video laryngoscopes.
- Continued and future acceptance of less invasive standards of care in Gastrointestinal and Hepatology products, including the areas of GI Diagnostic and Therapeutic product lines. Recently launched products include the PillCam COLON capsule endoscopy, the Barrx platform through ablation with the Barrx 360 Express catheter, EndoFLIP imaging systems, Bravo Calibration-free reflux testing, and the Emprint ablation system with Thermosphere Technology, which maintains predictable spherical ablation zones throughout procedures reducing procedure time and cost.
- Continued and future acceptance of Interventional Lung Solutions. Products include the superDimension GenCut core biopsy system and the Triple Needle Cytology Brush, a lung tissue biopsy tool for use with the superDimension navigation system. The superDimension system enables a minimally invasive approach to accessing difficult-to-reach areas of the lung, which may aid in the diagnosis of lung cancer.
- Expanding the use of less invasive treatments and furthering our commitment to improving options for women with abnormal uterine bleeding. Our expanded and strengthened surgical offerings are expected to complement our global gynecology business.

Restorative Therapies Group

The Restorative Therapies Group's products focus on various areas of the spine, bone graft substitutes, biologic products, trauma, implantable neurostimulation therapies and drug delivery systems for the treatment of chronic pain, movement disorders, epilepsy, overactive bladder, urinary retention, fecal incontinence and gastroparesis, as well as products to treat conditions of the ear, nose, and throat (ENT), and systems that incorporate advanced energy surgical instruments. The Restorative Therapies Group also manufactures and sells image-guided surgery and intra-operative imaging systems, robotic guidance systems used in robot assisted spine procedures, and therapies to treat diseases of the vasculature in and around the brain, including coils, neurovascular stents and flow diversion products. The Restorative Therapies Group's net sales for the three and six months ended October 25, 2019 were $2.1 billion and $4.1 billion, respectively, an increase of 6 percent and 5 percent, respectively, as compared to the corresponding periods in the prior fiscal year. Currency had an unfavorable impact on net sales for the three and six months ended October 25, 2019 of $17 million and $43 million, respectively. Net sales growth for the three and six months ended October 25, 2019 was driven by the Brain Therapies, Spine, and Specialty Therapies divisions. Net sales growth for the six months ended October 25, 2019 was partially offset by modest declines in Pain Therapies.

Brain Therapies net sales for the three and six months ended October 25, 2019 were $772 million and $1.5 billion, an increase of 10 percent as compared to the corresponding periods in the prior fiscal year. Brain Therapies net sales growth was driven by strong growth in both Neurovascular and Neurosurgery. Neurovascular net sales growth was driven by continued strength in both the Hemorrhagic and Ischemic stroke businesses. The Hemorrhagic stroke business saw growth in flow diversion products,

particularly with our Pipeline Flex flow diversion system. The Ischemic stroke business saw continued strong adoption of the recently launched Solitaire X stent retriever products as well as our Riptide aspiration system and React catheters. Neurosurgery net sales growth was driven by continued strong demand for the StealthStation S8 surgical navigation systems, O-Arm Imaging Systems, and Mazor X robotic guidance systems. Specifically, for the three months ended October 25, 2019, Neurosurgery also saw growth due to the strong uptake of the recently launched Midas Rex MR8 high-speed drill system which was fully launched in the U.S. during the quarter.

Spine net sales for the three and six months ended October 25, 2019 were $692 million and $1.3 billion, respectively, an increase of 5 percent and 3 percent, respectively, as compared to the corresponding periods in the prior fiscal year. Net sales growth for the three and six months ended October 25, 2019 was driven by continued success of our Surgical Synergy strategy, which integrates our spinal implants with enabling technologies such as imaging, navigation, power instruments, nerve monitoring and Mazor robotics sold by our Neurosurgery business. These enabling technologies also contributed to the strong performance in Neurosurgery within our Brain Therapies division. For the three months ended October 25, 2019, Core Spine grew primarily through new product penetration from recently launched products, including the Infinity OCT System, T2 Stratosphere, and Prestige LP cervical disc system.

Specialty Therapies net sales for the three and six months ended October 25, 2019 were $333 million and $656 million, respectively, an increase of 3 percent and 4 percent, respectively, as compared to the corresponding periods in the prior fiscal year. Net sales growth was driven by capital equipment sales of the StealthStation ENT surgical navigation system, intraoperative NIM nerve monitoring system, and powered ENT instruments in ENT, along with sales of the InterStim II neurostimulator in Pelvic Health.

Pain Therapies net sales for the three and six months ended October 25, 2019 were $315 million and $607 million, respectively, which was flat and a decrease of 3 percent, respectively, as compared to the corresponding periods in the prior fiscal year. For the six months ended October 25, 2019, the decrease in net sales was driven by the continued overall slowdown in the U.S. spinal cord stimulation market. For the three months ended October 25, 2019, Interventional Pain growth partially offset the decline in Pain Stimulation based on continued success of both the Kyphon V vertebroplasty and Osteocool RF Spinal Tumor ablation systems.

Looking ahead, we expect our Restorative Therapies Group could be affected by the following:

- Continued acceptance and growth of the Solitare FR revascularization device for treatment of acute ischemic stroke and the Pipeline Embolization Devices, endovascular treatments for large or giant wide-necked brain aneurysms.
- Continued acceptance of our React Catheter and Riptide aspiration system, along with our next-generation Solitaire revascularization device.
- Continued growth from Neurosurgery StealthStation and O-Arm Imaging Systems, Midas, and ENT Navigation and Power Systems.
- Continued sales of Mazor robotic units and associated market adoption of robot-assisted spine procedures, including the Mazor X Stealth, our integrated robotics and navigation platform, which received FDA approval in November 2018.
- Strengthening of our position as a global leader in enabling technologies for spine surgery as a result of the December 2018 acquisition of Mazor Robotics.
- Strengthening of our position in the spine titanium interbody implant marketplace as a result of the June 2019 acquisition of Titan Spine.
- Continued adoption of our integrated solutions through the Surgical Synergy strategy, which integrates our spinal implants with enabling technologies such as imaging, navigation, power instruments, nerve monitoring and Mazor robotics.
- Market acceptance and continued global adoption of innovative new Spine products and procedural solutions, such as our Infinity OCT System and Prestige LP cervical disc system.
- Growth in the broader vertebral compression fracture (VCF) and adjacent markets, as we continue to pursue the development of other therapies to treat more patients with VCF, including continued success of both the Kyphon V vertebroplasty system and the Osteocool RF Spinal Tumor ablation system.

- Continued global adoption of our Intellis spinal cord stimulator, Evolve workflow algorithm, and Snapshot reporting to treat chronic pain in major markets around the world.
- Ongoing obligations under the U.S. FDA consent decree entered in April 2015 relating to the SynchroMed drug infusion system and the Neuromodulation quality system. The U.S. FDA lifted its distribution requirements on our implantable drug pump in October 2017 and its warning letter in November 2017.
- Continued acceptance of our devices for the treatment of Parkinson's Disease, epilepsy and other movement disorders. We launched our medically refractory epilepsy device in the U.S. in November 2018.
- Continued acceptance and growth of our Specialty Therapies, including InterStim therapy for the treatment of the symptoms of overactive bladder, urinary retention, and bowel incontinence, and capital equipment sales of the Stealth Station ENT surgical navigation system and intraoperative NIM nerve monitoring system.

Diabetes Group

The Diabetes Group's products include insulin pumps, continuous glucose monitoring (CGM) systems, and insulin pump consumables. The Diabetes Group’s net sales for the three and six months ended October 25, 2019 were $596 million and $1.2 billion, respectively, an increase of 2 percent and 3 percent, respectively, as compared to the corresponding periods in the prior fiscal year. Currency had an unfavorable impact on net sales for the three and six months ended October 25, 2019 of $12 million and $23 million, respectively. The Diabetes Group's net sales growth for the three and six months ended October 25, 2019 was primarily attributable to growth in international markets resulting from strong consumer demand of the MiniMed 670G. In addition, continued adoption of the Guardian Connect Smart CGM System contributed to the revenue growth in the period. Our strong international growth was partially offset by declines in our U.S. business as a result of competitive challenges.

Looking ahead, we expect our Diabetes Group could be affected by the following:

- Increasing pump competition in an expanding U.S. market.
- Continued patient demand for the MiniMed 670G system, the first hybrid closed loop system in the world. The system is powered by SmartGuard technology, which mimics some of the functions of a healthy pancreas by providing two levels of automated insulin delivery, maximizing Time in Range with reduced user input. Approximately 224,000 trained, active users are benefiting from SmartGuard technology.
- Continued acceptance and future growth internationally for the MiniMed 670G system. This system received CE mark in June 2018 and is now commercialized in Canada, Australia, Chile and in select European and Central American countries. The global adoption of sensor-augmented insulin pump systems has resulted in strong sensor attachment rates. Reimbursement in Germany was received in September 2019 and we expect additional launches outside the U.S. in the remainder of fiscal year 2020, including France during the fourth quarter.
- Changes in medical reimbursement policies and programs, along with additional payor coverage of the MiniMed 670G system.
- Acceptance of the upcoming launch of our advanced hybrid closed loop system, MiniMed 780G, along with the advancement of our Personalized Closed Loop system which was just granted "Breakthrough Device" designation by the FDA within the United States. These technologies feature our next-generation algorithms designed to improve Time in Range by further automating insulin delivery.
- Continued acceptance and growth of the Guardian Connect CGM system which displays glucose information directly to a smartphone.
- Continued partnership with UnitedHealthcare as the preferred in-network provider of insulin pumps, giving their members, including pediatric patients 7 years and above, access to our advanced diabetes technology and comprehensive support services.

CRITICAL ACCOUNTING ESTIMATES

We have used various accounting policies to prepare the consolidated financial statements in accordance with U.S. GAAP. Our significant accounting policies are disclosed in Note 1 to the consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended April 26, 2019.

The preparation of the consolidated financial statements, in conformity with U.S. GAAP, requires us to use judgment in making estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, and expenses. These estimates reflect our best judgment about economic and market conditions and the potential effects on the valuation and/or carrying value of assets and liabilities based upon relevant information available. We base our estimates on historical experience and on various assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources.

Our critical accounting estimates include the following:

Litigation Contingencies We are involved in a number of legal actions involving product liability, intellectual property and commercial disputes, shareholder related matters, environmental proceedings, income tax disputes, and governmental proceedings and investigations. The outcomes of these legal actions are not completely within our control and may not be known for prolonged periods of time. In some actions, the enforcement agencies or private claimants seek damages, as well as other civil or criminal remedies (including injunctions barring the sale of products that are the subject of the proceeding), that could require significant expenditures or result in lost revenues or limit our ability to conduct business in the applicable jurisdictions. Estimating probable losses from our litigation and governmental proceedings is inherently difficult, particularly when the matters are in early procedural stages, with incomplete scientific facts or legal discovery; involve unsubstantiated or indeterminate claims for damages; potentially involve penalties, fines, or punitive damages; or could result in a change in business practice. Our significant legal proceedings are discussed in Note 17 to the current period's consolidated financial statements.

Income Tax Reserves We establish reserves when, despite our belief that our tax return positions are fully supportable, we believe that certain positions are likely to be challenged and that we may or may not prevail. Under U.S. GAAP, if we determine that a tax position is more likely than not of being sustained upon audit, based solely on the technical merits of the position, we recognize the benefit. We measure the benefit by determining the amount that is greater than 50 percent likely of being realized upon settlement. We presume that all tax positions will be examined by a taxing authority with full knowledge of all relevant information. The calculation of our tax liabilities involves dealing with uncertainties in the application of complex tax regulations in a multitude of jurisdictions across our global operations. We regularly monitor our tax positions and tax liabilities. We reevaluate the technical merits of our tax positions and recognize an uncertain tax benefit, or derecognize a previously recorded tax benefit, when there is (i) a completion of a tax audit, (ii) effective settlement of an issue, (iii) a change in applicable tax law including a tax case or legislative guidance, or (iv) the expiration of the applicable statute of limitations. Significant judgment is required in accounting for tax reserves. Although we believe that we have adequately provided for liabilities resulting from tax assessments by taxing authorities, positions taken by these tax authorities could have a material impact on our effective tax rate, consolidated earnings, financial position and/or cash flows.

Valuation of Intangible Assets and Goodwill When we acquire a business, the assets acquired and liabilities assumed are recorded at their respective fair values at the acquisition date. Goodwill is the excess of the purchase price over the estimated fair value of net assets of acquired businesses. Intangible assets primarily include patents, trademarks, tradenames, customer relationships, purchased technology, and IPR&D. Determining the fair value of intangible assets acquired as part of a business combination requires us to make significant estimates. These estimates include the amount and timing of projected future cash flows of each project or technology, the discount rate used to discount those cash flows to present value, the assessment of the asset’s life cycle, and the consideration of legal, technical, regulatory, economic, and competitive risks.

The test for goodwill impairment requires us to make several estimates to determine fair value, most of which are based on projected future cash flows. Our estimates associated with the goodwill impairment test are considered critical due to the amount of goodwill recorded on our consolidated balance sheets and the judgment required in determining fair value. We assess the impairment of goodwill at the reporting unit level annually in the third quarter and whenever an event occurs or circumstances change that would indicate that the carrying amount may be impaired.

We test definite-lived intangible assets for impairment when an event occurs or circumstances change that would indicate the carrying amount of the assets or asset group may be impaired. Our tests are based on future cash flows that require significant judgment with respect to future revenue and expense growth rates, appropriate discount rates, asset groupings, and other assumptions and estimates. We use estimates that are consistent with our business plans and a market participant's view of the assets being evaluated. Actual results may differ from our estimates due to a number of factors including, among others,

changes in competitive conditions, timing of regulatory approval, results of clinical trials, changes in worldwide economic conditions, and fluctuations in currency exchange rates.

We assess the impairment of indefinite-lived intangible assets annually in the third quarter and whenever an event occurs or circumstances change that would indicate that the carrying amount may be impaired. Our impairment tests of indefinite-lived intangible assets require us to make several estimates to determine fair value, including projected future cash flows and discount rates.

NEW ACCOUNTING PRONOUNCEMENTS

Information regarding new accounting pronouncements is included in Note 2 to the current period's consolidated financial statements.

ACQUISITIONS

Information regarding acquisitions is included in Note 4 to the current period's consolidated financial statements.

COSTS AND EXPENSES

The following is a summary of cost of products sold, research and development, and selling, general, and administrative expenses as a percent of net sales:

	Three months ended		Six months ended	
	October 25, 2019	October 26, 2018	October 25, 2019	October 26, 2018
Cost of products sold	31.1 %	29.4 %	31.3 %	29.6 %
Research and development expense	7.8 %	7.9 %	7.8 %	7.9 %
Selling, general, and administrative expense	34.0 %	34.8 %	34.0 %	35.0 %

Cost of Products Sold We continue to focus on reducing our costs of production through supplier management, manufacturing improvements, and optimizing our manufacturing network.

Cost of products sold for the three and six months ended October 25, 2019 was $2.4 billion and $4.8 billion, respectively. The increase in cost of products sold as a percentage of net sales for the three and six months ended October 25, 2019 as compared to the corresponding periods in the prior fiscal year was driven by increased restructuring and associated costs and increased duty, driven in part by increased China tariffs on inbound products. Additionally, for the six months ended October 25, 2019, we incurred increased expenses to overcome the sterilization shortage in our Minimally Invasive Therapies Group. Cost of products sold for the three and six months ended October 25, 2019 included $32 million and $67 million, respectively, of restructuring and associated costs, as compared to $22 million and $37 million, respectively, for corresponding periods in the prior fiscal year.

Research and Development Expense We remain committed to accelerating the development of meaningful innovations to deliver better patient outcomes at appropriate costs that lead to enhanced quality of life and may be validated by clinical and economic evidence. We are also focused on expanding access to quality healthcare. Research and development expense for the three and six months ended October 25, 2019 was $603 million and $1.2 billion, respectively.

Selling, General, and Administrative Expense Our goal is to continue to leverage selling, general, and administrative expense initiatives and to continue to realize cost synergies expected from our acquisitions. Selling, general, and administrative expense primarily consists of salaries and wages, other administrative costs, such as professional fees and marketing expenses, and certain acquisition and restructuring expenses.

Selling, general, and administrative expense for the three and six months ended October 25, 2019 was $2.6 billion and $5.2 billion, respectively. The decrease in selling, general, and administrative expense as a percentage of net sales for the three and six months ended October 25, 2019 benefited from our Enterprise Excellence program and continued net sales growth. Selling, general, and administrative expense for the three and six months ended October 26, 2018 also included expenses incurred to fulfill our Transition Service Agreements (TSAs) that we entered into with Cardinal Health in conjunction with the Divestiture.

The following is a summary of other costs and expenses:

	Three months ended		Six months ended	
(in millions)	October 25, 2019	October 26, 2018	October 25, 2019	October 26, 2018
Amortization of intangible assets	$ 441	$ 445	$ 881	$ 891
Restructuring charges, net	27	24	74	86
Certain litigation charges	121	—	168	103
Other operating expense, net	149	70	127	221
Other non-operating income, net	(108)	(52)	(209)	(238)
Interest expense	165	241	774	483

Amortization of Intangible Assets Amortization of intangible assets includes the amortization expense of our definite-lived intangible assets, consisting of purchased patents, trademarks, tradenames, customer relationships, purchased technology, and other intangible assets. Amortization expense was $441 million and $881 million for the three and six months ended October 25, 2019, respectively, as compared to $445 million and $891 million for the three and six months ended October 26, 2018, respectively.

Restructuring Charges, Net

In the third quarter of fiscal year 2018, we announced a multi-year global Enterprise Excellence Program designed to drive long-term business growth and sustainable efficiency. The Enterprise Excellence Program is expected to further leverage our global size and scale as well as enhance the customer and employee experience.

The Enterprise Excellence Program is focused on three objectives:

- Global Operations - integrating and enhancing global manufacturing and supply processes, systems and site presence to improve quality, delivery cost and cash flow
- Functional Optimization - enhancing and leveraging global operating models and systems across several enabling functions to improve productivity and employee experience
- Commercial Optimization - optimizing certain processes, systems and models to improve productivity and the customer experience

The Enterprise Excellence Program is designed to drive operating margin improvement as well as fund investment in strategic growth initiatives, with expected annual gross savings of more than $3.0 billion from cost reductions and leverage of our fixed infrastructure by the end of fiscal year 2022. Approximately $500 million to $700 million of gross annual savings are expected to be achieved each fiscal year through the end of fiscal year 2022.

The Enterprise Excellence Program is expected to result in pre-tax restructuring charges of approximately $1.6 billion to $1.8 billion, the vast majority of which are expected to be incurred by the end of fiscal year 2022 and result in cash outlays to be substantially complete by the end of fiscal year 2023. Approximately half of the estimated charges are related to employee termination benefits. The remaining charges are costs associated with the restructuring program, such as salaries for employees supporting the program and consulting expenses. We expect these costs to be recognized within *restructuring charges, net, cost of products sold*, and *selling, general, and administrative expense* in the consolidated statements of income.

For the three and six months ended October 25, 2019, we recognized charges of $95 million and $231 million, respectively. Additionally, we incurred accrual adjustments of $1 million and $13 million for the three and six months ended October 25, 2019, respectively, related to certain employees identified for termination finding other positions within Medtronic. For the three and six months ended October 25, 2019, charges included $28 million and $81 million, respectively, recognized within *restructuring charges, net* in the consolidated statements of income, primarily comprised of employee termination benefits For the three and six months ended October 25, 2019, charges also included costs incurred as a direct result of the restructuring program, such as salaries for employees supporting the program and consulting expenses, including $32 million and $61 million, respectively, recognized within *cost of products sold* and $35 million and $77 million, respectively, recognized within *selling, general, and administrative expense* in the consolidated statements of income. For the six months ended October 25, 2019, *cost of products sold* also included $6 million of fixed asset write-downs.

For the three and six months ended October 26, 2018, we recognized charges of $75 million and $195 million, respectively. Additionally, we incurred accrual adjustments of $4 million and $2 million for the three and six months ended October 26,

2018, respectively, primarily related to employee termination benefits being more than initially estimated. For the three and six months ended October 26, 2018, charges included $22 million and $91 million, respectively, recognized within *restructuring charges, net* in the consolidated statements of income, primarily comprised of employee termination benefits. For the three and six months ended October 26, 2018, charges also included costs incurred as a direct result of the restructuring program, such as salaries for employees supporting the program and consulting expenses, including $22 million and $37 million, respectively, recognized within *cost of products sold* and $31 million and $54 million, respectively, recognized within *selling, general and administrative expense* in consolidated statements of income. For the six months ended October 26, 2018, *selling, general and administrative expense* also included $13 million of fixed asset write-downs.

For additional information about our restructuring programs, refer to Note 5 to the current period's consolidated financial statements.

Certain Litigation Charges We classify litigation charges and gains related to significant legal matters as certain litigation charges. During the three and six months ended October 25, 2019 we recognized $121 million and $168 million, respectively, of certain litigation charges related to probable and estimable damages for significant legal matters. During the six months ended October 26, 2018, we recognized $103 million of certain litigation charges. There were no certain litigation charges recognized during the three months ended October 26, 2018.

Other Operating Expense, Net Other operating expense, net primarily includes royalty income and expense, currency remeasurement and derivative gains and losses, Puerto Rico excise taxes, changes in the fair value of contingent consideration, TSA income, a commitment to the Medtronic Foundation, and charges associated with business exits. For the three and six months ended October 25, 2019, other operating expense, net was $149 million and $127 million, respectively, as compared to $70 million and $221 million for the three and six months ended October 26, 2018, respectively. The changes in other operating expense, net are primarily attributable to our remeasurement and hedging programs as well as an $80 million charge associated with our commitment to the Medtronic Foundation during the three and six months ended October 25, 2019. Combined, our remeasurement and hedging programs resulted in a $47 million gain and $121 million gain for the three and six months ended October 25, 2019, respectively, as compared to a $10 million loss and $26 million loss for the three and six months ended October 26, 2018, respectively. Additionally, for the three and six months ended October 25, 2019, other operating expense, net includes a $41 million charge associated with the exit of businesses, as compared to an $80 million charge associated with the exit of a business during the six months ended October 26, 2018. There were no charges associated with the exit of a business during the three months ended October 26, 2018.

Other Non-Operating Income, Net Other non-operating income, net includes the non-service component of net periodic pension and postretirement benefit cost, investment gains and losses, and interest income. For the three and six months ended October 25, 2019, other non-operating income, net was $108 million and $209 million, respectively, as compared to $52 million and $238 million for the three and six months ended October 26, 2018, respectively. The change in other non-operating income, net is primarily attributable to gains and losses on our minority investment portfolio. Gains (losses) on minority investments were $12 million and $11 million for the three and six months ended October 25, 2019, respectively, as compared to ($25) million and $85 million for the three and six months ended October 26, 2018, respectively.

Interest Expense Interest expense includes interest incurred on our outstanding borrowings, amortization of debt issuance costs and debt premiums or discounts, amortization of gains or losses on terminated or de-designated interest rate derivative instruments, and charges recognized in connection with the tender and early redemption of senior notes. For the three and six months ended October 25, 2019, interest expense was $165 million and $774 million, respectively, as compared to $241 million and $483 million for the three and six months ended October 26, 2018, respectively. The decrease in interest expense during the three months ended October 25, 2019 was primarily due to a decrease in the weighted-average interest rate of outstanding debt obligations, as compared to the corresponding period in the prior fiscal year, driven by our debt issuance and tender transactions in the fourth quarter of fiscal year 2019 and first quarter of fiscal year 2020. The increase in interest expense during the six months ended October 25, 2019 was primarily driven by $413 million of charges recognized in connection with the tender and early redemption of $5.2 billion of senior notes, partially offset by a decrease in the weighted-average interest rate of outstanding debt obligations due to the aforementioned debt issuance and tender transactions.

INCOME TAXES

	Three months ended		Six months ended	
(in millions)	**October 25, 2019**	**October 26, 2018**	**October 25, 2019**	**October 26, 2018**
Income tax provision	$ (77)	$ 235	$ 23	$ 338
Income before income taxes	1,294	1,355	2,271	2,535
Effective tax rate	(6.0)%	17.3 %	1.0 %	13.3 %
Non-GAAP income tax provision	$ 312	$ 256	$ 618	$ 501
Non-GAAP income before income taxes	2,096	1,921	4,118	3,769
Non-GAAP Nominal Tax Rate	14.9 %	13.3 %	15.0 %	13.3 %
Difference between the effective tax rate and Non-GAAP Nominal Tax Rate	20.9 %	(4.0)%	14.0 %	— %

Many of the countries we operate in have statutory tax rates lower than our U.S. statutory rate, thereby resulting in an overall effective tax rate less than the U.S. statutory rate of 21 percent. A significant portion of our earnings are generated from operations in Puerto Rico, Switzerland, and Ireland. The statutory tax rates for these jurisdictions range from 12.5 percent to 45.1 percent. Our earnings in Puerto Rico and Switzerland are subject to certain tax incentive grants which provide for tax rates lower than the country statutory tax rates. Unless our tax incentive grants are extended, they will expire between fiscal years 2020 and 2034. The tax incentive grants scheduled to expire during fiscal year 2020 are not expected to have a material impact on our financial results. Refer to Note 14 to the consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended April 26, 2019 for additional information.

Our effective tax rate for the three and six months ended October 25, 2019 was (6.0) percent and 1.0 percent, respectively, as compared to 17.3 percent and 13.3 percent for the three and six months ended October 26, 2018, respectively. The decrease in the effective tax rate for the three and six months ended October 25, 2019, as compared to the corresponding period in the prior fiscal year, was primarily due to the impact of certain tax adjustments.

Our Non-GAAP Nominal Tax Rate for the three and six months ended October 25, 2019 was 14.9 percent and 15.0 percent, respectively, as compared to 13.3 percent for the three and six months ended October 26, 2018. The change in our Non-GAAP Nominal Tax Rate was primarily due to the impact of a lapse of federal statutes of limitations in the prior year and year-over-year changes in operational results by jurisdiction. An increase in our Non-GAAP Nominal Tax Rate of 1 percent would result in an additional income tax provision for the three and six months ended October 25, 2019 of approximately $21 million and $41 million, respectively.

Certain Tax Adjustments

During the three months ended October 25, 2019, the net benefit from certain tax adjustments of $251 million, recognized in *income tax provision* in the consolidated statements of income, included the following:

- A benefit of $251 million related to tax legislative changes in Switzerland which abolished certain preferential tax regimes the Company benefited from and replaced them with a new set of internationally accepted measures. The legislation provided for higher effective tax rates but allowed for a transitional period whereby an amortizable asset was created for Swiss federal income tax purposes which will be amortized and deducted over a 10-year period.

During the six months ended October 25, 2019, the net benefit from certain tax adjustments of $281 million, recognized in *income tax provision* in the consolidated statements of income, included the following:

- A net benefit of $30 million related to U.S. Treasury's issuance of certain Final Regulations associated with U.S. Tax Reform. The primary impact of these regulations resulted in the re-establishment of our permanently reinvested assertion on certain foreign earnings and reversing the previously accrued tax liability. This benefit was partially offset by additional tax associated with a previously executed internal reorganization of certain foreign subsidiaries.
- A benefit of $251 million related to tax legislative changes in Switzerland which abolished certain preferential tax regimes the Company benefited from and replaced them with a new set of internationally accepted measures. The legislation provided for higher effective tax rates but allowed for a transitional period whereby an amortizable asset was created for Swiss federal income tax purposes which will be amortized and deducted over a 10-year period.

During the three months ended October 26, 2018, the charge from certain tax adjustments of $58 million, recognized in *income tax provision* in the consolidated statements of income, included the following:

- A charge of $37 million associated with the transition tax liability recorded in connection with U.S. Tax Reform.
- A charge of $21 million related to the recognition of a prepaid tax expense resulting from the reduction in the U.S. statutory tax rate due to U.S. Tax Reform and the sale of U.S. manufactured inventory held as of April 27, 2018.

During the six months ended October 26, 2018, the net charge from certain tax adjustments of $29 million, recognized in *income tax provision* in the consolidated statements of income, included the following:

- A benefit of $13 million associated with the transition tax liability recorded in connection with U.S. Tax Reform.
- A charge of $42 million related to the recognition of a prepaid tax expense resulting from the reduction in the U.S. statutory tax rate due to U.S. Tax Reform and the sale of U.S. manufactured inventory held as of April 27, 2018.

LIQUIDITY AND CAPITAL RESOURCES

Our liquidity and capital structure is evaluated regularly within the context of our annual operating and strategic planning process. We consider the liquidity necessary to fund our operations, which includes working capital needs, investments in research and development, property, plant, and equipment, and other operating costs. We also consider capital allocation alternatives that balance returning value to shareholders through dividends and share repurchases, satisfying maturing debt, and acquiring businesses and technology.

Summary of Cash Flows

The following is a summary of cash provided by (used in) operating, investing, and financing activities, the effect of exchange rate changes on cash and cash equivalents, and the net change in cash and cash equivalents:

	Six months ended	
(in millions)	**October 25, 2019**	**October 26, 2018**
Cash provided by (used in):		
Operating activities	$ 3,377	$ 2,865
Investing activities	(1,767)	764
Financing activities	(2,015)	(3,303)
Effect of exchange rate changes on cash and cash equivalents	(26)	(84)
Net change in cash and cash equivalents	$ (431)	$ 242

Operating Activities The $512 million increase in net cash provided was primarily driven by a decrease in cash paid for income taxes and interest, partially offset by an increase in cash paid for Enterprise Excellence restructuring activities, and an increase in cash paid to employees. The decrease in cash paid for income taxes was primarily due to a tax payment associated with the intercompany sale of intellectual property in the first quarter of fiscal year 2019, a lower transition tax payment made in the second quarter of fiscal year 2020 as compared to the corresponding period in the prior year, as well as the timing of estimated tax payments. Cash paid for interest decreased due to a decrease in interest expense and change in timing of interest payments resulting from the debt tenders and issuances in the first quarter of fiscal year 2020 and the fourth quarter of fiscal year 2019. Refer to the "Restructuring Charges, Net" section of this Management's Discussion and Analysis and Note 5 to the current period's consolidated financial statements for information on the Enterprise Excellence program. Cash paid to employees increased due to higher annual incentive plan payouts compared the corresponding period in the prior fiscal year.

Investing Activities The $2.5 billion increase in net cash used was primarily attributable to a decrease in net proceeds from purchases and sales of investments of $2.3 billion, an increase in cash paid for acquisitions of $82 million, and an increase in cash paid for additions of property, plant, and equipment of $87 million during the six months ended October 25, 2019, as compared to the corresponding period in the prior fiscal year.

Financing Activities The $1.3 billion decrease in net cash used was primarily attributable to a decrease in net cash used for share repurchases of $1.1 billion, and a net increase in short-term borrowings during the six months ended October 25, 2019, partially offset by a decrease in the issuance of ordinary shares of $368 million, as compared to the corresponding period in the prior fiscal year. Financing cash flows were also impacted by the issuance of $5.6 billion of Euro-denominated senior notes offset by the tender of $5.2 billion of senior notes for $5.6 billion of total consideration.

Free Cash Flow

Free cash flow, a non-GAAP financial measure, is calculated by subtracting additions to property, plant, and equipment from net cash provided by operating activities. Management uses this non-GAAP financial measure, in addition to U.S. GAAP financial measures, to evaluate our operating results. Free cash flow should be considered supplemental to, and not a substitute for, our reported financial results prepared in accordance with U.S. GAAP. Reconciliations between net cash provided by operating activities (the most comparable U.S. GAAP measure) and free cash flow are as follows:

	Six months ended	
(in millions)	**October 25, 2019**	**October 26, 2018**
Net cash provided by operating activities	$ 3,377	$ 2,865
Additions to property, plant, and equipment	(584)	(497)
Free cash flow	$ 2,793	$ 2,368

Debt and Capital

Our capital structure consists of equity and interest-bearing debt. We use a combination of bank borrowings and commercial paper issuances to fund our short-term financing needs. Current debt, including the current portion of our long-term debt and capital lease obligations, at October 25, 2019 was $875 million as compared to $838 million at April 26, 2019. Long-term debt at October 25, 2019 was $24.8 billion as compared to $24.5 billion at April 26, 2019. We utilize unsecured senior debt obligations to meet our long-term financing needs. From time to time, we may repurchase our outstanding debt obligations in the open market or through privately negotiated transactions.

Total debt at October 25, 2019 was $25.6 billion, as compared to $25.3 billion at April 26, 2019. The increase in total debt was primarily driven by the net impact of the issuance and cash tender offers described below.

In June 2019, we issued six tranches of Euro-denominated senior notes with an aggregate principal of €5.0 billion, with maturities ranging from fiscal year 2021 to fiscal year 2050, resulting in cash proceeds of approximately $5.6 billion, net of discounts and issuance costs. We used the net proceeds of the offering to fund the cash tender offer and early redemption described below. The Euro-denominated debt is designated as a net investment hedge of certain of our European operations.

We completed the cash tender offer of $4.6 billion of senior notes for $5.0 billion of total consideration in July 2019. We recognized a loss on debt extinguishment of $413 million in the first quarter of fiscal year 2020, which primarily included cash premiums and accelerated amortization of deferred financing costs and debt discounts and premiums. The loss on debt extinguishment also included a $16 million charge for the estimated early redemption premium for $533 million of senior notes which were redeemed in August 2019. The loss on debt extinguishment was recognized in *interest expense* in the consolidated statements of income.

For additional information on the issuance of these senior notes and the subsequent cash tender offer and redemption, refer to Note 7 to the current period's consolidated financial statements. For additional information on the Euro-denominated debt designated as a net investment hedge, refer Note 8 to the current period's consolidated financial statements.

We maintain a commercial paper program for short-term financing, which allows us to issue unsecured commercial paper notes on a private placement basis up to a maximum aggregate amount outstanding at any time of $3.5 billion. At both October 25, 2019 and April 26, 2019, we had no commercial paper outstanding. The issuance of commercial paper reduces the amount of credit available under our existing line of credit, as explained below.

We also have a $3.5 billion five-year syndicated credit facility (Credit Facility) which expires in December 2023. The Credit Facility provides backup funding for the commercial paper program and may also be used for general corporate purposes. The Credit Facility provides us with the ability to increase our borrowing capacity by an additional $1.0 billion at any time during the term of the agreement. At each anniversary date of the Credit Facility, but not more than twice prior to the maturity date, we could also request a one-year extension of the maturity date. At October 25, 2019 and April 26, 2019, no amounts were outstanding under the Credit Facility.

Interest rates on advances of our Credit Facility are determined by a pricing matrix, based on our long-term debt ratings assigned by Standard & Poor's Ratings Services (S&P) and Moody's Investors Service (Moody’s). For additional information on our credit ratings status by S&P and Moody's, refer to the "Liquidity" section of this Management's Discussion and Analysis. Facility fees are payable on the Credit Facility and are determined in the same manner as the interest rates. The agreements also contain customary covenants, all of which we were in compliance with at October 25, 2019.

We repurchase our ordinary shares from time to time as part of our focus on returning value to our shareholders. In June 2017, our Board of Directors authorized the expenditure of up to $5.0 billion for new share repurchases. In March 2019, our Board of Directors authorized an incremental $6.0 billion for repurchase of our ordinary shares. There is no specific time period associated with these repurchase authorizations. During the three and six months ended October 25, 2019, we repurchased a total of 5.2 million and 8.5 million shares, respectively, at an average price per share of $106.12 and $102.99, respectively. At October 25, 2019, we had approximately $6.3 billion remaining under the share repurchase program authorized by our Board of Directors.

For more information on credit arrangements, refer to Note 7 to the current period's consolidated financial statements and Note 7 to the consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended April 26, 2019.

Liquidity

Our liquidity sources at October 25, 2019 include $4.0 billion of cash and cash equivalents and $6.4 billion of current investments. Additionally, we maintain a commercial paper program (no commercial paper outstanding at October 25, 2019) and Credit Facility. See discussion above regarding changes in our cash and cash equivalents and commercial paper program and Credit Facility.

Our investments include available-for-sale debt securities, including U.S. and non-U.S. government and agency securities, corporate debt securities, mortgage-backed securities, other asset-backed securities, and auction rate securities. Some of our investments may experience reduced liquidity due to changes in market conditions and investor demand. For the three and six months ended October 25, 2019, the total other-than-temporary impairment losses on available-for-sale debt securities were not significant. Based on our assessment of the credit quality of the underlying collateral and credit support available to each of the remaining securities in which we are invested, we believe we have recognized all necessary other-than-temporary impairments as we do not have the intent to sell, nor is it more likely than not that we will be required to sell, before recovery of the amortized cost. At October 25, 2019, we have $36 million of gross unrealized losses on our aggregate available-for-sale debt securities of $6.5 billion. If market conditions deteriorate, some of these holdings may experience other-than-temporary impairment in the future, which could adversely affect our financial results. We are required to use estimates and assumptions in our valuation of investments, which requires a high degree of judgment, and therefore, actual results could differ materially from estimates. Refer to Note 6 to the current period's consolidated financial statements for additional information regarding fair value measurements.

The table below includes our short-term and long-term debt ratings from S&P and Moody's at both October 25, 2019 and April 26, 2019:

	Agency Rating[1]	
	October 25, 2019	April 26, 2019
Standard & Poor's Ratings Services		
Long-term debt	A	A
Short-term debt	A-1	A-1
Moody's Investors Service		
Long-term debt	A3	A3
Short-term debt	P-2	P-2

(1) Agency ratings are subject to change, and there may be no assurance that an agency will continue to provide ratings and/or maintain its current ratings. A security rating is not a recommendation to buy, sell or hold securities, and may be subject to revision or withdrawal at any time by the rating agency, and each rating should be evaluated independently of any other rating.

S&P and Moody's long-term debt ratings and short-term debt ratings at October 25, 2019 were unchanged as compared to the ratings at April 26, 2019. We do not expect the S&P and Moody's ratings to have a significant impact on our liquidity or future flexibility to access additional liquidity given our balance sheet and Credit Facility and related commercial paper program.

We have future contractual obligations and other minimum commercial commitments that are entered into in the normal course of business. We believe our off-balance sheet arrangements do not have a material current or anticipated future effect on our consolidated earnings, financial position, and/or cash flows. Refer to the "Off-Balance Sheet Arrangements and Long-Term Contractual Obligations" section of this Management's Discussion and Analysis for more information on these obligations and commitments.

Note 17 to the to the current period's consolidated financial statements provides information regarding amounts we have accrued related to legal matters. In accordance with U.S. GAAP, we record a liability in our consolidated financial statements for these matters when a loss is known or considered probable and the amount can be reasonably estimated. Actual settlements may be different than estimated and could have a material effect on our consolidated earnings, financial position, and/or cash flows.

We record tax liabilities in our consolidated financial statements for amounts that we expect to repatriate from subsidiaries (to the extent the repatriation would be subject to tax); however, no tax liabilities are recorded for amounts that we consider to be permanently reinvested. We removed our permanently reinvested assertion on the undistributed earnings of certain foreign subsidiaries with a U.S. parent which were subject to the transition tax and all earnings of these subsidiaries through April 27, 2018. We have reasserted for certain earnings of such subsidiaries through April 27, 2018 which were not subject to the transition tax. We expect to have access to the majority of our cash flows in the future. In addition, we continue to evaluate our legal entity structure supporting our business operations, and to the extent such evaluation results in a change to our overall business structure, we may be required to accrue for additional tax obligations.

We believe our balance sheet and liquidity provide us with flexibility, and that our cash, cash equivalents, and current investments, as well as our Credit Facility and related commercial paper program, will satisfy our foreseeable operating needs for at least the next 12 months. We regularly review our capital needs and consider various investing and financing alternatives to support our requirements.

Off-Balance Sheet Arrangements and Long-Term Contractual Obligations

There have been no material changes to our long-term contractual obligations as reported in our most recent Annual Report filed on Form 10-K for the fiscal year ended April 26, 2019.

CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS

This Quarterly Report on Form 10-Q, and other written reports and oral statements made by or with the approval of one of the Company's executive officers from time to time, may include "forward-looking" statements. All statements other than statements of historical fact contained in this Quarterly Report on Form 10-Q, including statements regarding our future results of operations and financial position, business strategy and plans, objectives of management for future operations and current expectations or forecasts of future results, are forward-looking statements. These statements involve known and unknown risks, uncertainties, and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance, or achievements expressed or implied by the forward-looking statements. Our forward-looking statements may include statements related to our growth and growth strategies, developments in the markets for our products, therapies and services, financial results, product development launches and effectiveness, research and development strategy, regulatory approvals, competitive strengths, restructuring and cost-saving initiatives, intellectual property rights, litigation and tax matters, government investigations, mergers and acquisitions, divestitures, market acceptance of our products, therapies and services, accounting estimates, financing activities, ongoing contractual obligations, working capital adequacy, value of our investments, our effective tax rate, our expected returns to shareholders, and sales efforts. In some cases, such statements may be identified by the use of terminology such as "anticipate," "believe," "could," "estimate," "expect," "forecast," "intend," "looking ahead," "may," "plan," "possible," "potential," "project," "should," "will," and similar words or expressions. Forward-looking statements in this Quarterly Report include, but are not limited to, statements regarding our ability to drive long-term shareholder value, development and future launches of products and continued or future acceptance of products, therapies and services in our segments; expected timing for completion of research studies relating to our products; market positioning and performance of our products, including stabilization of certain product markets; divestitures and the potential benefits thereof; the costs and benefits of integrating previous acquisitions; anticipated timing for U.S. FDA and non-U.S. regulatory approval of new products; increased presence in new markets, including markets outside the U.S.; changes in the market and our market share; acquisitions and investment initiatives, as well as integration of acquired companies into our operations; the resolution of tax matters; the effectiveness of our development activities in reducing patient care costs and hospital stay lengths; our approach towards cost containment; our expectations regarding health care costs, including potential changes to reimbursement policies and pricing pressures; our expectations regarding changes to patient standards of care; our ability to identify and maintain successful business partnerships; the elimination of certain positions or costs related to restructuring initiatives; outcomes in our litigation matters and government investigations; general economic conditions; the adequacy of available working capital and our working capital needs; our payment of dividends and redemption of shares; the continued strength of our balance sheet and liquidity; our accounts receivable exposure; and the potential impact of our compliance with governmental regulations and accounting guidance.

We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements speak only as of the date of this Quarterly Report on Form 10-Q and are subject to a number of risks, uncertainties and assumptions described in the "Risk Factors" section and elsewhere in our Annual Report on Form 10-K. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely on these forward-looking statements as predictions of future events. One must carefully consider forward-looking statements and understand that such forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, and involve a variety of risks and uncertainties, known and unknown, including, among others, those discussed in the sections entitled "Government Regulation and Other Considerations" within "Item 1. Business" and "Item 1A. Risk Factors" in our Annual Report on Form 10-K, as well as those related to:

- competition in the medical device industry;
- reduction or interruption in our supply;
- laws and government regulations;
- quality problems;
- liquidity shortfalls;
- decreasing prices and pricing pressure;
- fluctuations in currency exchange rates;
- changes in applicable tax rates;
- changes in tax laws and regulations as well as positions taken by taxing authorities;
- adverse regulatory action;

- delays in regulatory approvals;
- litigation results;
- self-insurance;
- commercial insurance;
- health care policy changes;
- international operations;
- cybersecurity incidents;
- failure to complete or achieve the intended benefits of acquisitions or divestitures; or
- disruption of our current plans and operations.

Consequently, no forward-looking statement may be guaranteed and actual results may vary materially from those projected in the forward-looking statements. We intend to take advantage of the Safe Harbor provisions of the Private Securities Litigation Reform Act of 1995 regarding our forward-looking statements, and are including this sentence for the express purpose of enabling us to use the protections of the safe harbor with respect to all forward-looking statements. While we may elect to update these forward-looking statements at some point in the future, whether as a result of any new information, future events, or otherwise, we have no current intention of doing so except to the extent required by applicable law.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

CURRENCY EXCHANGE RATE RISK

Due to the global nature of our operations, we are exposed to currency exchange rate changes which may cause fluctuations in earnings and cash flows. We use operational and economic hedges, including currency exchange rate derivative instruments to manage the impact of currency exchange rate fluctuations. In order to minimize earnings and cash flow volatility resulting from currency exchange rate fluctuations, we enter into derivative instruments, principally forward currency exchange rate contracts. These contracts are designed to hedge anticipated transactions in other currencies and changes in the value of specific assets and liabilities. At inception of the contract, the derivative instrument is designated as either a freestanding derivative or a cash flow hedge. The primary currencies of our derivative instruments are the Euro, Japanese Yen, and British Pound. Fluctuations in the currency exchange rates of currency exposures that are unhedged, such as in certain emerging markets, may result in future earnings and cash flow volatility. We do not enter into currency exchange rate derivative instruments for speculative purposes.

The gross notional amount of all currency exchange rate derivative instruments outstanding at October 25, 2019 and April 26, 2019 was $10.9 billion and $11.1 billion, respectively. At October 25, 2019, these contracts were in a net unrealized gain position of $284 million. A sensitivity analysis of changes in the fair value of all currency exchange rate derivative contracts at October 25, 2019 indicates that, if the U.S. dollar uniformly strengthened/weakened by 10 percent against all currencies, the fair value of these contracts would increase/decrease by approximately $942 million. Any gains and losses on the fair value of derivative contracts would generally be offset by gains and losses on the underlying transactions. These offsetting gains and losses are not reflected in the above analysis.

In the second quarter of fiscal year 2019, we began accounting for our operations in Argentina as highly inflationary, as the prior three-year cumulative inflation rate exceeded 100 percent. The change did not have a material impact on our results for the three or six months ended October 25, 2019.

INTEREST RATE RISK

We are subject to interest rate risk on our short-term investments and our borrowings. We manage interest rate risk in the aggregate, while focusing on our immediate and intermediate liquidity needs. Our debt portfolio at October 25, 2019 was comprised of debt predominately denominated in U.S. dollars and Euros, of which substantially all is fixed rate debt. We are also exposed to interest rate changes affecting our investments in interest rate sensitive instruments, which include our marketable debt securities.

A sensitivity analysis of the impact on our interest rate-sensitive financial instruments of a hypothetical 10 basis point change in interest rates, compared to interest rates at October 25, 2019, indicates that the fair value of these instruments would correspondingly change by $33 million.

For a discussion of current market conditions and the impact on our financial condition and results of operations, please see the “Liquidity” section of the current period's Management's Discussion and Analysis. For additional discussion of market risk, refer to Notes 6 and 8 to the current period's consolidated financial statements.

Item 4. Controls and Procedures

EVALUATION OF DISCLOSURE CONTROLS AND PROCEDURES

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act)) and changes in the Company's internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) as of the end of the period covered by this report. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of the period covered by this quarterly report, our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act) are effective.

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

The Company is deploying an enterprise resource planning (ERP) software program, SAP, to the Minimally Invasive Therapies Group. Although no specific implementation activity or related changes in internal controls occurred during the period covered by this Quarterly Report on Form 10-Q, the system deployment will continue with projected completion in fiscal year 2020. There have been no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) under the Exchange Act) during the period covered by this Quarterly Report on Form 10-Q 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

A discussion of the Company's policies with respect to legal proceedings is included in the management's discussion and analysis, and our legal proceedings and other loss contingencies are described in Note 17 to the current period's consolidated financial statements.

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

Issuer Purchases of Equity Securities

The following table provides information about the shares repurchased by the Company during the second quarter of fiscal year 2020:

Fiscal Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as a Part of Publicly Announced Program [1]	Maximum Approximate Dollar Value of Shares that may yet be Purchased Under the Program [1]
7/27/2019 - 8/23/2019	2,227,358	$ 103.35	2,227,358	$ 6,620,476,770
8/24/2019 - 9/27/2019	2,049,917	108.74	2,049,917	6,397,579,042
9/28/2019 - 10/25/2019	925,840	107.03	925,840	6,298,488,003
Total	5,203,115	$ 106.12	5,203,115	$ 6,298,488,003

(1) In June 2017, the Company's Board of Directors authorized the repurchase of $5.0 billion of the Company's ordinary shares. In March 2019, the Company's Board of Directors authorized an incremental $6.0 billion for repurchase of the Company's ordinary shares. There is no specific time-period associated with these repurchase authorizations.

Item 6. Exhibits

(a) Exhibits

10.1	Office of Chairman and Chief Executive Officer Letter Agreement
10.2	Executive Chairman Offer Letter Agreement
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.SCH	Inline XBRL Schema Document.
101.CAL	Inline XBRL Calculation Linkbase Document.
101.DEF	Inline XBRL Definition Linkbase Document.
101.LAB	Inline XBRL Label Linkbase Document.
101.PRE	Inline XBRL Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

MEDTRONIC PUBLIC LIMITED COMPANY
(Registrant)

Date: December 3, 2019

/s/ Omar Ishrak
Omar Ishrak
Chairman and Chief Executive Officer

Date: December 3, 2019

/s/ Karen L. Parkhill
Karen L. Parkhill
Executive Vice President and
Chief Financial Officer

Medtronic

Board of Directors **Exhibit 10.2**

August 23, 2019

Omar Ishrak

2309 Lake of The Isles Parkway East
Minneapolis, MN 55405

Dear Omar,

It is with great pleasure that I extend this Offer Letter for appointment as Executive Chairman (herein called "Offer Letter").

1. **Title**
   Executive Chairman
   In this role you will continue to report to the Board of Directors.

2. **Employment Location**
   Your employment with Medtronic will continue to be located at Medtronic's Operating Headquarters in the Twin Cities, Minnesota, and subject to business travel appropriate for your duties and responsibilities.

3. **Board Membership**
   You will continue to be a member of Medtronic's Board of Directors (the "Board") after your Start Date as Executive Chairman.

4. **Employment Start Date**
   Your employment as Executive Chairman will commence on April 27, 2020 (herein called "Start Date").

5. **Base Salary**
   Your annualized base salary will be $1,000,000 US Dollars (USD), less applicable withholdings and deductions, commencing on the first day of the pay period for your Start Date (herein called "Salary Start Date"), and paid in accordance with Medtronic's standard U.S. payroll practices.

6. **Medtronic Incentive Plan ("MIP")**
   You will continue to be eligible to participate in MIP for Fiscal Year 2020. Your target payout continues to equal 175% of your annual base salary. Information about Fiscal Year 2021 MIP will be provided following the June 2020 Board of Director meeting.

7. **Annual Long-Term Incentive Plan ("LTIP")**
   Your Medtronic LTIP grant for Fiscal Year 2020, granted on July 29, 2019, will remain unchanged. Information about your Fiscal Year 2021 LTIP will be provided following the June 2020 Board of Director meeting.

8. **Employee Health and Welfare Benefits**
   You will continue to be eligible for the same benefits as all other U.S. employees of Medtronic, including any benefits commensurate with your job level.

9. **Business Allowance and Other Perquisites**
   In order to provide remuneration for business use of your personal automobile, financial planning services, and other personal, job related expenses; you will continue to be provided with an annual allowance of $40,000 (paid bi-weekly). Additionally, you will continue to have access to Medtronic's corporate jet, following the policies that have been established for its use.

10. **Deferred Compensation Plan**
    You will be eligible to participate in the next calendar year phase of Medtronic's Capital Accumulation Plan ("CAP"), subject to the terms of the CAP, which provides for the opportunity to defer a portion of calendar year 2020 compensation. If desired, you may enroll in the 2020 CAP during the annual enrollment period held in November 2019.

11. **Stock Ownership Policy**
    Medtronic's policy requires you to maintain Medtronic stock equal to six (6) times annual salary. Unless noted otherwise by an equity grant agreement, you must retain 75% of the after-tax shares following settlement of equity compensation awards, including stock option exercises and restricted stock vesting, until the stock ownership requirement is met.

12. **Employee Agreement**
    The compensation and benefits provided in this Offer Letter are contingent on you signing the Medtronic Employee Agreement, which specifies certain employment terms and conditions. That agreement is provided to you with this Offer Letter.

13. **Other Terms and Conditions of Employment**
    All other terms and conditions of employment not specifically mentioned in this Offer Letter shall remain unchanged and shall continue to apply to your role as Executive Chairman.

Omar, I am pleased to extend this Offer Letter for your appointment as Executive Chairman on April 27, 2020. Please review and direct any questions to Carol Surface, Chief Human Resources Officer. To accept, please sign and date below, and return the two original documents to Carol Surface.

Best regards,

Scott Donnelly,
Lead Director
Medtronic Board of Directors

I, **Omar Ishrak**, accept this Offer Letter as outlined above.

_____ _____
Signature Date

Medtronic

Board of Directors **Exhibit 10.1**

Medtronic
Office of Chairman and Chief Executive Officer

August 26, 2019

Geoff Martha
2118 Shadywood Rd
Wayzata, MN 55391

Dear Geoff,

It is with great pleasure that I extend this Offer Letter for Appointment as President of Medtronic (herein called "Offer Letter"). I am also pleased to let you know of the Board of Director's intent to appoint you Chief Executive Officer effective April 27, 2020.

1. **Title**
   President, Medtronic
   In this role, you will continue to report to me. Details about your appointment as Chief Executive Officer will be provided separately.

2. **Employment Location**
   Your employment with Medtronic will continue to be located at Medtronic's Operating Headquarters in the Twin Cities, Minnesota, and subject to business travel appropriate for your duties and responsibilities.

3. **Employment Start Date**
   Your employment as President of Medtronic will commence on November 1, 2019 (herein called "Start Date"). Your employment as Chief Executive officer is expected to start effective April 27, 2020.

4. **Board Membership**
   I am pleased to inform you that, in connection with your new position as President, Medtronic's Board of Directors (the "Board") has voted to appoint you as a director effective on your November 1, 2019 Start Date. Thereafter, during your employment with the Company, the Board may annually nominate you for re-election as a member of the Board in accordance with the Company's Principles of Corporate Governance.
5. **Base Salary**
   Your annual base salary will be $1,100,000 US Dollars (USD), less applicable withholdings and deductions, commencing upon the first day of the pay period for your Start Date (herein called

"Salary Start Date"), which is October 26, 2019, and paid in accordance with Medtronic's standard U.S. payroll practices.

6. **Medtronic Incentive Plan ("MIP")**
You will continue to be eligible to participate in MIP for Fiscal Year 2020. Your participation in your current plan as Executive Vice President and President, Restorative Therapies Group, with a target payout equal to 100% of your base salary will end on October 25, 2019 and the associated payout after fiscal 2020 year-end will be prorated for the employment time in your current role.

   Participation in your new plan will begin on your Salary Start Date with a target payout equal to 150% of your annual base salary effective on the Salary Start Date. The associated payout after fiscal 2020 year-end will be prorated for the time in your new role. The payout for your new plan as President of Medtronic will continue to be based 100% on the performance of Medtronic.

7. **Annual Long-Term Incentive Plan ("LTIP")**
You will continue to be eligible to participate in Medtronic's LTIP beginning with Fiscal Year 2020. The annualized total target grant date value of your LTIP will be increased from $3,800,000 to $10,000,000 and is comprised of the following, equally weighted three components:

   a. ***Annual Long-Term Performance Plan*** **("LTPP")**
   LTPP is granted annually and has a three-fiscal year performance period after which the incentive is paid in cash based on Medtronic's performance against the long-term performance plan's goals and paid in accordance with the terms and conditions of the plan. All terms and conditions of LTPP awards will be described in the incentive program document. LTPP awards is subject to approval by the Board.

   b. Annual Nonqualified Stock Option Grant
   Stock options vest 25% per year beginning on the one-year anniversary of the date of Medtronic's annual grants (July 29, 2019 for FY2020). All terms and conditions of the stock option awards will be described in the stock option agreements that are delivered to you following the grant date. Stock option awards are subject to approval by the Board.

   c. Restricted Stock Unit Grant
   The restricted stock units vest 100% on the 3 rd anniversary of the date of Medtronic's annual grants (July 29, 2019 for FY2020). Vesting of restricted stock unit awards is contingent on a minimum company performance threshold being achieved. The performance threshold set for Fiscal Year 2020 is a 3% Cumulative Compound Annual Growth Rate for Diluted Earnings Per Share measured for FY2020-FY2022. All terms and conditions of restricted stock unit awards will be described in the restricted stock unit agreement provided following the grant date. Restricted stock unit awards are subject to approval by the Board.

   On October 28, 2019, you will receive an additional LTIP grant of $3,100,000, which will be divided equally between LTPP, Stock Options, and Restricted Stock Units. Shown in the table below, the $3,100,000 grant plus the $3,800,000 grant made on July 29, 2019 will bring your total LTIP grant for FY2020 to $6,900,000, which provides a one-half year proration for your role as Executive Vice President and President, Restorative Therapies Group, and a one-half year proration for your role as President of Medtronic.

EVP & President RTG LTIP Annualized (Granted 7/29/19)	EVP Half-Year Proration **A.**	President, Medtronic LTIP Annualized	President Half-Year Proration **B.**	Total FY2020 LTIP Grant **A + B**	Additional Grant on 10/28/19
$3,800,000	$1,900,000	$10,000,000	$5,000,000	$6,900,000	$3,100,000

The vesting schedule for the additional grant will match the grant made on July 29, 2019.

8. **Fiscal Year 2021 Compensation**
   The compensation effective for your appointment as President, Medtronic, will remain in effect following your appointment as Chief Executive Officer on April 27, 2020. The Board of Directors will review any potential updates to your compensation for Fiscal Year 2021 at its June 2020 meeting.

9. **Employee Health and Welfare Benefits**
   You will be offered the same benefits as all other U.S. employees of Medtronic, including any benefits commensurate with your job level, upon meeting eligibility requirements as provided for in the Plan documents.

10. **Business Allowance and Other Perquisites**
    In order to provide remuneration for business use of your personal automobile, financial planning services, and other personal, job related expenses; you will be provided with an annual allowance of $40,000 (paid bi-weekly). Additionally, you will have access to Medtronic's corporate jet, following the policies that have been established for its use.

11. **Deferred Compensation Plan**
    You will be eligible to participate in the next calendar year phase of Medtronic's Capital Accumulation Plan ("CAP"), subject to the terms of the CAP, which provides for the opportunity to defer a portion of calendar year 2020 compensation. If desired, you may enroll in the 2020 CAP during the annual enrollment period held in November 2019.

12. **Termination**
    Your employment with Medtronic is at will and may be terminated at any time by Medtronic or by you. If your employment is terminated by the Company without Cause and contingent upon your signing and complying with a severance and release agreement, the Company shall provide you with benefits consistent with the Company's severance policies and practices and with market practice for the President of Medtronic role. Cause is defined in the Company's 2013 Stock Award and Incentive Plan document.

13. **Change in Control**
    You will be eligible for Medtronic's Section 16 Officer Change in Control Policy.

14. **Employee Agreement**
    The compensation and benefits provided in this Offer are contingent on you signing the Medtronic Employee Agreement, which specifies certain employment terms and conditions. That agreement is provided to you with this Offer Letter.

15. **Stock Ownership Policy**
    The current stock ownership policy will continue to apply, which is to maintain Medtronic stock equal to three (3) times annual salary. Unless noted otherwise by an equity grant agreement, you must retain 50% of the after-tax shares following settlement of equity compensation awards, including stock option exercises and restricted stock vesting, until the stock ownership requirement is met.

Geoff, I am pleased to extend this Offer Letter to serve as the new President of Medtronic. Please review and direct any questions to Carol Surface, Chief Human Resources Officer. To accept this Offer Letter, please sign and date below, sign the Medtronic Employee Agreement included with this Offer Letter, and return the two original documents to Carol Surface.

Best regards,

Omar Ishrak,
Chairman and Chief Executive Officer

I, **Geoff Martha**, accept this Offer Letter as outlined above.

_____ _____
Signature Date

EXHIBIT 31.1

Certification of Chief Executive Officer
Pursuant to Section 302 of the
Sarbanes-Oxley Act of 2002

I, Omar Ishrak, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Medtronic Public Limited Company;

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

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

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

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

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

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

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

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

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

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

Date: December 2, 2019

/s/ Omar Ishrak

Omar Ishrak
Chairman and Chief Executive Officer

EXHIBIT 31.2

Certification of Chief Financial Officer
Pursuant to Section 302 of the
Sarbanes-Oxley Act of 2002

I, Karen L. Parkhill, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Medtronic Public Limited Company;

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

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

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

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

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

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

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

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

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

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

Date: December 3, 2019

/s/ Karen L. Parkhill

Karen L. Parkhill
Executive Vice President and
Chief Financial Officer

EXHIBIT 32.1

Certification of Chief Executive Officer
Pursuant to Section 906 of the
Sarbanes-Oxley Act of 2002

In connection with this quarterly report on Form 10-Q of Medtronic Public Limited Company for the quarter ended October 25, 2019, the undersigned hereby certifies, in his capacity as Chief Executive Officer of Medtronic Public Limited Company, for purposes of 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in this report fairly presents, in all material respects, the financial condition and results of operations of Medtronic Public Limited Company.

Date: December 3, 2019

/s/ Omar Ishrak

Omar Ishrak
Chairman and Chief Executive Officer

EXHIBIT 32.2

Certification of Chief Financial Officer
Pursuant to Section 906 of the
Sarbanes-Oxley Act of 2002

In connection with this quarterly report on Form 10-Q of Medtronic Public Limited Company for the quarter ended October 25, 2019, the undersigned hereby certifies, in her capacity as Chief Financial Officer of Medtronic Public Limited Company, for purposes of 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in this report fairly presents, in all material respects, the financial condition and results of operations of Medtronic Public Limited Company.

Date: December 3, 2019

/s/ Karen L. Parkhill

Karen L. Parkhill
Executive Vice President and
Chief Financial Officer