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

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FORM 10-K

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Medtronic plc

(Exact name of registrant as specified in its charter)

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

20 On Hatch, Lower Hatch Street
Dublin 2, Ireland
(Address of principal executive offices)
+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	N
Ordinary shares, par value $0.0001 per share	MDT	
0.00% Senior Notes due 2022	MDT/22B	
0.375% Senior Notes due 2023	MDT/23B	
0.000% Senior Notes due 2023	MDT/23C	
0.25% Senior Notes due 2025	MDT/25	
0.000% Senior Notes due 2025	MDT/25A	
1.125% Senior Notes due 2027	MDT/27	
0.375% Senior Notes due 2028	MDT/28	
1.625% Senior Notes due 2031	MDT/31	
1.00% Senior Notes due 2031	MDT/31A	
0.750% Senior Notes due 2032	MDT/32	
2.250% Senior Notes due 2039	MDT/39A	
1.50% Senior Notes due 2039	MDT/39B	
1.375% Senior Notes due 2040	MDT/40A	
1.75% Senior Notes due 2049	MDT/49	
1.625% Senior Notes due 2050	MDT/50	

Securities registered pursuant to section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act. Yes ☐ No ☒

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

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

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes ☒ No ☐

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

Aggregate market value of voting and non-voting common equity of Medtronic plc held by non-affiliates of the registrant as of October 29, 2021, based on the closing price of $119.86 as reported on the New York Stock Exchange: approximately $161.2 billion. Number of Ordinary Shares outstanding on June 20, 2022: 1,328,709,310

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for its 2022 Annual General Meeting are incorporated by reference into Part III hereof.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, and other written reports of Medtronic plc, organized under the laws of Ireland (together with its consolidated subsidiaries, Medtronic, the Company, or we, us, or our), 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 Annual Report on Form 10-K, 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, the potential or anticipated direct or indirect impact of COVID-19 ("COVID-19" or the "pandemic") on our business, results of operations and/or financial condition, restructuring and cost-saving initiatives, intellectual property rights, litigation and tax matters, governmental proceedings and 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 Annual 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 United States (U.S.) Food and Drug Administration (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, including the timing of regulatory approvals 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 healthcare 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 governmental proceedings and 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, results of operations, financial condition, and cash flows. These forward-looking statements speak only as of the date of this Annual Report on Form 10-K and are subject to a number of risks, uncertainties and assumptions described in the "Risk Factors" section and elsewhere in this 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" within "Item 1. Business" and "Item 1A. Risk Factors" in this Annual Report on Form 10-K, as well as those related to:

- competition in the medical device industry;
- delays in regulatory approvals;
- the global COVID-19 pandemic, including new COVID-19 variants that may emerge, as well as potential impacts of the pandemic on healthcare staffing levels;

- reduction or interruption in our supply;
- failure to complete or achieve the intended benefits of acquisitions or divestitures;
- adverse regulatory action;
- laws and governmental regulations;
- litigation results;
- quality problems;
- healthcare policy changes;
- cybersecurity incidents;
- international operations, including the impact of armed conflicts;

- self-insurance;
- commercial insurance;
- changes in applicable tax rates;
- positions taken by taxing authorities;
- decreasing selling prices and pricing pressure;
- liquidity shortfalls;
- fluctuations in currency exchange rates;
- inflation; 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.

PART I

Item 1. Business

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Medtronic plc, headquartered in Dublin, Ireland, is the leading global healthcare technology company. Medtronic was founded in 1949 and today serves healthcare systems, physicians, clinicians, and patients in more than 150 countries worldwide. We remain committed to a mission written by our founder in 1960 that directs us “to contribute to human welfare by the application of biomedical engineering in the research, design, manufacture, and sale of products to alleviate pain, restore health, and extend life.”

Our Mission — to alleviate pain, restore health, and extend life — empowers insight-driven care and better outcomes for our world. We remain committed to being recognized as a company of dedication, honesty, integrity, and service. Building on this strong foundation, we are embracing our role as a healthcare technology leader and evolving our business strategy in four key areas:

- Leveraging our pipeline to win market share: The combination of our good end markets, recent product launches and robust pipeline is expected to continue accelerating our growth over both the near-and long-term. We aim to bring inventive and disruptive technology to large healthcare opportunities which enables us to better meet patient needs. Patients around the world deserve access to our life-saving products, and we are driven to use our local presence and scale to increase the adoption of our products and services in markets around the globe.
- Serving more patients by accelerating innovation driven growth and delivering shareholder value: We listen to our patients and customers to better understand the challenges they face. From the patient journey, to creating agile partnerships that produce novel solutions, to making it easier for our customers to deploy our therapies — everything we do is anchored in deep insight, and creates simpler, superior experiences.
- Creating and disrupting markets with our technology: We are confident in our ability to maximize new technology, artificial intelligence (AI), and data and analytics to tailor therapies in real-time, facilitating remote monitoring and care delivery that conveniently manages conditions, and creates new standards of care.
- Empowering our operating units to be more nimble and more competitive: Our operating model, which was effective February 2021, simplified our organization to accelerate decision making, improve commercial execution, and more effectively leverage the scale of our company.

We have four operating and reportable segments that primarily develop, manufacture, distribute, and sell device-based medical therapies and services: the Cardiovascular Portfolio, the Medical Surgical Portfolio, the Neuroscience Portfolio, and the Diabetes Operating Unit. For more information regarding our segments, please see Note 19 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

CARDIOVASCULAR PORTFOLIO

The Cardiovascular Portfolio is made up of the Cardiac Rhythm & Heart Failure, Structural Heart & Aortic, and Coronary & Peripheral Vascular divisions. The primary medical specialists who use our Cardiovascular products include electrophysiologists, implanting cardiologists, heart failure specialists, cardiovascular, cardiothoracic, and vascular surgeons, and interventional cardiologists and radiologists.

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Cardiac Rhythm & Heart Failure

Our Cardiac Rhythm & Heart Failure division includes the following Operating Units: Cardiac Rhythm Management; Cardiac Ablation Solutions; and Cardiovascular Diagnostics and Services. The division develops, manufactures, and markets products for the diagnosis, treatment, and management of heart rhythm disorders and heart failure. Our products include implantable devices, leads and delivery systems, products for the treatment of atrial fibrillation (AF), products designed to reduce surgical site infections, information systems for the management of patients with Cardiac Rhythm & Heart Failure devices, and an integrated health solutions business. Principal products and services offered include:

- Implantable cardiac pacemakers including the Azure MRI SureScan, Adapta, Advisa MRI SureScan, and the Micra Transcatheter Pacing System. The Micra Transcatheter Pacing System, which is leadless and does not have a subcutaneous device pocket like a conventional pacemaker, includes the Micra VR device and the Micra AV device. Both of these pacemakers treats patients with atrioventricular block.
- Implantable cardioverter defibrillators (ICDs), including the Visia AF MRI SureScan, Evera MRI SureScan, Primo MRI, and the Cobalt and Crome portfolio of BlueSync-enabled ICDs, as well as defibrillator leads, including the Sprint Quattro Secure lead.
- Implantable cardiac resynchronization therapy devices (CRT-Ds and CRT-Ps) including the Claria/Amplia/Compia family of MRI Quad CRT-D SureScan systems and the Cobalt and Crome portfolio of BlueSync-enabled CRT-Ds, as well as the Percepta/Serena/Solara family of MRI Quad CRT-P SureScan systems.
- Cardiac ablation products including the Arctic Front Advanced Cardiac cryoablation System, designed for pulmonary vein isolation in the treatment of patients with paroxysmal and persistent AF, as well as the DiamondTemp Ablation system, which is the first U.S. FDA-approved, temperature controlled, irrigated radiofrequency ablation system.
- Insertable cardiac monitoring systems, including the Reveal LINQ and LINQ II. These devices are for patients who experience infrequent symptoms such as dizziness, palpitation, syncope (fainting) and chest pain, which may indicate a cardiac arrhythmia that requires long-term monitoring or ongoing management. The LINQ II device offers improved device longevity, unmatched accuracy and a streamlined workflow with AccuRhythm AI algorithms to reduce clinic workload and data burden.
- TYRX products, including the Cardiac and Neuro Absorbable Antibacterial Envelopes, which are designed to stabilize electronic implantable devices and help prevent infection associated with implantable pacemakers, and defibrillators.
- Remote monitoring services and patient-centered software to enable efficient care coordination and specialized telehealth nurse support as well as services related to hospital operational efficiency.
- Medtronic stopped the distribution and sale of the HVAD System on June 3, 2021. We continue a support program for patients with HVAD devices, and for caregivers and healthcare professionals who participate in their care.

Structural Heart & Aortic

Our Structural Heart & Aortic division includes the following Operating Units: Structural Heart & Aortic and Cardiac Surgery. The division includes therapies to treat heart valve disorders and aortic disease. Our devices include products for the repair and replacement of heart valves, perfusion systems, positioning and stabilization systems for beating heart revascularization surgery, surgical ablation products, and comprehensive line of products and therapies to treat aortic disease, such as aneurysms, dissections, and transections. Principal products offered include:

- CoreValve family of aortic valves, including the Evolut R, Evolut PRO, and Evolut PRO+ systems for transcatheter aortic valve replacement.
- Surgical valve replacement and repair products for damaged or diseased heart valves, including both tissue and mechanical valves; blood-handling products that form a circulatory support system to maintain and monitor blood circulation and coagulation status, oxygen supply, and body temperature during arrested heart surgery; and surgical ablation systems and positioning and stabilization technologies.
- Endovascular stent grafts and accessories, including the Endurant II Stent Graft System for the treatment of abdominal aortic aneurysms, the Valiant Captivia Thoracic Stent Graft System for thoracic endovascular aortic repair procedures, and the Heli-FX EndoAnchor System.
- Transcatheter Pulmonary Valves, including Harmony TPV and Delivery Catheter System and Melody TPV/ Ensemble II Delivery System.

Coronary & Peripheral Vascular

Our Coronary & Peripheral Vascular division includes the following Operating Units: Coronary & Renal Denervation and Peripheral Vascular Health. The division is comprised of a comprehensive line of products and therapies to treat coronary artery disease as well as peripheral vascular disease and venous disease. Our products include coronary stents and related delivery systems, including a broad line of balloon angioplasty catheters, guide catheters, guide wires, diagnostic catheters, and accessories, peripheral drug coated balloons, stent and angioplasty systems, carotid embolic protection systems for the treatment of vascular disease outside the heart, and products for superficial and deep venous disease. Principal products offered include:

- Percutaneous Coronary Intervention products including our Resolute Onyx drug-eluting stent, Euphora balloons, and Launcher guide catheters.
- Percutaneous angioplasty balloons including the IN.PACT family of drug-coated balloons, vascular stents including the Abre venous stent, directional atherectomy products including the HawkOne directional atherectomy system, and other procedure support tools.
- Products to treat superficial venous diseases in the lower extremities including the ClosureFast radiofrequency ablation system and the VenaSeal Closure System.

MEDICAL SURGICAL PORTFOLIO

The Medical Surgical Portfolio is made up of the Surgical Innovations and Respiratory, Gastrointestinal, & Renal divisions. Products and therapies of this group are used primarily by healthcare systems, physicians' offices, ambulatory care centers, and other alternate site healthcare providers. While less frequent, some products and therapies are also used in home settings.

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Surgical Innovations

Our Surgical Innovations division includes the following Operating Units: Surgical Innovations and Surgical Robotics. The division develops, manufactures, and markets advanced and general surgical products, including surgical stapling devices, vessel sealing instruments, wound closure, electrosurgery products, surgical artificial intelligence (AI) and robotic-assisted surgery products, hernia mechanical devices, mesh implants, gynecology products, lung health and visualization, and therapies to treat diseases and conditions that are typically, but not exclusively, addressed by surgeons. Principal products and services offered include:

- Advanced stapling and energy products, including the Tri-Staple technology platform for endoscopic stapling, including the Endo GIA reloads and reinforced reloads with Tri-Staple Technology and the Endo GIA ultra universal stapler; the Signia Powered Stapling System; the LigaSure Exact Dissector and L-Hook Laparoscopic Sealer/Divider; and the Sonicision curved jaw cordless ultrasonic dissection system.
- Electrosurgical hardware and instruments, including the Valleylab FT10 energy platform, and the Force TriVerse electrosurgical pencils.
- Robotic and digital surgery technologies including, the Hugo robotic-assisted surgery (RAS) system designed for a broad range of soft-tissue procedures and Touch Surgery Enterprise, the first AI-powered surgical video management solution for the operating room.
- Products designed for the treatment of hernias, including the AbsorbaTack absorbable mesh fixation device for hernia repair, the Symbotex composite mesh for surgical laparoscopic and open ventral hernia repair, and Parietex ProGrip, a self-gripping, biocompatible solution for inguinal hernias.

Respiratory, Gastrointestinal, & Renal

Our Respiratory, Gastrointestinal, & Renal division includes the following Operating Units: Respiratory Interventions, Patient Monitoring, Gastrointestinal, and Renal Care Solutions. The division develops, manufactures, and markets products in the emerging fields of minimally invasive gastrointestinal and hepatologic diagnostics and therapies, patient monitoring, respiratory interventions including airway management and ventilation therapies, and for the treatment of renal disease. Principal products and services offered include:

- Gastrointestinal and endoscopy products, including the PillCam capsule endoscopy systems, the Bravo calibration-free reflux testing systems, the EndoFLIP imaging systems, the Emprint ablation system with Thermosphere Technology, the ManoScan Bravo system, the Barrx platform through ablation with the Barrx 360 Express catheter, the GI Genius intelligent endoscopy module, the Cool-tip radiofrequency ablation system, and the HET Bipolar System.
- Airway, ventilation, and inhalation therapies products, including the Puritan Bennett 980 and 840 ventilators, the Newport e360 and HT70 ventilators, the TaperGuard Evac tube, Shiley Endotracheal Tubes, Shiley Tracheostomy Tubes, McGRATH MAC video laryngoscopes, and DAR Filters.
- Products focused on patient monitoring, including Nellcor pulse oximetry monitors and sensors, Microstream capnography monitors, Bispectral Index (BIS) brain monitoring technology, INVOS cerebral/somatic oximetry systems, Vital Sync remote monitoring, and WarmTouch convective warming.
- Products providing solutions for the treatment of renal disease, including Palindrome, Mahurkar and Mahurkar Elite Dialysis Access Catheters for renal therapy, Argyle peritoneal dialysis catheters, Carpediem dialysis machines for pediatric patients,

Amplya dialysis machines for acute patients, and other products designed for use in treatment of both acute and chronic renal failure conditions.

NEUROSCIENCE PORTFOLIO

The Neuroscience Portfolio is made up of the Cranial & Spinal Technologies, Specialty Therapies, and Neuromodulation divisions. The primary medical specialists who use the products of this group include spinal surgeons, neurosurgeons, neurologists, pain management specialists, anesthesiologists, orthopedic surgeons, urologists, urogynecologists, interventional radiologists, and ear, nose, and throat specialists.

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Cranial & Spinal Technologies

Our Cranial & Spinal Technologies division and Operating Unit develops, manufactures, and markets an integrated portfolio of devices and therapies for surgical technologies designed to improve the precision and workflow of neuro procedures, and a comprehensive line of medical devices and implants used in the treatment of the spine and musculoskeletal system. The division also provides biologic solutions for the orthopedic and dental markets and offers unique and highly differentiated imaging, navigation, power instruments, nerve monitoring, and robotic guidance systems used in spine and cranial procedures. Principal products and services offered include:

- Neurosurgery products, including platform technologies, implant therapies, and advanced energy products. This includes our StealthStation S8 Navigation System, Stealth Autoguide cranial robotic guidance platform, O-arm Imaging System, Mazor X robotic guidance systems used in robot-assisted spine procedures, and our Midas Rex Surgical Drills, including our MR8 high-speed drill system. This group of products also includes our cerebrospinal fluid (CSF) Management Portfolio, Visualase MRI-guided laser ablation, Aquamantys Sealers, and our PEAK Surgery System used in tissue dissection that consists of the PEAK PlasmaBlade and PULSAR Generator.

- Products to treat a variety of conditions affecting the spine, including degenerative disc disease, spinal deformity, spinal tumors, fractures of the spine, and stenosis. These products include our CD HORIZON SOLERA system, T2 STRATOSPHERE, and CLYDESDALE interbody spacers. These products also include titanium interbody implants and surface technologies, such as our Adaptix interbody system and the Titan Interbody Fusion Device with NanoLOCK technology.

- Products that facilitate less invasive thoracolumbar surgeries, including the CD HORIZON SOLERA VOYAGER Percutaneous Fixation System.

- Products to treat conditions in the cervical region of the spine, including the ZEVO Anterior Cervical Plate System, the INFINITY OCT System, and PRESTIGE LP Cervical Artificial Discs.

- Biologic solutions products, including our INFUSE Bone Graft (InductOs in the European Union (E.U.)), which contains a recombinant human bone morphogenetic protein, rhBMP-2, for certain spinal, trauma, and oral maxillofacial applications.

- Demineralized Bone Matrix products, including MAGNIFUSE, GRAFTON/GRAFTON PLUS, and the MASTERGRAFT family of synthetic bone graft products – Matrix, Putty, and Granules.

Specialty Therapies

Our Specialty Therapies division includes the following Operating Units: Neurovascular; Ear, Nose, and Throat (ENT); and Pelvic Health. The division develops, manufactures, and markets products and therapies to treat diseases of ENT, patients afflicted with acute ischemic and hemorrhagic stroke, and help control the systems of overactive bladder, (non-obstructive) urinary retention, and chronic fecal incontinence. Principal products and services offered include:

- Pelvic health products, including our InterStim X, InterStim Micro, and InterStim II neurostimulators, and InterStim SureScan MRI leads, to help control the systems of overactive bladder, (non-obstructive) urinary retention, and chronic fecal incontinence. Our NURO System delivers Percutaneous Tibial Neuromodulation therapy to treat overactive bladder and associated symptoms of urinary urgency, urinary frequency, and urge incontinence.

- ENT products, including the Straightshot M5 Microdebrider Handpiece, the IPC system, NIM Nerve Monitoring Systems, FUSION Compact and StealthStation ENT Navigation System, as well as products for hearing restoration and obstructive sleep apnea.
- Neurovascular products to treat diseases of the vasculature in and around the brain. This includes coils, neurovascular stent retrievers, and flow diversion products, as well as access and delivery products to support procedures. Products also include the Pipeline Flex Embolization Devices, endovascular treatments for large or giant wide-necked brain aneurysms, the portfolio of Solitaire revascularization devices for treatment of acute ischemic stroke, the Riptide Aspiration System, the Onyx Liquid Embolic System, and a portfolio of associated access catheters including our React aspiration catheters also for the treatment of acute ischemic stroke.

Neuromodulation

Our Neuromodulation division and Operating Unit develops, manufactures, and markets spinal cord stimulation systems, implantable drug infusion systems for chronic pain, as well as interventional products. Principal products and services offered include:

- Spinal cord stimulation products, including rechargeable and non-rechargeable devices and a large selection of leads used to treat chronic back and/or limb pain and chronic pain resulting from diabetic peripheral neuropathy. This includes the Intellis Spinal Cord Stimulation System, with AdaptiveStim and SureScan MRI Technology, DTM (differential target multiplexed) proprietary waveform, the Evolve workflow algorithm, and Snapshot reporting. Products also include our RestoreSensor (rechargeable) SureScan MRI neurostimulation system with its proprietary AdaptiveStim technology.
- Brain modulation products, including those for the treatment of the disabling symptoms of Parkinson's disease, essential tremor, refractory epilepsy, severe, treatment-resistant obsessive-compulsive disorder (approved under a Humanitarian Device Exemption (HDE) in the U.S.), and chronic, intractable primary dystonia (approved under a HDE in the U.S.). Specifically, this includes our family of Activa Neurostimulators, including Activa SC (single-channel primary cell battery), Activa PC (dual channel primary cell battery), and Activa RC (dual channel rechargeable battery). This also includes our Percept PC Neurostimulator DBS system with BrainSense technology.
- Implantable drug infusion systems, including our SynchroMed II Implantable Infusion System, that deliver small quantities of drug directly into the intrathecal space surrounding the spinal cord.
- Interventional products, including the Kyphon Balloon, the Kyphon V, and Kyphon Assist systems and the OsteoCool RF Tumor ablation system.
- The Accurian nerve ablation system, which conducts radio frequency ablation of nerve tissues.

DIABETES OPERATING UNIT

The Diabetes Operating Unit develops, manufactures, and markets products and services for the management of Type 1 and Type 2 diabetes. The primary medical specialists who use and/or prescribe our Diabetes products are endocrinologists and primary care physicians.

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Principal products and services offered include:

- Insulin pumps and consumables, including the MiniMed 770G system and MiniMed 780G system, which are all powered by SmartGuard technology. The MiniMed 770G system provides smartphone and Bluetooth connectivity, continuously delivers background insulin, monitors sugar levels, and an expanded age indication to ages two and up. The MiniMed 780G enhances the insulin pump systems by including automatic correction boluses and an adjustable glucose target down to 100 mg/dl.
- Continuous glucose monitoring (CGM) systems and sensors, including the Guardian Connect smart CGM system, the Guardian Sensor 3, and the Guardian Sensor 4, are products worn by patients capturing glucose data to reveal patterns and potential problems, such as hyperglycemic and hypoglycemic episodes.

- The InPen smart insulin pen system that combines a reusable Bluetooth-enabled insulin pen with an intuitive mobile app that helps users administer the appropriate insulin dose. The InPen application integrates with our CGM data to provide real-time CGM readings alongside insulin dose information.
- Consumables and supplies, including infusion sets.

HUMAN CAPITAL

Medtronic Workforce Overview

Medtronic's employees deliver on our Mission every day. We empower insight-driven care, experiences that put people first, and better outcomes for our world. In everything we do, we are engineering the extraordinary. We strive to be the employer of choice for the best and brightest global talent, where employees can grow and develop fulfilling careers. We aspire to create a truly inclusive, diverse, and equitable workplace that fosters innovation and creativity, and where every employee feels a sense of belonging and well-being. Medtronic has 95,000+ full-time employees, of which forty-four percent are based in the U.S. or Puerto Rico.

Inclusion, Diversity & Equity

We believe that improving health for people from all walks of life depends on our ability to unleash the creative power of our diverse global employees. By breaking down barriers to Inclusion, Diversity and Equity (ID&E), we open doors for everyone, driving progress and prosperity around the world. As of the end of fiscal year 2022, 38 percent of our U.S. workforce is ethnically diverse; women comprise 50 percent of our global workforce; and 42 percent of our manager and above employees are women. Additionally, Medtronic employee resource groups (ERGs) are employee-led affinity groups that provide career development and networking opportunities for members and strengthen ties between employees of many different backgrounds, cultures, and interests. In fiscal year 2022, there were 12 ERGs and Diversity Networks across 75 countries with more than 34,000 members.

Pay Equity

For fiscal year 2022, in the United States we have achieved 100% pay equity for gender for the third consecutive year and 100% pay equity for ethnically diverse employees. Globally we have achieved 99% pay equity for gender. We are actively working to close any remaining pay gaps by continuing to expand the annual pay equity analyses for each country we operate in.

Workforce Compensation

Our compensation framework is designed to celebrate the value and contributions of our employees. We are committed to transparent communications on compensation. Our competitive approach to compensation reflects industry benchmarks and local market standards. Our programs include annual and long-term incentives that provide the means to share in the Company's success. To attract the best leaders, we offer competitive benefits and cash and equity incentives. We reward high-performing employees with an ownership stake in the company through restricted stock, and all employees have the opportunity to purchase stock at a significant discount.

Learning & Development

The skills and dedication of our employees drive our business performance. Our comprehensive professional development programs empower our people to build rewarding careers and help us attract world-class talent. Our suite of professional development programs ensures that our employees, regardless of level, location, language or learning preferences, have access to opportunities to develop and grow. Our investment in employee development has contributed to more than 30 percent of our open roles being filled with internal employees.

In fiscal year 2022, we began our shift away from degree requirements to focus on skills-based certification for certain roles within Medtronic. Additionally, as members of the Multiple Pathways Initiative, we have used a skill – based approach to offering opportunities to expanded pools of external talent that have previously been held back due to lack of access to undergraduate education. Internally, employees can now participate through MAPS (Medtronic Advancement Pathways and Skill-building) in undergraduate courses from top-tier universities to enhance or obtain new skills, at no cost to the employee. Our change in approach has opened up opportunities for employees who have been otherwise restricted from career advancement due to degree requirements.

Employee Engagement and Culture

Through our organizational health survey, we gain valuable insight into the Medtronic employee experience and identify areas where we can improve in four key priority areas: 1) Employee Engagement, 2) Inclusion, 3) Innovation, and 4) Ethics. In our most recent survey ending in the fourth quarter of fiscal year 2022, more than 77 percent of our employees responded. Medtronic carefully reviews and implements actions based on employee feedback in order to partner and create an inclusive, innovative and supportive environment.

To enable our transformation to be the global healthcare technology leader, we introduced a reinvigorated and revived culture. The Medtronic Mindset builds on our core values of integrity, quality, inclusion and collaboration. It urges us to act boldly, compete to win, move with speed and decisiveness, foster belonging, and deliver results… the right way. Our renewed culture helps us meet the needs of our patients and customers, and ensures our Mission endures for many years to come.

Health & Safety

As a large, global employer, it is our responsibility to maintain a safe workplace and support the well-being of our employees. Throughout the COVID-19 pandemic, we have placed a high priority on employee health, providing comprehensive benefits, accommodations and resources to support our workforce through this challenging time. During fiscal year 2022, we offered on-site vaccinations to our employees, enabling a vaccination rate of nearly 90% for our U.S. and Puerto Rico – based workforce. To help limit exposure to the virus, we acted to ensure employees in business-critical functions who cannot work from home were protected, including those in research and development, quality, manufacturing, distribution, and sales. Personal protective equipment, increased sanitation, social distancing guidance, and facility updates (one-way hallways, cafeteria partitions and extra sinks) were provided to protect our employees.

Medtronic has a comprehensive approach to providing robust support for our employees and their families not only during the pandemic, but also in natural disasters, civil unrest and war, bereavement, and other challenging events. Along with other programs, the Medtronic Employee Assistance Program and the Medtronic Employee Emergency Assistance Fund have historically supported employees and their families when faced with difficult times by providing a variety of services such as mental health, safety, and financial resources and support at no cost. These programs have proven invaluable in navigating our employees through unique challenge, including in fiscal year 2022. The Medtronic Employee Emergency Assistance Fund is supported by donations from employees and the Medtronic Foundation, and over the last five years has provided over $6 million in grants to employees experiencing unexpected events creating a financial hardship.

For more information on Human Capital Management at Medtronic, please refer to our 2021 Integrated Performance Report[(1)] as well as Medtronic's 2021 Global Inclusion, Diversity and Equity Report[(1)] available on our company website.

CORPORATE SUSTAINABILITY GOALS

We see possibilities to further increase our positive impact in the world. We have identified three focus areas for our environmental, social, and governance (ESG) efforts to drive measurable impact on issues including: protecting our planet, accelerating access to healthcare technology, and advancing ID&E. In early fiscal year 2022, we set new performance targets across the following areas: Patient Safety & Product Quality; Inclusion, Diversity & Equity; Climate Stewardship; Product Stewardship; and Access & Innovation. More information about our ESG focus areas, including progress we have made to date toward achieving them, is included in our Integrated Performance Report.[(1)]

(1) The contents of our Integrated Performance Report and our Global Inclusion, Diversity, and Equity Report are referenced for general information only and are not incorporated by reference in the Form 10-K.

OTHER FACTORS IMPACTING OUR OPERATIONS

COVID-19 Pandemic

The global COVID-19 pandemic, together with the preventative and precautionary measures taken by businesses, communities, and governments, has impacted, and may continue to impact significant aspects of our Company and business, including future procedural volumes, supply constraints, healthcare staffing, worker absenteeism with our customers, suppliers, and in our own operations and field teams, and resulting impacts on demand for our products and therapies. See "Item 1A. Risk Factors" in this Annual Report on Form 10-K.

Research and Development

The markets in which we participate are subject to rapid technological advances. Constant improvement of existing products and introduction of new products is necessary to maintain market leadership. Our research and development (R&D) efforts are directed toward maintaining or achieving technological leadership in each of the markets we serve to help ensure that patients using our devices and therapies receive the most advanced and effective treatment possible. We remain committed to developing technological enhancements and new indications for existing products,

and less invasive and new technologies for new and emerging markets to address unmet patient needs. That commitment leads to our initiation and participation in hundreds of clinical trials each fiscal year as the demand for clinical and economic evidence remains high. Furthermore, our development activities are intended to help reduce patient care costs and the length of hospital stays in the future. We have not engaged in significant customer or government-sponsored research.

Our R&D activities include improving existing products and therapies, expanding their indications and applications for use, developing new therapies and procedures, and entering into arrangements with third parties to fund the development of certain technologies. We continue to focus on optimizing innovation, improving our R&D productivity, driving growth in emerging markets, generating clinical evidence, and assessing our R&D programs based on their ability to address unmet clinical needs, produce better patient outcomes, and create new standards of care.

Intellectual Property

We rely on a combination of patents, trademarks, tradenames, copyrights, trade secrets, and agreements (non-disclosure and non-competition agreements) to protect our business and proprietary technology. In addition, we have entered into exclusive and non-exclusive licenses relating to a wide array of third-party technologies. In the aggregate, these intellectual property assets and licenses are of material importance to our business; however, we believe that no single intellectual property asset or license is material in relation to any segment of our business or to our business as a whole.

We operate in an industry characterized by extensive patent litigation. Patent litigation may result in significant damage awards and injunctions that could prevent the manufacture and sale of affected products or result in significant royalty payments in order to continue selling the products. At any given time, we are involved as both a plaintiff and a defendant in a number of patent infringement actions, the outcomes of which may not be known for prolonged periods of time.

Sales and Distribution

We sell our medical devices and therapies through a combination of direct sales representatives and independent distributors globally. Additionally, a portion of the Company's revenue is generated from consignment inventory maintained at hospitals. Our medical supply products are used primarily in hospitals, surgical centers, and alternate care facilities, such as home care and long-term care facilities, and are marketed to materials managers, group purchasing organizations (GPOs) and integrated delivery networks (IDNs). We often negotiate with GPOs and IDNs, which enter into supply contracts for the benefit of their member facilities. Our four largest markets are the U.S., Western Europe, China, and Japan. Emerging markets are an area of increasing focus and opportunity, as we believe they remain under-penetrated.

Our marketing and sales strategy is focused on rapid, cost-effective delivery of high-quality products to a diverse group of customers worldwide. To achieve this objective, our marketing and sales teams are organized around physician specialties. This focus enables us to develop highly knowledgeable and dedicated sales representatives who are able to foster strong relationships with physicians and other customers and enhance our ability to cross-sell complementary products.

We are not dependent on any single customer for more than 10 percent of our total net sales.

Competition, Industry, and Cost Containment

We compete in both the therapeutic and diagnostic medical markets in more than 150 countries throughout the world. These markets are characterized by rapid change resulting from technological advances and scientific discoveries. Our product lines face a mix of competitors ranging from large manufacturers with multiple business lines to small manufacturers offering a limited selection of products. In addition, we face competition from providers of other medical therapies, such as pharmaceutical companies.

Major shifts in industry market share have occurred in connection with product problems, physician advisories, safety alerts, results of clinical trials to support superiority claims, and publications about our products, reflecting the importance of product quality, product efficacy and quality systems in the medical device industry. In the current environment of managed care, economically motivated customers, consolidation among healthcare providers, increased competition, declining reimbursement rates, and national and provincial tender pricing, competitively priced product offerings are essential to our business. In order to continue to compete effectively, we must continue to create or acquire advanced technology, incorporate this technology into proprietary products, obtain regulatory approvals in a timely manner, maintain high-quality manufacturing processes, and successfully market these products.

Government and private sector initiatives to limit the growth of healthcare costs, including price regulation, competitive pricing, bidding and tender mechanics, coverage and payment policies, comparative effectiveness of therapies, technology assessments and managed-care arrangements, are continuing in many countries where we do business, including the U.S. These initiatives put increased emphasis on the delivery of more cost-effective medical devices and therapies. Government programs, including Medicare and Medicaid, private healthcare insurance and managed-care plans have attempted to control costs by limiting the amount of reimbursement they will pay for particular procedures or treatments, tying reimbursement to outcomes, shifting to population health management, and

other mechanisms. Hospitals, which purchase our technology, are also seeking to reduce costs through a variety of mechanisms, including, for example, centralized purchasing, and in some cases, limiting the number of vendors that may participate in the purchasing program. Hospitals are also aligning interests with physicians through employment and other arrangements, such as gainsharing, where a hospital agrees with physicians to share any realized cost savings resulting from changes in practice patterns such as device standardization. This has created an increased level of price sensitivity among customers for our products.

Production and Availability of Raw Materials

We manufacture products at manufacturing facilities located in various countries throughout the world. We purchase many of the components and raw materials used in manufacturing our products from numerous suppliers in various countries. Certain components and raw materials are available only from a sole supplier. We work closely with our suppliers to help ensure continuity of supply while maintaining high quality and reliability. Generally, we have been able to obtain adequate supplies of such raw materials and components.

However, due to the U.S. FDA's manufacturing requirements, we may not be able to quickly establish additional or replacement sources for certain components or materials if we experience a sudden or unexpected reduction or interruption in supply and are unable to develop alternative sources.

For additional information related to our manufacturing facilities refer to "Item 2. Properties" in this Annual Report on Form 10-K.

Government Regulation

Our operations and products are subject to extensive regulation by numerous government agencies, including the U.S. FDA, European regulatory authorities such as the Medicines and Healthcare Products Regulatory Agency in the United Kingdom Republic of Ireland and the Federal Institute for Drugs and Medical Devices in Germany, the China National Medical Product Administration (NMPA), and other government agencies inside and outside the U.S. To varying degrees, each of these agencies requires us to comply with laws and regulations governing the development, testing, manufacturing, labeling, marketing, distribution and post-marketing surveillance of our products. Our business is also affected by patient and data privacy laws and government payer cost containment initiatives, as well as environmental health and safety laws and regulations.

Product Approval and Monitoring

Many countries where we sell medical devices subject such medical devices and technologies to their own approval and other regulatory requirements regarding performance, safety, and quality of our products. Authorization to commercially distribute a new medical device in the U.S. is generally obtained in one of two primary ways. The first, known as pre-market notification or the 510(k) process, requires us to demonstrate that our medical device is substantially equivalent to a legally marketed medical device. The second, more rigorous process, known as pre-market approval, requires us to independently demonstrate that a medical device is safe and effective for its intended use. This process is generally much more time-consuming and expensive than the 510(k) process.

In the E.U., a single regulatory approval process exists, and conformity with the legal requirements is represented by the CE Mark. To obtain a CE Mark, defined products must meet minimum standards of performance, safety, and quality (i.e., the essential requirements), and then, according to their classification, comply with one or more of a selection of conformity assessment routes. The competent authorities of the E.U. countries separately regulate the clinical research for medical devices and the market surveillance of products once they are placed on the market. A new Medical Device Regulation was published by the E.U. in 2017 which imposes significant additional pre-market and post-market requirements (EU MDR). The regulation provided an implementation period and became effective on May 26, 2021. Medical devices marketed in the E.U. will require certification according to these new requirements, except that devices with valid CE certificates, issued pursuant to the Medical Device Directives before May 2020, can be placed on the market until May 2024.

The global regulatory environment is increasingly stringent and unpredictable. While harmonization of global regulations has been pursued, requirements continue to differ significantly among countries. We expect this global regulatory environment will continue to evolve, which could impact the cost, the time needed to approve, and ultimately, our ability to maintain existing approvals or obtain future approvals for our products. Regulations of the U.S. FDA and other regulatory agencies in and outside the U.S. impose extensive compliance and monitoring obligations on our business. These agencies review our design and manufacturing practices, labeling, record keeping, and manufacturers' required reports of adverse experiences and other information to identify potential problems with marketed medical devices. We are also subject to periodic inspections for compliance with applicable quality system regulations, which govern the methods used in, and the facilities and controls used for, the design, manufacture, packaging, and servicing of finished medical devices intended for human use. In addition, the U.S. FDA and other regulatory bodies, both in and outside the U.S. (including the Federal Trade Commission, the Office of the Inspector General of the Department of Health and Human Services, the U.S. Department of Justice, and various state Attorneys General), monitor the promotion and advertising of our products. Any adverse regulatory action, depending on its magnitude, may limit our ability to effectively market and sell our products, limit our ability to obtain future pre-market approvals or result in a substantial modification to our business practices and operations. For additional information, see "Item 1A. Risk Factors" *We are subject to extensive and complex laws and governmental regulations and any adverse regulatory action may materially adversely affect our financial condition and business operations*.

Trade Regulations

The movement of products, services, and investment across borders subjects us to extensive trade regulations. A variety of laws and regulations in the countries in which we transact business apply to the sale, shipment and provision of goods, services and technology across borders. These laws and regulations govern, among other things, our import, export and other business activities. We are also subject to the risk that these laws and regulations could change in a way that would expose us to additional costs, penalties or liabilities. Some governments also impose economic sanctions against certain countries, persons or entities. In addition to our need to comply with such regulations in connection with our direct activities, we also sell and provide goods, technology and services to agents, representatives and distributors who may export such items to customers and end-users. If we, or the third parties through which we do business, are not in compliance with applicable import, export control or economic sanctions laws and regulations, we may be subject to civil or criminal enforcement action, and varying degrees of liability. Such actions may disrupt or delay sales of our products or services or result in restrictions on our distribution and sales of products or services that may materially impact our business.

Anti-Boycott Laws

Under U.S. laws and regulations, U.S. companies and their subsidiaries and affiliates outside the U.S. are prohibited from participating or agreeing to participate in unsanctioned foreign boycotts in connection with certain business activities, including the sale, purchase, transfer, shipping or financing of goods or services within the U.S. or between the U.S. and countries outside of the U.S. If we, or certain third parties through which we sell or provide goods or services, violate anti-boycott laws and regulations, we may be subject to civil or criminal enforcement action and varying degrees of liability.

Data Privacy and Security Laws and Regulations

As a business with a significant global footprint, compliance with evolving regulations and standards in data privacy and cybersecurity has resulted, and may continue to result, in increased costs, new compliance challenges, and the threat of increased regulatory enforcement activity. Our business relies on the secure electronic transmission, storage and hosting of sensitive information, including personal information, protected health information, financial information, intellectual property and other sensitive information related to our customers and workforce.

Our global operational footprint comes with the obligation for compliance and adherence to individual data security, confidentiality and breach notification laws at the State Level, Federal Level, and International Level. Examples of those laws include the Health Insurance and Portability Act of 1996 (HIPAA), as amended, and the Health Information Technology for Economic and Clinical Health Act of 2009 (HITECH) in the U.S., the Global Data Protection Regulation (GDPR) within the European Union, and various other country specific requirements around the world.

Because the laws and regulations continue to expand, differ from jurisdiction to jurisdiction, and are subject to evolving (and at times inconsistent) governmental interpretation, compliance with these laws and regulations may require significant additional cost expenditures or changes in products or business that increase competition or reduce revenue. Noncompliance could result in the imposition of fines, penalties, or orders to stop noncompliant activities, or withdrawal of non-compliant products from a market.

Regulations Governing Reimbursement

The delivery of our devices is subject to regulation by the U.S. Department of Health and Human Services (HHS) and comparable state and non-U.S. agencies responsible for reimbursement and regulation of healthcare items and services. U.S. laws and regulations are imposed primarily in connection with federally funded healthcare programs, such as the Medicare and Medicaid programs, as well as the government's interest in regulating the quality and cost of healthcare. Other governments also impose regulations in connection with their healthcare reimbursement programs and the delivery of healthcare items and services.

U.S. federal healthcare laws apply when we or customers submit claims for items or services that are reimbursed under federally-funded healthcare programs, including laws related to kickbacks, false claims, self-referrals or other healthcare fraud. There are often similar state false claims, anti-kickback, and anti-self-referral and insurance laws that apply to state Medicaid and other healthcare programs and private third-party payers. In addition, as a manufacturer of U.S. FDA-approved devices reimbursable by federal healthcare programs, we are subject to the Physician Payments Sunshine Act, which requires us to annually report certain payments and other transfers of value we make to U.S.-licensed physicians or U.S. teaching hospitals. Any failure to comply with these laws and regulations could subject us or our officers and employees to criminal and civil financial penalties.

Implementation of legislative or regulatory reforms to reimbursement systems, or adverse decisions relating to our products by administrators of these systems in coverage or reimbursement, could significantly reduce reimbursement or result in the denial of coverage, which could have an impact on the acceptance of and demand for our products and the prices that our customers are willing to pay for them.

Environmental Health and Safety Laws

We are also subject to various environmental health and safety laws and regulations both within and outside the U.S. Like other companies in our industry, our manufacturing and other operations involve the use and transportation of substances regulated under environmental health and safety laws including those related to the transportation of hazardous materials.

Available Information

We maintain a website at www.medtronic.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (Exchange Act) are made available under the "Our Company – Investors" caption and "Financials – SEC Filings" subcaption of our website as soon as reasonably practicable after we electronically file them with, or furnish them to, the Securities and Exchange Commission (SEC).

Information relating to our corporate governance, including our Principles of Corporate Governance, Code of Conduct (including our Code of Ethics for Senior Financial Officers and any related amendments or waivers), Code of Business Conduct and Ethics for Members of the

Board of Directors, and information concerning our executive officers, directors and Board committees (including committee charters) is available through our website at www.medtronic.com under the "Our Company – Governance" caption. Information relating to transactions in Medtronic securities by directors and officers is available through our website at www.medtronic.com under the "Our Company – Investors" caption and the "Financials – SEC Filings" subcaption.

Our website and the information contained on or connected to our website are not incorporated by reference into this Form 10-K.

The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers, including the Company, that file electronically with the SEC. The public may obtain any documents that we file with the SEC at http://www.sec.gov. We file annual reports, quarterly reports, proxy statements, and other documents with the SEC under the Exchange Act.

Item 1A. Risk Factors

Investing in our securities involves a variety of risks and uncertainties, known and unknown, including, among others, those discussed below. Each of the following risks should be carefully considered, together with all the other information included in this Annual Report on Form 10-K, including our consolidated financial statements and the related notes and in our other filings with the SEC. Furthermore, additional risks and uncertainty not presently known to us or that we currently believe to be immaterial may also adversely affect our business. Our business, results of operations, financial condition, and cash flow and prospects could be materially and adversely affected by any of these risks or uncertainties.

Business and Operational Risks

We operate in a highly competitive industry and we may be unable to compete effectively.

We compete in both the therapeutic and diagnostic medical markets in more than 150 countries throughout the world. These markets are characterized by rapid change resulting from technological advances and scientific discoveries. In the product lines in which we compete, we face a range of competitors from large companies with multiple business lines to small, specialized manufacturers that offer a limited selection of niche products. Development by other companies of new or improved products, processes, technologies, or the introduction of reprocessed products or generic versions when our proprietary products lose their patent protection may make our existing or planned products less competitive. In addition, we face competition from providers of alternative medical therapies, such as pharmaceutical companies.

We believe our ability to compete depends upon many factors both within and beyond our control, including:

- product performance and reliability,
- product technology and innovation,
- product quality and safety,
- breadth of product lines,
- product support services,
- customer support,
- cost-effectiveness and price,
- reimbursement approval from healthcare insurance providers, and
- changes to the regulatory environment.

Competition may increase as additional companies enter our markets or modify their existing products to compete directly with ours. In addition, academic institutions, governmental agencies and other public and private research organizations also may conduct research, seek patent protection and establish collaborative arrangements for discovery, research, clinical development and marketing of products similar to ours. These companies and institutions compete with us in recruiting and retaining qualified scientific and management personnel, as well as in acquiring necessary product technologies. From time to time we have lost, and may in the future lose, market share in connection with product problems, physician advisories, safety alerts and publications about our products, which highlights the importance of product quality, product efficacy and quality systems to our business. In the current environment of managed care, consolidation among healthcare providers, increased competition, declining

reimbursement rates, and national and provincial tender pricing, as recently experienced in China, competitively priced product offerings are essential to our success. Further, our continued growth and success depend on our ability to develop, acquire and market new and differentiated products, technologies and intellectual property, and as a result we also face competition for marketing, distribution, and collaborative development agreements, establishing relationships with academic and research institutions and licenses to intellectual property. In order to continue to compete effectively, we must continue to create, invest in or acquire advanced technology, incorporate this technology into our proprietary products, obtain regulatory approvals in a timely manner, and manufacture and successfully market our products. Given these factors, we cannot guarantee that we will be able to compete effectively or continue our level of success.

The ongoing global COVID-19 pandemic has had, and may continue to have, an adverse effect on certain aspects of our business, results of operations, financial condition and cash flows. The nature and extent of future impacts are highly uncertain and unpredictable.

Our global operations and interactions with healthcare systems, providers and patients around the world expose us to risks associated with public health crises, including epidemics and pandemics such as COVID-19. In particular, the continuing preventative and precautionary measures that we and other businesses, communities, and governments have taken to mitigate the spread of the disease has led to restrictions on, disruptions in, and other related impacts on business and personal activities, including reduced customer demand for certain of our products and has resulted in many of our employees working remotely. We expect medical procedure rates to continue to vary by therapy and country, and could be impacted by regional COVID-19 case volumes, healthcare system staffing shortages, patient's willingness to schedule deferrable procedures, travel restrictions, transportation limitations, quarantine restrictions, vaccine and booster immunization rates, and new COVID-19 variants. While COVID-19 case volumes appear to be decreasing in the U.S and certain other countries as a result of higher vaccination rates, the global COVID-19 outlook remains uncertain as new variants emerge.

Together with the preventative and precautionary measures being taken, as well as the corresponding need to adapt to new and improved methods of conducting business, such as increased remote monitoring, COVID-19 is having, and may continue to have, an adverse impact on certain aspects of our Company and business, including the demand for and supply of certain of our products, operations, supply chains and distribution systems, impacts or delays to product development milestones, clinical trials, or regulatory clearances and approval timing, and our ability to generate cash flow, and may have an adverse impact on our ability to access capital. Some of our products are more sensitive to reductions in deferrable and emergent medical procedures, and, as hospital systems prioritize treatment of COVID-19 patients and otherwise comply with government guidelines, certain medical procedures have been and may continue to be suspended or postponed. It is not possible to predict the timing of deferrable medical procedures and, to the extent individuals and hospital systems de-prioritize, delay or cancel these procedures, or if unemployment or loss of insurance coverage adversely impacts an individual's ability to pay for our products and services, our business, results of operations, financial condition, and cash flows could continue to be negatively affected. Further, the COVID-19 pandemic has strained hospital systems around the world, resulting in adverse financial impacts to those systems that could result in reduced future expenditures for certain capital equipment and other products and services we provide, as well as potential disruption of product launches of our recently approved products.

A number of our global suppliers, vendors, and distributors have been adversely affected by the COVID-19 pandemic, including employee absenteeism. These impacts could impair our ability to move our products through distribution channels to end customers, and any such delay or shortage in the supply of components or materials may result in our inability to satisfy consumer demand for certain of our products in a timely manner or at all, which could harm our reputation, future sales and profitability.

COVID-19 has impacted and may further impact the global economy and capital markets, including by negatively impacting demand for a number of our products, access to capital markets (including the commercial paper market), foreign currency exchange rates, and interest rates, each of which may adversely impact our business and liquidity. We could experience loss of sales and profits due to delayed payments or insolvency of healthcare professionals, hospitals and other customers, suppliers and vendors facing liquidity issues. As a result, we may be compelled to take additional measures to preserve our cash flow.

COVID-19 could adversely impact our ability to retain key employees and the continued service and availability of skilled personnel necessary to run our complex productions and operations, including our executive officers and other key members of our management team.

While the impact of COVID-19 has had, and may continue to have, an adverse effect on our business, results of operations, financial condition and cash flows, the nature and extent of such impact is highly uncertain and unpredictable, as we cannot predict with confidence the duration of the pandemic.

Reduction or interruption in supply or other manufacturing difficulties may adversely affect our manufacturing operations and related product sales.

The manufacture of our products requires the timely delivery of a sufficient amount of quality components and materials and is highly exacting and complex, due in part to strict regulatory requirements. We manufacture the

majority of our products and procure important third-party services, such as sterilization services, at numerous facilities worldwide. We purchase many of the components, raw materials and services needed to manufacture these products from numerous suppliers in various countries. We seek to maintain continuity of supply by use of multiple options for sourcing where possible. We have generally been able to obtain adequate supplies of such raw materials, components and services, although global shortages of certain components such as semiconductors and resins have recently caused, and may in the future cause, disruptions to our product manufacturing supply chain. In addition, for reasons of quality assurance, cost effectiveness, or availability, certain components, raw materials and services needed to manufacture our products are obtained from a sole supplier. Although we work closely with our suppliers to try to ensure continuity of supply while maintaining high quality and reliability, the supply of these components, raw materials and services may be interrupted or insufficient. In addition, due to the stringent regulations and requirements of regulatory agencies, including the U.S. FDA, regarding the manufacture of our products, we may not be able to quickly establish additional or replacement sources. Additionally, many regulatory agencies are imposing regulatory requirements on safe use of

chemicals and their potential impact on health and the environment which also may impact supply constraints. Furthermore, the prices of commodities and other materials used in our products, which are often volatile and outside of our control, could adversely impact our supply. We use resins, other petroleum-based materials and pulp as raw materials in some of our products, and the prices of oil and gas also significantly affect our costs for freight and utilities. A reduction or interruption in supply, and an inability to develop alternative sources for such supply, could adversely affect our ability to manufacture our products in a timely or cost-effective manner and could result in lost sales.

Other disruptions in the manufacturing process or product sales and fulfillment systems for any reason, including equipment malfunction, failure to follow specific protocols and procedures, supplier facility shut-downs, defective raw materials, natural disasters such as hurricanes, tornadoes, earthquakes, or wildfires, property damage or facility closures from riots or public protests, and other environmental factors and the impact of epidemics or pandemics, such as the COVID-19 pandemic, and actions by businesses, communities and governments in response, could lead to launch delays, product shortage, unanticipated costs, lost revenues and damage to our reputation. For example, in the past we have experienced a global information technology systems interruption that affected our customer ordering, distribution, and manufacturing processes, and we have been adversely impacted by, and may continue to be adversely impacted by, the global COVID-19 pandemic and the responses of governments and of our partners, including suppliers, manufacturers, distributors and other businesses. Furthermore, any failure to identify and address manufacturing problems prior to the release of products to our customers could result in quality or safety issues.

In addition, many of our products require sterilization before sale and several of our key products are manufactured or sterilized at a particular facility, with limited alternate facilities. If an event occurs that results in damage to or closure of one or more of such facilities, such as the Illinois Environmental Protection Agency's decision to close a supplier's sterilization facility in February 2019, we may be unable to manufacture or sterilize the relevant products to the required quality specifications or at all. Because of the time required to approve and license a manufacturing or sterilization facility, a third-party may not be available on a timely basis to replace production capacity in the event manufacturing or sterilization capacity is lost.

Our research and development efforts rely upon investments and investment collaborations, and we cannot guarantee that any previous or future investments or investment collaborations will be successful.

Our Mission is to provide a broad range of therapies to restore patients to fuller, healthier lives, which requires a wide variety of technologies, products and capabilities. The rapid pace of technological development in the medical industry and the specialized expertise required in different areas of medicine make it difficult for one company alone to develop a broad portfolio of technological solutions. In addition to internally generated growth through our research and development efforts, historically we have relied, and expect to continue to rely, upon investments and investment collaborations to provide us access to new technologies both in areas served by our existing businesses as well as in new areas.

We expect to make future investments where we believe that we can stimulate the development or acquisition of new technologies and products to further our strategic objectives and strengthen our existing businesses. Investments and investment collaborations in and with medical technology companies are inherently risky, and we cannot guarantee that any of our previous or future investments or investment collaborations will be successful or will not materially adversely affect our business, results of operations, financial condition and cash flows.

The continuing development of many of our products depends upon us maintaining strong relationships with healthcare professionals.

If we fail to maintain our working relationships with healthcare professionals, many of our products may not be developed and marketed in line with the needs and expectations of the professionals who use and support our products, which could cause a decline in our earnings and profitability. The research, development, marketing and sales of many of our new and improved products depends on our maintaining working relationships with healthcare professionals. We rely on these professionals to provide us with considerable knowledge and experience regarding the development, marketing and sale of our products. Physicians assist us as researchers, marketing and product consultants, inventors and public speakers. In addition, as a result of the COVID-19 pandemic, our access to these professionals has been limited at times, and travel restrictions, shutdowns and similar measures have impacted our ability to maintain these relationships, thereby affecting our ability to develop, market and sell new and improved products. If we are unable to maintain strong relationships with these professionals, the development and marketing

of our products could suffer, which could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

We have debt obligations that create risk.

We are required to use a portion of our operating cash flow to pay interest or principal on our outstanding indebtedness instead of for other corporate purposes, including funding future expansion of our business. We may also incur additional indebtedness in the future to supplement our existing liquidity and cash generated from operations to satisfy our needs for working capital and capital expenditures, to pursue growth initiatives, and to make returns of capital to shareholders. At the time we incur such additional indebtedness, or refinance or restructure existing indebtedness, we may be unable to obtain capital market financing with similar terms and currency denomination, or at

all, which could have a material adverse effect on our business and results of operations. At any time, the value of our debt outstanding will fluctuate based on several factors including foreign currency exchange rate and interest rate movements.

Failure to integrate acquired businesses into our operations successfully, as well as liabilities or claims relating to such acquired businesses, could adversely affect our business.

As part of our strategy to develop and identify new products and technologies, we have made several significant acquisitions in recent years, and may make additional acquisitions in the future. Our integration of the operations of acquired businesses requires significant efforts, including the coordination of information technologies, research and development, sales and marketing, operations, manufacturing, and finance. These efforts result in additional expenses and involve significant amounts of management's time that cannot then be dedicated to other projects. Our failure to manage and coordinate the growth of acquired companies successfully could also have an adverse impact on our business. Further, acquired businesses may have liabilities, or be subject to claims, litigation or investigations that we did not anticipate or which exceed our estimates at the time of the acquisition. In addition, we cannot be certain that the businesses we acquire will become profitable or remain so. Factors that will affect the success of our acquisitions include:

- the presence or absence of adequate internal controls and/or significant fraud in the financial systems of acquired companies,
- our ability or inability to integrate information technology systems of acquired companies in a secure and reliable manner,
- liabilities, claims, litigation, investigations, or other adverse developments relating to acquired businesses or the business practices of acquired companies, including investigations by governmental entities, potential FCPA or product liability claims or other unanticipated liabilities,
- any decrease in customer loyalty and product orders caused by dissatisfaction with the combined companies' product lines and sales and marketing practices, including price increases,
- our ability to retain key employees, and
- the ability to achieve synergies among acquired companies, such as increasing sales of the integrated company's products, achieving cost savings, and effectively combining technologies to develop new products.

We also could experience negative effects on our business, results of operations, financial condition, and cash flows from acquisition-related charges, amortization of intangible assets and asset impairment charges.

Legal and Regulatory Risks

We are subject to extensive and complex laws and governmental regulations and any adverse regulatory action may materially adversely affect our financial condition and business operations.

Our medical devices and technologies, as well as our business activities, are subject to a complex set of regulations and rigorous enforcement, including by the U.S. FDA, U.S. Department of Justice, Health and Human Services-Office of the Inspector General, and numerous other federal, state, and non-U.S. governmental authorities. To varying degrees, each of these agencies requires us to comply with laws and regulations governing the development, testing, manufacturing, labeling, marketing and distribution of our products. As a part of the regulatory process of obtaining marketing clearance for new products and new indications for existing products, we conduct and participate in numerous clinical trials with a variety of study designs, patient populations, and trial endpoints. Unfavorable clinical data from existing or future clinical trials may adversely impact our ability to obtain product approvals, our position in, and share of, the markets in which we participate, and our business, results of operations, financial condition, and cash flows. We cannot guarantee that we will be able to obtain or maintain marketing clearance for our new products or enhancements or modifications to existing products, and the failure to maintain approvals or obtain approval or clearance could have a material adverse effect on our business, results of operations, financial condition and cash flows. Even if we are able to obtain approval or clearance, it may:

- take a significant amount of time,
- require the expenditure of substantial resources,
- involve stringent clinical and pre-clinical testing, as well as increased post-market surveillance,

- involve modifications, repairs or replacements of our products, and
- limit the proposed uses of our products.

Both before and after a product is commercially released, we have ongoing responsibilities under the U.S. FDA and other applicable non-U.S. government agency regulations. For instance, many of our facilities and procedures and those of our suppliers are also subject to periodic inspections by the U.S. FDA to determine compliance with applicable regulations. The results of these inspections can include inspectional observations on the U.S. FDA's Form-483, warning letters, or other forms of enforcement. If the U.S. FDA were to conclude that we are not in compliance with applicable laws or regulations, or that any of our medical products are ineffective or pose an unreasonable health risk, the U.S. FDA could ban such medical products, detain or seize adulterated or misbranded medical products, order

a recall, repair, replacement, or refund of such products, refuse to grant pending pre-market approval applications or require certificates of non-U.S governments for exports, and/or require us to notify health professionals and others that the devices present unreasonable risks of substantial harm to the public health. The U.S. FDA and other non-U.S. government agencies may also assess civil or criminal penalties against us, our officers or employees and impose operating restrictions on a company-wide basis. The U.S. FDA may also recommend prosecution to the U.S. Department of Justice. Any adverse regulatory action, depending on its magnitude, may restrict us from effectively marketing and selling our products and limit our ability to obtain future pre-market clearances or approvals, and could result in a substantial modification to our business practices and operations. Furthermore, we occasionally receive subpoenas or other requests for information from state and federal governmental agencies, and while these investigations typically relate primarily to financial arrangements with healthcare providers, regulatory compliance and product promotional practices, we cannot predict the timing, outcome or impact of any such investigations. Any adverse outcome in one or more of these investigations could include the commencement of civil and/or criminal proceedings, substantial fines, penalties, and/or administrative remedies, including exclusion from government reimbursement programs and/or entry into Corporate Integrity Agreements (CIAs) with governmental agencies. In addition, resolution of any of these matters could involve the imposition of additional, costly compliance obligations. These potential consequences, as well as any adverse outcome from government investigations, could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

In addition, the U.S. FDA has taken the position that device manufacturers are prohibited from promoting their products other than for the uses and indications set forth in the approved product labeling, and any failure to comply could subject us to significant civil or criminal exposure, administrative obligations and costs, and/or other potential penalties from, and/or agreements with, the federal government.

Governmental regulations in the U.S. and outside the U.S. are constantly changing and may become increasingly stringent. In the European Union, for example, the Medical Device Regulation which became effective in May 2021 includes significant additional pre-market and post-market requirements. Penalties for regulatory non-compliance could be severe, including fines and revocation or suspension of a company's business license, mandatory price reductions and criminal sanctions. The development and implementation of future laws and regulations may have a material adverse effect on us.

Our failure to comply with laws and regulations relating to reimbursement of healthcare goods and services may subject us to penalties and adversely impact our reputation, business, results of operations, financial condition and cash flows.

Our devices, products and therapies are purchased principally by hospitals or physicians that typically bill various third-party payers, such as governmental healthcare programs (e.g., Medicare, Medicaid and comparable non-U.S. programs), private insurance plans and managed care plans, for the healthcare services provided to their patients. The ability of our customers to obtain appropriate reimbursement for products and services from third-party payers is critical because it affects which products customers purchase and the prices they are willing to pay. As a result, our devices, products and therapies are subject to regulation regarding quality and cost by HHS, including the Centers for Medicare & Medicaid Services (CMS), as well as comparable state and non-U.S. agencies responsible for reimbursement and regulation of health are goods and services, including laws and regulations related to kickbacks, false claims, self-referrals and healthcare fraud. Many states have similar laws that apply to reimbursement by state Medicaid and other funded programs as well as in some cases to all payers. In certain circumstances, insurance companies attempt to bring a private cause of action against a manufacturer for causing false claims. In addition, as a manufacturer of U.S. FDA-approved devices reimbursable by federal healthcare programs, we are subject to the Physician Payments Sunshine Act, which requires us to annually report certain payments and other transfers of value we make to U.S.-licensed physicians or U.S. teaching hospitals. Any failure to comply with these laws and regulations could subject us or our officers and employees to criminal and civil financial penalties.

We are also subject to risks relating to changes in government and private medical reimbursement programs and policies, and changes in legal regulatory requirements in the U.S. and around the world. Implementation of further legislative or administrative reforms to these reimbursement systems, or adverse decisions relating to coverage of or reimbursement for our products by administrators of these systems, could have an impact on the acceptance of and demand for our products and the prices that our customers are willing to pay for them.

We are substantially dependent on patent and other proprietary rights and failing to protect such rights or to be successful in litigation related to our rights or the rights of others may result in our payment of significant monetary damages and/or royalty payments, negatively impacting our ability to sell current or future products.

We are substantially dependent on patent and other proprietary rights and rely on a combination of patents, trademarks, tradenames, copyrights, trade secrets, and agreements (such as employee, non-disclosure and non-competition agreements) to protect our business and proprietary intellectual property. We also operate in an industry characterized by extensive patent litigation. Patent litigation can result in significant damage awards and injunctions that could prevent our manufacture and sale of affected products or require us to pay significant royalties in order to continue to manufacture or sell affected products. At any given time, we are generally involved as both a plaintiff and a defendant in a number of patent infringement actions, the outcomes of which may not be known for prolonged periods of time. While it is not possible to predict the outcome of patent litigation, it is possible that the results of such litigation could require us to pay significant monetary damages and/or royalty payments, negatively impact our ability to sell current or future products, or that enforcement actions to protect our patent and proprietary rights against others could be unsuccessful, any of which could have a material adverse impact on our

business, results of operations, financial condition, and cash flows. In addition, any public announcements related to litigation or administrative proceedings initiated or threatened against us could cause our stock price to decline.

While we intend to defend against any threats to our intellectual property, our patents, trademarks, tradenames, copyrights, trade secrets or agreements (such as employee, non-disclosure and non-competition agreements) may not adequately protect our intellectual property. Further, pending patent applications may not result in patents being issued to us, patents issued to or licensed by us may be challenged or circumvented by competitors and such patents may be found invalid, unenforceable or too limited in scope to protect our technology or provide us with any competitive advantage. In addition, our patents will expire over time, our ability to protect novel business models is uncertain, and infringement may go undetected. Third parties could obtain patents that may require us to negotiate licenses to conduct our business, and such licenses may not be available on reasonable terms or at all. In addition, license agreements could be terminated. We also rely on non-disclosure and non-competition agreements with certain employees, consultants and other parties to protect, in part, trade secrets and other proprietary rights. We cannot be certain that these agreements will not be breached, that we will have adequate remedies for any breach, that others will not independently develop substantially equivalent proprietary information, or that third parties will not otherwise gain access to our trade secrets or proprietary knowledge.

In addition, the laws of certain countries in which we market or manufacture some of our products do not protect our intellectual property rights to the same extent as the laws of the U.S., which could make it easier for competitors to capture market position. Competitors also may harm our sales by designing products that substantially mirror the capabilities of our products or technology without infringing our intellectual property rights. If we are unable to protect our intellectual property in these countries, it could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

Quality problems could lead to recalls or safety alerts, product liability claims, reputational harm, adverse verdicts or costly settlements, and could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Quality is extremely important to us and our customers due to the impact on patients, and the serious and potentially costly consequences of adverse product performance. Our business exposes us to potential product liability risks that are inherent in the design, manufacture, and marketing of medical devices. In addition, many of our products are often used in intensive care settings with seriously ill patients and some of the medical devices we manufacture and sell are designed to be implanted in the human body for long periods of time or indefinitely. Component failures, manufacturing nonconformances, design defects, off-label use, or inadequate disclosure of product-related risks or product-related information with respect to our products, if they were to occur, could result in an unsafe condition or injury to, or death of, a patient. These problems could lead to recall of, or issuance of a safety alert relating to, our products, and could result in product liability claims and lawsuits, including class actions, which could ultimately result, in certain cases, in the removal from the body of such products and claims regarding costs associated therewith. Due to the strong name recognition of the Medtronic brand, a material adverse event involving one of our products could result in diminished market acceptance and demand for all products within that brand, and could harm our reputation and ability to market products in the future. Further, we may be exposed to additional potential product liability risks related to products designed, manufactured and/or marketed in response to the COVID-19 pandemic, and unpredictable or accelerated changes in demand for certain of our products in connection with COVID-19 and its related impacts could impact development and production of products and services and could increase the risk of regulatory enforcement actions, product defects or related claims, as well as adversely impact our customer relationships and reputation.

Strong product quality is critical to the success of our goods and services. If we fall short of these standards and our products are the subject of recalls or safety alerts, our reputation could be damaged, we could lose customers and our revenue and results of operations could decline. Our success also can depend on our ability to manufacture to exact specification precision-engineered components, subassemblies and finished devices from multiple materials. If our components fail to meet these standards or fail to adapt to evolving standards, our reputation, competitive advantage and market share could be harmed. In certain situations, we may undertake a voluntary recall of products or temporarily shut down production lines based on performance relative to our own internal safety and quality monitoring and testing data.

Any of the foregoing problems, including future product liability claims or recalls, regardless of their ultimate outcome, could harm our reputation and have a material adverse effect on our business, results of operations, financial condition and cash flows.

Healthcare policy changes may have a material adverse effect on us.

In response to perceived increases in healthcare costs in recent years, there have been and continue to be actions and proposals by several governments, regulators and third-party payers globally, including the U.S. federal and state governments, to control these costs and, more generally, to reform healthcare systems. Certain of these actions and proposals, among other things, limit the prices we are able to charge for our products or the amounts of reimbursement available for our products and could limit the acceptance and availability of our products. These actions and proposals could have a material adverse effect on our business, results of operations, financial condition and cash flows.

We rely on the proper function, security and availability of our information technology systems and data, as well as those of third parties throughout our global supply chain, to operate our business, and a breach, cyber-attack or other disruption to these systems or data could materially and adversely affect our business, results of operations, financial condition, cash flows, reputation or competitive position.

We are increasingly dependent on sophisticated information technology systems to operate our business. That technology includes systems that could be used to process, transmit and store sensitive data. Additionally, many of our products and services include integrated software and information technology that collects data regarding patients or connects to other internal systems. One of the most prevalent attacks on large organizations has been ransomware which can have a devastating impact on an organization's operations. We have invested in ransomware readiness in the pursuit of both prevention and rapid response to a ransomware event. Like all organizations, we routinely experience attempted interference with the integrity of, and interruptions in, our technology systems via events such as cyber-attacks, malicious intrusions, or other breakdowns. The consequences could mean data breaches, interference with the integrity of our products and data, compromise of intellectual property or other proprietary information, or other significant disruptions. Furthermore, we rely on third-party vendors to supply and/or support certain aspects of our information technology systems and resulting products. As we have seen with recent "Supply Chain Attacks," these third-party systems could also become vulnerable to cyber-attack, malicious intrusions, breakdowns, interference, or other significant disruptions, and may contain defects in design or manufacture or other problems that could result in system disruption or compromise the information security of our own systems. The Russia-Ukraine conflict may increase cybersecurity risks on a global basis. Lastly, we continue to grow in part through new business acquisitions and, as a result, may face risks associated with defects and vulnerabilities in their systems, or difficulties or other breakdowns or disruptions in connection with the integration of the acquisitions into our information technology systems.

Our worldwide operations mean that we are subject to laws and regulations, including data protection and cybersecurity laws and regulations, in many jurisdictions. The variety of U.S. and international privacy and cybersecurity laws and regulations impacting our operations are described in "Item 1. Business" – *Other Factors Impacting Our Operations – Data Privacy and Security Laws and Regulations*. Any data security breaches, cyber-attacks, malicious intrusions or significant disruptions could result in actions by regulatory bodies and/or civil litigation, any of which could materially and adversely affect our business, results of operations, financial condition, cash flows, reputation, or competitive position.

In addition, our information technology systems require an ongoing commitment of significant resources to maintain, protect, and enhance existing systems and develop new systems. This enables us to keep pace with continuing changes in information processing technology, evolving legal and regulatory standards, the increasing need to protect patient and customer information, changes in the techniques used to obtain unauthorized access to data and information systems, and the information technology needs associated with our changing products and services. There can be no assurance that our extensive efforts (including, but not limited to, consolidating, protecting, upgrading, and expanding our systems and capabilities, continuing to build security into the design of our products, and developing new systems to keep pace with continuing changes in information processing technology) will be successful or that additional systems issues will not arise in the future.

If our information technology systems, products or services or sensitive data are compromised, there are many consequences that could result. Consequences include, but are not limited to patients or employees being exposed to financial or medical identity theft or suffer a loss of product functionality, losing existing customers or have difficulty attracting new customers, experiencing difficulty preventing, detecting, and controlling fraud, being exposed to the loss or misuse of confidential information, having disputes with customers, physicians, and other healthcare professionals, suffering regulatory sanctions or penalties under federal laws, state laws, or the laws of other jurisdictions, experiencing increases in operating expenses or an impairment in our ability to conduct our operations, incurring expenses or losing revenues as a result of a data privacy breach, product failure, information technology outages or disruptions, or suffering other adverse consequences including lawsuits or other legal action and damage to our reputation.

The failure to comply with anti-corruption laws could materially adversely affect our business and result in civil and/or criminal sanctions.

The U.S. Foreign Corrupt Practices Act (FCPA), the Irish Criminal Justice (Corruption Offences) Act 2018, and similar anti-corruption laws in other jurisdictions generally prohibit companies and their intermediaries from making

improper payments to government officials for the purpose of obtaining or retaining business. Because of the predominance of government-administered healthcare systems in many jurisdictions around the world, many of our customer relationships outside of the U.S. are with governmental entities and are therefore potentially subject to such laws. We also participate in public-private partnerships and other commercial and policy arrangements with governments around the globe.

Global enforcement of anti-corruption laws has increased in recent years, including investigations and enforcement proceedings leading to assessment of significant fines and penalties against companies and individuals. Our international operations create a risk of unauthorized payments or offers of payments by one of our employees, consultants, sales agents, or distributors. We maintain policies and programs to implement safeguards to educate our employees and agents on these legal requirements, and to prevent and prohibit improper practices. However, existing safeguards and any future improvements may not always be effective, and our employees, consultants, sales agents or

distributors may engage in conduct for which we could be held responsible. In addition, regulators could seek to hold us liable for conduct committed by companies in which we invest or that we acquire. Any alleged or actual violations of these regulations may subject us to government scrutiny, criminal or civil sanctions and other liabilities, including exclusion from government contracting, and could disrupt our business, adversely affect our reputation and result in a material adverse effect on our business, results of operations, financial condition and cash flows.

Laws and regulations governing international business operations could adversely impact our business.

The U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) and the U.S. Commerce Department's Bureau of Industry and Security (BIS) administer certain laws and regulations that restrict U.S. persons and, in some instances, non-U.S. persons, in conducting activities, transacting business with, or making investments in, certain countries, governments, entities and individuals subject to U.S. economic sanctions or export restrictions. Our international operations subject us to these laws and regulations, which are complex, restrict our business dealings with certain countries, governments, entities, and individuals, and are constantly changing. Further restrictions may be enacted, amended, enforced or interpreted in a manner that materially impacts our operations.

From time to time, certain of our subsidiaries have limited business dealings in countries subject to comprehensive sanctions, including Iran, Syria, Cuba and the region of Crimea. Certain of our subsidiaries sell medical devices, and may provide related services, to distributors and other purchasing bodies in such countries. These business dealings represent an insignificant amount of our consolidated revenues and income, but expose us to a heightened risk of violating applicable sanctions regulations. Violations of these regulations are punishable by civil penalties, including fines, denial of export privileges, injunctions, asset seizures, debarment from government contracts and revocations or restrictions of licenses, as well as criminal fines and imprisonment. We have established policies and procedures designed to assist with our compliance with such laws and regulations. However, there can be no assurance that our policies and procedures will prevent us from violating these regulations in every transaction in which we may engage, and such a violation could adversely affect our reputation, business, results of operations, financial condition, and cash flows.

Climate change, or legal, regulatory or market measures to address climate change may materially adversely affect our financial condition and business operations.

Climate change resulting from increased concentrations of carbon dioxide and other greenhouse gases in the atmosphere presents risks to our current and future operations from natural disasters and extreme weather conditions, such as hurricanes, tornadoes, earthquakes, wildfires or flooding. Such extreme weather conditions and other conditions caused by or related to climate change could increase our operational costs, pose physical risks to our facilities and adversely impact our supply chain, including: manufacturing and distribution networks, the availability and cost of raw materials and components, energy supply, transportation, or other inputs necessary for the operation of our business. The impacts of climate change on global water resources may result in water scarcity, which could impact our ability to access sufficient quantities of water in certain locations and result in increased costs. Concerns over climate change could have an impact on customer demand for our products and result in new legal or regulatory requirements designed to mitigate the effects of climate change on the environment. Although it is difficult to predict and adequately prepare to meet the challenges to our business posed by climate change, if new laws or regulations are more stringent than current legal or regulatory requirements, we may experience increased compliance burdens and costs to meet the regulatory obligations as well as adverse impacts on raw material sourcing, manufacturing operations and the distribution of our products.

We are subject to environmental laws and regulations and the risk of environmental liabilities, violations and litigation.

We are subject to environmental, health, and safety laws, and regulations concerning, among other things, the generation, handling, transportation, and disposal of hazardous substances or wastes, the remediation of hazardous substances or materials at various sites, and emissions or discharges into the land, air or water. We are further subject to numerous, laws and regulations concerning, among other things, chemical constituents in medical products and end-of-life disposal and take-back programs for medical devices. Our operations and those of certain third-party suppliers involve the use of substances subject to these laws and regulations, primarily those used in manufacturing and sterilization processes. If we or our suppliers violate these environmental laws and regulations, facilities could be shut down and violators could be fined, or otherwise sanctioned. New laws and regulations, violations of these laws

or regulations, stricter enforcement of existing requirements, or the discovery of previously unknown contamination could require us to incur costs or could become the basis for new or increased liabilities that could be material.

Our insurance program may not be adequate to cover future losses.

We have elected to self-insure most of our insurable risks across the Company, and we made this decision based on cost and availability factors in the insurance marketplace. We manage and maintain a portion of our self-insured program through a wholly-owned captive insurance company. We continue to maintain a directors and officers liability insurance policy with third-party insurers that provides coverage for the directors and officers of the Company. We continue to monitor the insurance marketplace to evaluate the value of obtaining insurance coverage for other categories of losses in the future. Although we believe, based on historical loss trends, that our self-insurance program accruals and our existing insurance coverage will be adequate to cover future losses, historical trends may not be indicative of

future losses. The absence of third-party insurance coverage for other categories of losses increases our exposure to unanticipated claims and these losses could have a material adverse impact on our business, results of operations, financial condition and cash flows.

Changes in tax laws or exposure to additional income tax liabilities could have a material impact on our business, results of operations, financial condition and cash flows.

We are subject to income taxes, as well as non-income based taxes, in the U.S., Ireland, and various other jurisdictions in which we operate. The tax laws in the U.S., Ireland and other countries in which we and our affiliates do business could change on a prospective or retroactive basis, and any such changes could materially adversely affect our business and our effective tax rate. For example, on December 22, 2017, the U.S. enacted comprehensive tax legislation, commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"), which resulted in a significant charge to tax expense during our fiscal year 2018 associated with U.S. taxation of accumulated foreign earnings as well as the requirement to revalue U.S. deferred tax assets and liabilities resulting from the reduction in the U.S. corporate tax rate. In addition, the Biden Administration has provided a framework for proposed U.S. tax law changes, which if enacted could have a material impact on our business, results of operations, financial condition, and cash flows.

In October 2021, the Organization for Economic Cooperation and Development (OECD) secured agreement from 136 countries to push forward with proposals to fundamentally rewrite International Tax rules which if enacted by these countries, will likely impact the amount of tax multinationals such as Medtronic pay in the future. During 2022 and 2023 more details on these proposals will be released and various consultations will take place. The OECD has set a timeline for the implementation of these proposals in 2023 but may end up being deferred to a later date.

The aggressive nature of the timeline set by the OECD may mean that all implications for business may not have been fully worked through or fully understood before rules are finalized. We continue to monitor the implications potentially resulting from this guidance. This action together with other legislative changes in many countries on the mandatory sharing of company information (financial and operational) with taxing authorities on a local and global basis under various information sharing initiatives, could lead to disagreements between jurisdictions associated with the proper allocation of profits between such jurisdictions.

We are subject to ongoing tax audits in the various jurisdictions in which we operate. Tax authorities may disagree with certain positions we have taken and assess additional taxes. We regularly assess the likely outcomes of these audits in order to determine the appropriateness of our tax provision. However, there can be no assurance that we will accurately predict the outcomes of these audits, and the actual outcomes of these audits could have a material impact on our business, results of operations, financial condition, and cash flows.

We have recorded reserves for potential payments of tax to various tax authorities related to uncertain tax positions. However, the calculation of such tax liabilities involves the application of complex tax laws, regulations and treaties (where applicable) in many jurisdictions. Therefore, any dispute with a tax authority may result in a payment that is significantly different from current estimates. If payment of these amounts ultimately proves to be less than the recorded amounts, the reversal of the liabilities generally would result in tax benefits being recognized in the period when we determine the liabilities are no longer necessary. If our estimate of tax liabilities proves to be less than the amount for which it is ultimately liable, we would incur additional charges, and such charges could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

The Medtronic, Inc. tax court proceeding outcome could have a material adverse impact on our financial condition.

In March 2009, the IRS issued its audit report for Medtronic Inc. for fiscal years 2005 and 2006. Medtronic, Inc. reached agreements 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 our key manufacturing sites. An adverse outcome in this matter could materially and adversely affect our business, results of operations, financial condition, and cash flows. See Note 18 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Future potential changes to the U.S. tax laws could result in us being treated as a U.S. corporation for U.S. federal tax purposes, and the IRS may not agree with the conclusion that we should be treated as a foreign corporation for U.S federal income tax purposes.

Because Medtronic plc is organized under the laws of Ireland, we would generally be classified as a foreign corporation under the general rule that a corporation is considered tax resident in the jurisdiction of its organization or incorporation for U.S. federal income tax purposes. Even so, the IRS may assert that we should be treated as a U.S. corporation (and, therefore, a U.S. tax resident) for U.S. federal income tax purposes pursuant to Section 7874 of the U.S. Internal Revenue Code of 1986, as amended (the Code). In addition, a retroactive change to U.S. tax laws in this area could change this classification. If we were to be treated as a U.S. corporation for federal tax purposes, we could be subject to substantially greater U.S. tax liability than currently contemplated as a non-U.S. corporation.

Legislative or other governmental action relating to the denial of U.S. federal or state governmental contracts to U.S. companies that redomicile abroad could adversely affect our business.

Various U.S. federal and state legislative proposals that would deny governmental contracts to U.S. companies that move their corporate location abroad may affect us. We are unable to predict the likelihood that, or final form in which, any such proposed legislation might become law, the nature of the regulations that may be promulgated under any future legislative enactments, or the effect such enactments and increased regulatory scrutiny may have on our business.

Risks Relating to Our Jurisdiction of Incorporation

We are incorporated in Ireland, and Irish law differs from the laws in effect in the U.S. and may afford less protection to holders of our securities.

Our shareholders may have more difficulty protecting their interests than would shareholders of a corporation incorporated in a jurisdiction of the United States. It may not be possible to enforce court judgments obtained in the U.S. against us in Ireland based on the civil liability provisions of the U.S. federal or state securities laws. In addition, there is some uncertainty as to whether the courts of Ireland would recognize or enforce judgments of U.S. courts obtained against us or our directors or officers based on the civil liabilities provisions of the U.S. federal or state securities laws or hear actions against us or those persons based on those laws. We have been advised that the U.S. currently does not have a treaty with Ireland providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters. Therefore, a final judgment for the payment of money rendered by any U.S. federal or state court based on civil liability, whether or not based solely on U.S. federal or state securities laws, would not automatically be enforceable in Ireland.

As an Irish company, we are governed by the Irish Companies Act 2014, which differs in some material respects from laws generally applicable to U.S. corporations and shareholders, including, among others, differences relating to interested director and officer transactions and shareholder lawsuits. Likewise, the duties of directors and officers of an Irish company generally are owed to the company only. Shareholders of Irish companies generally do not have a personal right of action against directors or officers of the company and may exercise such rights of action on behalf of the company only in limited circumstances. Accordingly, holders of our securities may have more difficulty protecting their interests than would holders of securities of a corporation incorporated in the U.S.

As an Irish public limited company, certain capital structure decisions require shareholder approval, which may limit Medtronic's flexibility to manage its capital structure.

Under Irish law, our authorized share capital can be increased by an ordinary resolution of our shareholders and the directors may issue new ordinary or preferred shares, without shareholder approval, once authorized to do so by our articles of association or by an ordinary resolution of our shareholders. Additionally, subject to specified exceptions, Irish law grants statutory preemption rights to existing shareholders where shares are being issued for cash consideration but allows shareholders to disapply such statutory preemption rights either in our articles of association or by way of special resolution. Such disapplication can either be generally applicable or be in respect of a particular allotment of shares. Accordingly, at our 2021 Annual General Meeting, our Shareholders authorized our Board of Directors to issue up to 33% of our issued ordinary shares and further authorized our Board of Directors to issue up to 10% of such shares for cash without first offering them to our existing shareholders (provided that with respect to 5% of such shares, such allotment is to be used for the purposes of a specified capital investment). Both of these authorizations will expire on June 9, 2023, unless renewed by shareholders for a further period. We anticipate seeking new authorizations at our 2022 Annual General Meeting and in subsequent years. We cannot provide any assurance that these authorizations will always be approved, which could limit our ability to issue equity and thereby adversely affect the holders of our securities.

A transfer of our shares, other than ones effected by means of the transfer of book-entry interests in the Depository Trust Company, may be subject to Irish stamp duty.

Transfers of our shares effected by means of the transfer of book entry interests in the Depository Trust Company (DTC) will not be subject to Irish stamp duty. However, if a shareholder holds our shares directly rather than beneficially through DTC, any transfer of shares could be subject to Irish stamp duty (currently at the rate of 1% of the higher of the price paid or the market value of the shares acquired). Payment of Irish stamp duty is generally a legal obligation of the transferee. The potential for stamp duty could adversely affect the price of shares.

In certain limited circumstances, dividends we pay may be subject to Irish dividend withholding tax and dividends received by Irish residents and certain other shareholders may be subject to Irish income tax.

In certain limited circumstances, dividend withholding tax (currently at a rate of 25%) may arise in respect of dividends paid on our shares. A number of exemptions from dividend withholding tax exist such that shareholders resident in the U.S. and other specified countries that have a tax treaty with Ireland may be entitled to exemptions from dividend withholding tax.

Shareholders resident in the U.S. that hold their shares through DTC will not be subject to dividend withholding tax, provided the addresses of the beneficial owners of such shares in the records of the brokers holding such shares are recorded as being in the U.S. (and such brokers

have further transmitted the relevant information to a qualifying intermediary appointed by us). However, other shareholders may be subject to dividend withholding tax, which could adversely affect the price of their shares.

Shareholders entitled to an exemption from Irish dividend withholding tax on dividends received from us will not be subject to Irish income tax in respect of those dividends unless they have some connection with Ireland other than their shareholding in our Company (for example, they are resident in Ireland). Shareholders who are not resident nor ordinarily resident in Ireland, but who receive dividends subject to Irish dividend withholding tax, will generally have no further liability to Irish income tax on those dividends.

Our shares received by means of a gift or inheritance could be subject to Irish capital acquisitions tax.

Irish capital acquisitions tax (CAT) could apply to a gift or inheritance of our shares irrespective of the place of residence, ordinary residence or domicile of the parties. This is because our shares will be regarded as property situated in Ireland. The person who receives the gift or inheritance has primary liability for CAT. Gifts and inheritances passing between spouses are exempt from CAT. Children currently have a tax-free threshold of €335,000 in respect of taxable gifts or inheritances received from their parents. Irish Revenue typically updates the amount of this tax-free threshold on an annual basis.

Economic and Industry Risks

Changes in the prices of our goods and services and/or inflationary costs may have a material adverse effect on our business, results of operations, financial condition and cash flows.

We have experienced, and may continue to experience, decreasing prices for certain of our goods and services due to pricing pressure from managed care organizations and other third-party payers on our customers, increased market power of our customers as the medical device industry consolidates and increased competition among medical engineering and manufacturing services providers. We have also recently experienced, and may continue to experience, rising costs due to inflation. If the prices for our goods and services change or inflation continues to rise, we may be unable to sufficiently reduce our expenses or offset rising costs through increased prices to customers. As a result, our business, results of operations, financial condition and cash flows may be adversely affected.

We are subject to a variety of risks associated with global operations that could adversely affect our profitability and operating results.

We develop, manufacture, distribute and sell our products globally. We intend to continue to expand our operations and to pursue growth opportunities outside the U.S., especially in emerging markets. Operations in different countries including emerging markets could expose us to additional and greater risks and potential costs, including:

- fluctuations in currency exchange rates,
- healthcare reform legislation,
- the need to comply with different regulatory regimes worldwide that are subject to change and that could restrict our ability to manufacture and sell our products,
- local product preferences and product requirements,
- longer-term receivables than are typical in the U.S.,
- trade protection measures, tariffs and other border taxes, and import or export licensing requirements,
- less intellectual property protection in some countries outside the U.S. than exists in the U.S.,
- different labor regulations and workforce instability,
- political and economic instability, including as a result of wars and insurrections,
- the expiration and non-renewal of foreign tax rulings and/or grants,
- potentially negative consequences from changes in or interpretations of tax laws, and
- economic instability and inflation, recession or interest rate fluctuations.

The ongoing global economic competition and trade tensions between the U.S. and China present risk to Medtronic. Although we have been able to mitigate some of the impact on Medtronic from increased duties imposed by both sides (through petitioning both governments for tariff exclusions and other mitigations), the risk remains of additional tariffs and other kinds of restrictions. Tariff exclusions awarded to Medtronic by the U.S. Government require periodic renewal, and policies for granting exclusions could shift. The U.S. and China could impose other

types of restrictions such as limitations on government procurement or technology export restrictions, which could affect Medtronic's access to the markets. China comprises approximately eight percent of our total revenues.

The Russia-Ukraine conflict and resulting sanctions and export restrictions are creating barriers to doing business in Russia and adversely impacting global supply chains. While we have no manufacturing, distribution or direct material suppliers in the region, we are closely monitoring the potential raw material/sub-tier supplier impact in both Russia and Ukraine. Materials like palladium and neon, which are both dependent on Russia supply, are part of broader semiconductor shortages in industry. Additional sanctions, export restrictions, and

potential countermeasures within Russia may lead to greater uncertainty and geopolitical shifts in Asia that could cause additional adverse impacts on global supply chains and our business, results of operations, financial condition and cash flows.

More generally, several governments including the U.S. have raised the possibility of policies to induce “re-shoring” of supply chains, less reliance on imported supplies, and greater national production. Examples include potential “Buy America” requirements in the U.S. If such steps triggered retaliation in other markets restricting access to foreign products in purchases by their government-owned healthcare systems, the result could be a significant impact on Medtronic.

Other significant changes or disruptions to international trade arrangements, such as termination or modifications of other existing trade agreements, may adversely affect our business, results of operations, financial condition and cash flows. In addition, a significant amount of our trade receivables are with national healthcare systems in many countries. Repayment of these receivables is dependent upon the political and financial stability of those countries. In light of these global economic fluctuations, we continue to monitor the creditworthiness of customers. Failure to receive payment of all or a significant portion of these receivables could adversely affect our business, results of operations, financial condition and cash flows.

The COVID-19 pandemic, and the responses of business and governments to the pandemic, have at times resulted in reduced availability of air transport, port closures, increased border controls or closures, increased transportation costs and increased security threats to our supply chain, and countries may continue to close borders, impose prolonged quarantines, and further restrict travel and other activities. Our business could be adversely impacted if we are unable to successfully manage these and other risks of global operations.

Finally, changes in currency exchange rates may impact the reported value of our revenues, expenses, and cash flows. We cannot predict changes in currency exchange rates, the impact of exchange rate changes, nor the degree to which we will be able to manage the impact of currency exchange rate changes.

Consolidation in the healthcare industry could have an adverse effect on our revenues and results of operations.

Many healthcare industry companies, including healthcare systems, distributors, manufacturers, providers, and insurers, are consolidating or have formed strategic alliances. As the healthcare industry consolidates, competition to provide goods and services to industry participants will become more intense. Further, this consolidation creates larger enterprises with greater negotiating power, which they can use to negotiate price concessions. If we must reduce our prices because of industry consolidation, or if we lose customers as a result of consolidation, our business, results of operations, financial condition, and cash flows could be adversely affected.

Healthcare industry cost-containment measures could result in reduced sales of our medical devices and medical device components.

Most of our customers, and the healthcare providers to whom our customers supply medical devices, rely on third-party payers, including government programs and private health insurance plans, to reimburse some or all of the cost of the procedures in which medical devices that incorporate components we manufacture or assemble are used. The continuing efforts of governmental authorities, insurance companies and other payers of healthcare costs to contain or reduce these costs could lead to patients being unable to obtain approval for payment from these third-party payers. If third-party payer payment approval cannot be obtained by patients, sales of finished medical devices that include our components may decline significantly and our customers may reduce or eliminate purchases of our components. The cost-containment measures that healthcare providers are instituting, both in the U.S. and outside of the U.S., could harm our ability to operate profitably. For example, managed care organizations have successfully negotiated volume discounts for pharmaceuticals, and GPOs and IDNs have also concentrated purchasing decisions for some customers, which has led to downward pricing pressure for medical device companies, including us.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Medtronic's principal executive office is located in Ireland and is leased by the Company, while its main operational offices are located in the Minneapolis, Minnesota metropolitan area and are owned by the Company.

The Company's total manufacturing and research space is approximately 9.6 million square feet. Approximately 37 percent of the manufacturing or research facilities are owned by Medtronic and the remaining balance is leased. The following is a summary of the Company's largest manufacturing facilities by location:

Location Country or State	Square Feet (in thousands)
Connecticut	1,138
Puerto Rico	811
Mexico	762
China	735
Minnesota	623
Italy	485
Ireland	446
Dominican Republic	304
Arizona	294
Switzerland	283
France	268
Colorado	259
Florida	255
California	210

Medtronic also maintains sales and administrative offices in the U.S. at five locations in five states and outside the U.S. at 129 locations in 62 countries. A majority of these locations are leased. The Company is using substantially all of its currently available productive space to develop, manufacture, and market its products. The Company's facilities are well-maintained, suitable for their respective uses, and adequate for current needs.

Item 3. Legal Proceedings

In accordance with Item 103 of Regulation S-K, we have adopted a $1 million disclosure threshold for proceedings under environmental laws to which a governmental authority is a party, as we believe matters under this threshold are not material to the Company. A discussion of the Company’s legal proceedings and other loss contingencies are described in Note 18 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Medtronic's Common Equity, Related Shareholder Matters, and Issuer Purchases of Equity Securities

The Company's ordinary shares are listed on the New York Stock Exchange under the symbol "MDT."

The following table provides information about the shares repurchased by the Company during the fourth quarter of fiscal year 2022:

Fiscal Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as a Part of Publicly Announced Program	Maximum Approximate Dollar Value of Shares that may yet be Purchased Under the Program
1/29/2022-2/25/2022	1,130,750	$ 103.16	1,130,750	$ 4,234,214,099
2/26/2022-4/1/2022	6,141,716	107.85	6,141,716	3,571,839,180
4/2/2022-4/29/2022	5,627,112	110.47	5,627,112	2,950,215,113
Total	12,899,578	$ 108.58	12,899,578	$ 2,950,215,113

In March 2019, the Company's Board of Directors authorized the repurchase of $6.0 billion of the Company's ordinary shares. There is no specific time-period associated with these repurchase authorizations. For additional discussion, see Note 11 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

On June 20, 2022, there were approximately 22,372 shareholders of record of the Company's ordinary shares. Ordinary cash dividends declared and paid totaled $0.63 per share for each quarter of fiscal year 2022 and $0.58 per share for each quarter of fiscal year 2021. On May 26, 2022, the Company announced an increase in Medtronic's cash dividends for the first quarter of fiscal year 2023, raising the amount to $0.68 per share.

Stock Performance Graph

The following graph compares the cumulative total shareholder return on Medtronic's ordinary shares with the cumulative total shareholder return on the Standard & Poor's (S&P) 500 Index and the S&P 500 Health Care Equipment Index for the last five fiscal years. The graph assumes that $100 was invested at market close on April 24, 2017 in Medtronic's ordinary shares, the S&P 500 Index, and the S&P 500 Health Care Equipment Index and that all dividends were reinvested.

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Company/Index	April 2017	April 2018	April 2019	April 2020	April 2021	April 2022
Medtronic plc	$ 100.00	$ 100.06	$ 109.91	$ 127.67	$ 172.10	$ 140.27
S&P 500 Index	100.00	114.20	128.28	126.28	189.28	189.68
S&P 500 Health Care Equipment Index	100.00	120.35	141.25	160.75	213.16	198.87

For information on the Company's equity compensation plans, see "Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters" in this Annual Report on Form 10-K.

Irish Restrictions on Import and Export of Capital

Except as indicated below, there are no restrictions on non-residents of Ireland dealing in Irish domestic securities, which includes ordinary shares of Irish companies. Except as indicated below, dividends and redemption proceeds also continue to be freely transferable to non-resident holders of such securities. The Financial Transfers Act, 1992 provides that the Irish Minister for Finance can make provision for the restriction of financial transfers between Ireland and other countries. For the purposes of this Act, "financial transfers" include all transfers which would be movements of capital or payments within the meaning of the treaties governing the E.U. if they had been made between Member States of the E.U. This Act and underlying E.U. regulations provide for the restriction of financial transfers to certain countries, organizations, and people including the Al-Qaeda network and the Taliban, Afghanistan, Belarus, Burma (Myanmar), Democratic People's Republic of Korea, Democratic Republic of Congo, Iran, Iraq, Ivory Coast, Lebanon, Liberia, Libya, Republic of Guinea, Russia, Somalia, Sudan, Syria, Tunisia, certain persons and groups in Ukraine and Zimbabwe.

Any transfer of, or payment in respect of, a share or interest in a share involving the government of any country that is currently the subject of United Nations or E.U. sanctions, any person or body controlled by any of the foregoing, or by any person acting on behalf of the foregoing, may be subject to restrictions pursuant to such sanctions as implemented into Irish law.

Irish Taxes Applicable to U.S. Holders

Dividends paid by Medtronic will generally be subject to Irish dividend withholding tax (currently at a rate of 25 percent) unless an exemption applies.

Dividends paid to U.S. residents will not be subject to Irish dividend withholding tax provided that:

- in the case of a beneficial owner of Medtronic shares held in the Depository Trust Company (DTC), the address of the beneficial owner in the records of his or her broker is in the United States and this information is provided by the broker to the Company's qualifying intermediary; or
- in the case of a record owner, the record owner has provided to the Company's transfer agent a valid U.S. Certification of Residence (Form 6166) or valid Irish Non-Resident Form V2.

Irish income tax may also arise with respect to dividends paid on Medtronic's ordinary shares. A U.S. resident who meets one of the exemptions from dividend withholding tax described above and who does not hold Medtronic shares through a branch or agency in Ireland through which a trade is carried on generally will not have any Irish income tax liability on a dividend paid by Medtronic. In addition, if a U.S. shareholder is subject to the dividend withholding tax, the withholding payment discharges any Irish income tax liability, provided the shareholder furnishes to the Irish Revenue authorities a statement of the dividend withholding tax imposed.

While the U.S./Ireland Double Tax Treaty contains provisions regarding withholding, due to the wide scope of the exemptions from dividend withholding tax available under Irish domestic law, it would generally be unnecessary for a U.S. resident shareholder to rely on the treaty provisions.

Item 6. Reserved

Item 7. 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 the Company. The discussion focuses on our financial results for the fiscal year ended April 29, 2022 (fiscal year 2022) and the fiscal year ended April 30, 2021 (fiscal year 2021). A discussion on our results of operations for fiscal year 2021 as compared to the year ended April 24, 2020 (fiscal year 2020) is included in Part II, Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" of our Annual Report on Form 10-K for the year ended April 30, 2021, filed with the SEC on June 25, 2021, and is incorporated by reference into this Form 10-K. You should read this discussion and analysis along with our consolidated financial statements and related notes thereto at April 29, 2022 and April 30, 2021 and for fiscal years 2022, 2021, and 2020, which are presented within "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K. Amounts reported in millions within this annual report are computed based on the amounts in thousands, and therefore, the sum of the components may not equal the total amount reported in millions due to rounding. Additionally, certain columns and rows within tables may not sum due to rounding.

Financial Trends

Throughout this Management's Discussion and Analysis, we present certain financial measures that facilitate management's review of 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 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 benefits 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

The global healthcare system is continuing to respond to the unprecedented challenge posed by the COVID-19 pandemic ("COVID-19" or the "pandemic"). Most of our businesses were affected by a decline in global procedural volumes during fiscal year 2021, particularly in the first and second quarters. During fiscal year 2022, the pandemic, to a lesser extent, continued to affect most of our businesses, including the most recent COVID-19 lockdown in China which began in late March. In addition to the pandemic, our business faced the impacts of healthcare system staffing shortages on procedural volumes and significant supply chain disruptions in certain businesses particularly in the fourth quarter of fiscal year 2022. We cannot predict with confidence the duration and severity of the pandemic and its impact on global procedure volumes. We expect medical procedure rates may continue to vary by therapy and country and to be impacted by regional COVID-19 case volumes, vaccine and booster immunization rates, and new

COVID-19 variants. Additionally, we cannot predict the impact healthcare system staffing shortages will have on procedural volumes, and the impact supply chain disruptions will have on the business.

The following is a summary of revenue, diluted earnings per share, and cash flow for fiscal years 2022 and 2021:

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GAAP to Non-GAAP Reconciliations

Starting with the quarter ended April 29, 2022, the Company will no longer adjust non-GAAP financial measures for certain license payments for, or acquisitions of, technology not approved by regulators due to recent industry guidance from the U.S. Securities and Exchange Commission. Historical non-GAAP financial measures presented in this Annual Report on Form 10-K have been recast for comparability.

The tables below present reconciliations of our Non-GAAP financial measures to the most directly comparable financial measures prepared in accordance with U.S. GAAP for fiscal years 2022 and 2021.

	Fiscal year ended April 29, 2022				
(in millions, except per share data)	Income Before Income Taxes	Income Tax Provision (Benefit)	Net Income Attributable to Medtronic	Diluted EPS	Effective Tax Rate
GAAP	$ 5,517	$ 456	$ 5,039	$ 3.73	8.3 %
Non-GAAP Adjustments:					
Restructuring and associated costs [1]	335	54	281	0.21	16.1
Acquisition-related items [2]	(43)	5	(48)	(0.04)	(11.6)
Certain litigation charges	95	17	78	0.06	17.9
(Gain)/loss on minority investments [3]	(12)	—	(9)	(0.01)	—
Medical device regulations [4]	102	16	86	0.06	15.7
Amortization of intangible assets	1,733	266	1,467	1.09	15.3
MCS impairment / costs [5]	881	220	661	0.49	25.0
Certain tax adjustments, net [6]	—	50	(50)	(0.04)	—
Non-GAAP	$ 8,609	$ 1,084	$ 7,505	$ 5.55	12.6 %

(in millions, except per share data)	Fiscal year ended April 30, 2021				
	Income Before Income Taxes	Income Tax (Benefit) Provision	Net Income Attributable to Medtronic	Diluted EPS	Effective Tax Rate
GAAP	$ 3,895	$ 265	$ 3,606	$ 2.66	6.8 %
Non-GAAP Adjustments:					
Restructuring and associated costs [1]	617	128	489	0.36	20.7
Acquisition-related items [2]	(15)	(20)	4	—	126.7
Certain litigation charges	118	23	95	0.07	19.5
(Gain)/loss on minority investments [3]	(61)	—	(57)	(0.04)	—
Impairment charges [7]	76	7	68	0.05	10.5
Medical device regulations [4]	83	15	68	0.05	18.1
Debt tender premium and other charges [8]	308	60	248	0.18	19.5
Amortization of intangible assets	1,783	283	1,500	1.11	15.9
Certain tax adjustments, net [9]	—	41	(41)	(0.03)	—
Non-GAAP	$ 6,804	$ 802	$ 5,980	$ 4.42	11.8 %

(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) The charges primarily include business combination costs, changes in fair value of contingent consideration, specifically for the fiscal year ended April 30, 2021, changes in amounts accrued for certain contingent liabilities for a past acquisition.

(3) 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.

(4) The charges represent estimated 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, which are expected to be substantially complete by the end of fiscal year 2023.

(5) The charges relate to the Company's June 2021 decision to stop the distribution and sale of the Medtronic HVAD System within the Mechanical Circulatory Support Operating Unit (MCS). The charges included $515 million of non-cash impairments, primarily related to $409 million of intangible asset impairments, as well as $366 million for commitments and obligations in connection with the decision, including patient support obligations, restructuring, and other associated costs. Medtronic is committed to serving the needs of the approximately 3,500 patients currently implanted with the HVAD System.

(6) The net benefit primarily relates to the deferred tax impact associated with a step up in tax basis for Swiss Cantonal purposes and a change in tax rates on deferred taxes associated with intellectual property, which are partially offset by the amortization on previously established deferred tax assets from intercompany intellectual property transactions and a charge related to a change in the Company's permanent reinvestment assertion on certain historical earnings.

(7) The charges relate to the abandonment of certain intangible assets in our Neuroscience segment.

(8) The charges relate to the early redemption of approximately $6.0 billion of debt.

(9) The net benefit primarily relates to the finalization of an audit at the IRS Appellate level for fiscal years 2012 through 2014 and the capitalization of certain research and development costs for U.S. income tax purposes, which are partially offset by the impact of an intercompany sale of assets, and a tax basis adjustment and amortization of previously established deferred tax assets from intercompany intellectual property transactions.

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:

(in millions)	Fiscal Year 2022	Fiscal Year 2021
Net cash provided by operating activities	$ 7,346	$ 6,240
Additions to property, plant, and equipment	(1,368)	(1,355)
Free cash flow	$ 5,978	$ 4,885

Refer to the Summary of Cash Flows section for drivers of the change in cash provided by operating activities.

NET SALES

Segment and Division

The charts below illustrate the percent of net sales by segment for fiscal years 2022 and 2021:

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The table below includes net sales by segment and division for fiscal years 2022 and 2021:

(in millions)	Net Sales by Fiscal Year 2022	Net Sales by Fiscal Year 2021	Percent Change
Cardiac Rhythm & Heart Failure	$ 5,908	$ 5,584	6 %
Structural Heart & Aortic	3,055	2,834	8
Coronary & Peripheral Vascular	2,460	2,354	5
Cardiovascular	11,423	10,772	6
Surgical Innovations	6,060	5,438	11
Respiratory, Gastrointestinal, & Renal	3,081	3,298	(7)
Medical Surgical	9,141	8,737	5
Cranial & Spinal Technologies	4,456	4,288	4
Specialty Therapies	2,592	2,307	12
Neuromodulation	1,735	1,601	8
Neuroscience	8,784	8,195	7
Diabetes	2,338	2,413	(3)
Total	$ 31,686	$ 30,117	5 %

Segment and Market Geography

The charts below illustrate the percent of net sales by market geography for fiscal years 2022 and 2021:

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The table below includes net sales by market geography for each of our segments for fiscal years 2022 and 2021:

	U.S.[1]			Non-U.S. Developed Markets[2]			Emerging Markets[3]		
(in millions)	Fiscal Year 2022	Fiscal Year 2021	% Change	Fiscal Year 2022	Fiscal Year 2021	% Change	Fiscal Year 2022	Fiscal Year 2021	% Change
Cardiovascular	$ 5,545	$ 5,248	6 %	$ 3,866	$ 3,752	3 %	$ 2,012	$ 1,773	13 %
Medical Surgical	3,862	3,650	6	3,373	3,320	2	1,905	1,766	8
Neuroscience	5,753	5,456	5	1,801	1,724	4	1,229	1,015	21
Diabetes	974	1,171	(17)	1,085	1,019	6	279	222	26
Total	$ 16,135	$ 15,526	4 %	$ 10,126	$ 9,815	3 %	$ 5,426	$ 4,777	14 %

(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 of 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.

The increase in net sales for fiscal year 2022 was primarily due to the recovery of global procedure volumes from the downturn experienced in the first and second quarters of fiscal year 2021 as a result of the COVID-19 pandemic. The net sales increase was partially offset by supply chain challenges, particularly in the fourth quarter of fiscal year 2022, as well as the impact of COVID-19 experienced in fiscal year 2022, particularly in the U.S. and China. For fiscal year 2022, currency had an unfavorable impact of $107 million on non-U.S. developed markets and a favorable impact of $33 million on emerging markets.

Looking ahead, a number of macro-economic and geopolitical factors could negatively impact our business, including without limitation:

- The uncertain and uneven impact of COVID-19 on future procedural volumes, supply constraints including certain electronic components and semiconductors, healthcare staffing, worker absenteeism with our customers, suppliers, and in our own operations and field teams, and resulting impacts on demand for our products and therapies;
- The potential impact that sanctions and other measures being imposed in response to the Russia-Ukraine conflict could have on revenue and supply chain. The financial impact of the conflict in the fourth quarter of fiscal year 2022, including on accounts receivable and inventory reserves, was not material and for the fiscal year ended April 29, 2022, the business of the Company in these countries represented less than 1% of the Company's consolidated revenues and assets. Although the implications of this conflict are difficult to predict at this time, the ongoing conflict may increase pressure on the global economy and supply chains, resulting in increased future volatility risk for our business operations and performance.
- Competitive product launches and pricing pressure, geographic macro-economic risks including general price inflation, rising interest rates, reimbursement challenges, impacts from changes in the mix of our product offerings, delays in product registration approvals, replacement cycle challenges, and fluctuations in currency exchange rates; and
- National and provincial tender pricing for certain products, particularly in China.

Cardiovascular

Cardiovascular products include pacemakers, insertable cardiac monitors, cardiac resynchronization therapy devices, implantable cardioverter defibrillators (ICD), leads and delivery systems, 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. Cardiovascular also includes Care Management Services and Cath Lab Managed Services (CLMS) within the Cardiac Rhythm & Heart Failure division. Cardiovascular net sales for fiscal year 2022 were $11.4 billion, an increase of 6 percent as compared to fiscal year 2021. Currency had an unfavorable impact on net sales for fiscal year 2022 of $32 million. The net sales increase was primarily due to the recovery of global procedure volumes from the declines experienced in fiscal year 2021 along with growth from recent product launches, partially offset by global supply chain disruptions and declines in China due to recent COVID-19 lockdowns.

The charts below illustrate the percent of Cardiovascular net sales by division for fiscal years 2022 and 2021:

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Cardiac Rhythm & Heart Failure (CRHF) net sales increased 6 percent in fiscal year 2022 as compared to fiscal year 2021. The increase was led by Cardiac Rhythm Management with growth in TYRX antibacterial envelopes, CRT-Ds, and cardiac pacing therapies due to Micra and transvenous pacemakers. Cardiac Ablation Solutions also led growth with strong sales of Arctic Front cryoablation systems. The net sales growth was partially offset by a decline of Medtronic HVAD System net sales as a result of our June 2021 decision to stop the

distribution and sale of the system. The net sales for the Medtronic HVAD system for fiscal year 2021 was $141 million.

Structural Heart & Aortic (SHA) net sales increased 8 percent in fiscal year 2022 as compared to fiscal year 2021. The increase was led by growth in transcatheter aortic valve replacement (TAVR) net sales as a result of continued adoption of the CoreValve Evolut. Cardiac Surgery also contributed to the net increase in sales as a result of broad growth across the business, particularly from strong sales of Extra-Corporeal Life Support (ECLS) devices. These increases were partially offset by declines within Aortic caused by field corrective actions (FCA) and COVID-19 challenges. The most notable field corrective actions were for the Valiant Navion Thoracic Stent Graft System FCA issued in the fourth quarter of fiscal year 2021 and the Endurant II/IIs Stent Graft Systems FCA issued in the third quarter of fiscal year 2022.

Coronary & Peripheral Vascular (CPV) net sales increased 5 percent in fiscal year 2022 as compared to fiscal year 2021. The increase was led by growth in Peripheral Vascular Health driven by strong performance of the recently launched Abre venous self-expanding stent system for Deep Venous disease, as well as our superficial venous product portfolio, including the VenaSeal and ClosureFast systems. The increase was partially offset by declines in Coronary as well as Atherectomy products due to impacts of COVID-19 on procedural volumes.

In addition to the macro-economic and geopolitical factors described in the Executive Level Overview, looking ahead, we expect Cardiovascular could be affected by the following:

- Continued growth of our Micra transcatheter pacing system. The Micra AV launched in Japan in November 2021 and received approval in China in May 2022. Micra AV expands the Micra target population from 15 percent to 45 percent of pacemaker patients.
- 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.
- Growth of the Cobalt and Crome portfolio of ICDs and CRT-Ds.
- Continued acceptance and expansion of the Claria MRI CRT-D system with AdaptivCRT and compatibility with TriageHF technology.
- Continued acceptance and expansion of the LINQ II cardiac monitor. Supply for the LINQ II cardiac monitor is improving as we continue to ramp our wafer scale manufacturing. During the third quarter of fiscal year 2022, we launched two AccuRhythm AI algorithms on the LINQ II platform to significantly reduce false positive alerts for Atrial Fibrillation and Pause while retaining sensitivity for true positive detection, and reduce clinic workload and burden.
- Growth of the CRT-P quadripolar pacing system.
- Continued growth, adoption, and utilization of the TYRX Envelope for implantable devices.
- Continued acceptance and market expansion of Arctic Front cryoablation for treatment of atrial fibrillation. In June 2021, the Arctic Front cryoablation system received a first line therapy designation from the U.S. FDA for the treatment of atrial fibrillation.
- Continued acceptance and growth of the self-expanding CoreValve Evolut transcatheter aortic valve replacement platform into intermediate risk indication globally and for the treatment of patients determined to be at low risk with surgery.
- Continued expansion and training of field support to increase coverage in the U.S. centers performing TAVR procedures.
- Continued acceptance and growth from Evolut PRO, which provides industry-leading hemodynamics, reliable delivery, enhanced durability versus SAVR procedures at 5 years, and advanced sealing with an excellent safety profile. In August 2021, the U.S. FDA approved the Evolut FX TAVR, a system enhancement designed to improve the overall procedural experience through enhancements in deliverability, implant visibility and deployment stability. During the third quarter of fiscal year 2022, Evolut PRO received NMPA approval within China.

- Continued acceptance and growth from the VenaSeal Closure System in the U.S. The VenaSeal Closure 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 of the Abre venous self-expanding stent system in the U.S. as well as pressure from competitors re-entering the market. Abre is designed for the unique challenges of venous disease. It offers easy deployment, to let physicians focus on their patient, and delivers demonstrated endurance, to give patients freedom of movement.
- Our voluntary recall of the Valiant Navion Thoracic Stent Graft System and our ability to ramp production of our previous generation product, the Valiant Captivia Thoracic Stent Graft System. We are currently ramping production of the Valiant Captivia Thoracic Stent Graft System and plan to reach full production capacity in the first quarter of fiscal year 2023.

- Our June 2021 decision to stop the distribution and sale of the Medtronic HVAD System.
- Our ability to successfully develop, obtain regulatory approval of and commercialize the products within our pipeline, which include, but are not limited to, the Symplicity Spyral Multi-Electrode Renal Denervation Catheter, Pulse Field Ablation, a novel energy source that is non-thermal, Aurora Extravascular ICD and transcatheter mitral and tricuspid therapy products led by our Intrepid system.

Medical Surgical

Medical Surgical'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, surgical stapling devices, vessel sealing instruments, wound closure, electrosurgery products, hernia mechanical devices, mesh implants, advanced ablation, interventional lung, ventilators, airway products, renal care products, and sensors and monitors for pulse oximetry, capnography, level of consciousness and cerebral oximetry. Medical Surgical's net sales for fiscal year 2022 were $9.1 billion, an increase of 5 percent as compared to fiscal year 2021. Currency had an unfavorable impact on net sales of $44 million for fiscal year 2022. The net sales increase was primarily due to the recovery of global procedure volumes from the declines experienced in fiscal year 2021 partially offset by global supply chain disruptions and declines in China due to recent COVID-19 lockdowns.

The charts below illustrate the percent of Medical Surgical net sales by division for fiscal years 2022 and 2021:

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Surgical Innovations (SI) net sales for fiscal year 2022 increased 11 percent as compared to fiscal year 2021. Net sales growth was led by Advanced Surgical instruments, driven by the continued adoption of the Company's LigaSure, Sonicision, and Tri-Staple technologies, and Hernia and Wound Management. The increase was partially offset by declines in the fourth quarter of fiscal year 2022 resulting from global supply chain challenges, including resins, semiconductors, and packaging trays, which impacted energy and stapling products.

Respiratory, Gastrointestinal, & Renal (RGR) net sales for fiscal year 2022 decreased 7 percent as compared to fiscal year 2021. RGR net sales declines were largely due to declines in ventilator demands when compared fiscal year 2021 as demand returned to pre-pandemic levels in the fourth quarter of fiscal year 2022. These declines were partially offset by growth in Patient Monitoring, led by the Nellcor pulse oximetry sensors and the Bispectral Index (BIS) sensors, Gastrointestinal, driven by the esophageal product portfolio, as well as growth in Renal Care Solutions.

In addition to the macro-economic and geopolitical factors described in the Executive Level Overview, looking ahead we expect Medical Surgical 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 (minimally invasive surgery). 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.
- Our ability to execute ongoing strategies in order to address the competitive pressure of reprocessing of our vessel sealing disposables and growth of surgical soft tissue robotics procedures in the U.S.
- Our ability to create markets and drive products 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 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, McGRATH MAC video laryngoscopes, SonarMed Airway Monitoring System for the NICU, and the Nellcor Oxysoft pulse oximetry system for neonatal and adult critical care patients, which received U.S. FDA clearance during the fourth quarter of fiscal year 2022.
- 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 our Illumisite navigation platform, combined with our portfolio of biopsy tools including the Arcpoint pulmonary needle, and to access lesions outside the airway, the CrossCountry transbronchial access tool. This comprehensive portfolio gives the power to display position and access lung nodules in the periphery of the lungs, in 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.
- Continued future growth internationally for the Hugo robotic assisted surgery (RAS) system for urologic, bariatric, gynecologic, and general surgery procedures as well as for our easy-to-access Touch Surgery Enterprise surgical video system. The Hugo RAS system, which received CE Mark in October 2021 as well as secured additional regulatory approvals in the third and fourth quarters of fiscal year 2022, is designed to help reduce unwanted variability, improve patient outcomes, and by extension, lower per procedure cost.
- The pending contribution of our Renal Care Solutions business as a result of the May 25, 2022 definitive agreement with DaVita Inc. Refer to the "Subsequent Events" section of this Management's Discussion and Analysis for additional information on the divestiture.
- Our ability to successfully develop, obtain regulatory approval of and commercialize the products within our pipeline, which include, but are not limited to, our Hugo RAS system in the U.S., our NextGen McGrath MAC video laryngoscopes, Signia power stapling devices, and our Ligasure and Sonicision vessel sealing devices.

Neuroscience

Neuroscience's products include various spinal implants, bone graft substitutes, biologic products, image-guided surgery and intra-operative imaging systems, robotic guidance systems used in the robot-assisted spine procedures, and systems that incorporate advanced energy surgical instruments. Neuroscience's products also focus on the treatment of overactive bladder, urinary retention, fecal incontinence, as well as products to treat ear, nose, and throat (ENT), and therapies to treat the diseases of the vasculature in and around the brain, including coils, neurovascular stents and flow diversion products. Neuroscience also manufactures products related to implantable neurostimulation therapies and drug delivery systems for the treatment of chronic pain, movement disorders, and epilepsy. Neuroscience’s net sales for fiscal year 2022 were $8.8 billion, an increase of 7 percent as compared to fiscal year 2021. Currency had a favorable impact on net sales for fiscal year 2022 of $3 million. The net sales increase was primarily due to the recovery of global procedure volumes from the declines experienced in fiscal year 2021, partially offset by global supply chain disruptions and declines in China due to COVID-19 lockdowns and reduced sales in advance of potential national volume-based pricing (VBP) tenders.

The graphs below illustrate the percent of Neuroscience net sales by division for fiscal years 2022 and 2021:

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Cranial & Spinal Technologies (CST) net sales for fiscal year 2022 increased 4 percent as compared to fiscal year 2021. Net sales growth was primarily driven by Neurosurgery with strong sales of the Midas Rex powered surgical instruments and StealthStation Navigation and O-arm Imaging System. Growth in CST also occurred in Spine and Biologics due to the recovery of global procedural volumes in the U.S., Japan, and Western Europe compared to the prior fiscal year. This growth was partially offset by recent reduced sales in China in advance of potential national VBP tender in Spine.

Specialty Therapies (Specialty) net sales for fiscal year 2022 increased 12 percent as compared to fiscal year 2021. Net sales growth was primarily driven by strength in Pelvic Health, ENT, and Neurovascular. Pelvic Health's growth was led by sales of the recently launched InterStim Micro neurostimulator and SureScan MRI leads. ENT growth was driven by the sales of StealthStation ENT Navigation System despite continued supply constraints in disposables, which are recovering. Neurovascular's growth was led by sales of flow diversion, hemorrhagic stroke, and liquid embolic products.

Neuromodulation (NM) net sales for fiscal year 2022 increased 8 percent as compared to fiscal year 2021. Sales growth occurred in both Pain Therapies and Brain Modulation and reflected a recovery in procedural volumes. Net sales growth was driven by strong performance of the Percept PC deep brain stimulation (DBS) device with BrainSense technology in Brain Modulation.

In addition to the macro-economic and geopolitical factors described in the Executive Level Overview, looking ahead we expect Neuroscience could be affected by the following:

- Continued growth from Enabling Technologies, including StealthStation Navigation and O-arm Imaging Systems, Midas Rex Powered Surgical Instruments, and ENT Navigation and Power Systems, as well as acceptance of the Stealth Autoguide cranial robotic guidance platform.
- 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.
- Continued growth from spine titanium interbody implants.
- 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, as well as AI-driven surgical planning, personalized spinal implants, and robot-assisted surgery due to Medicrea technologies, acquired in fiscal year 2021.
- Market acceptance and continued global adoption of innovative new spine products and procedural solutions within our CST division 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 acceptance and growth of our ENT and Pelvic Health therapies within our Specialty Therapies division, including our InterStim therapy with InterStim II, InterStim Micro and InterStim X neurostimulators 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.
- Continued acceptance and growth of the Solitaire 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.
- Market acceptance and continued global adoption of our Intellis spinal cord stimulator, DTM proprietary waveform, Evolve workflow algorithm, and Snapshot reporting to treat chronic pain in major markets around the world.
- Continued acceptance and growth of our Percept PC DBS device with BrainSense technology, including its treatment of Parkinson's Disease, epilepsy, and other movement disorders.
- Market acceptance and growth from SCS therapy for treating Diabetic Peripheral Neuropathy (DPN) on Intellis rechargeable neurostimulator and Vanta recharge-free neurostimulator which received U.S. FDA approval in January 2022.
- 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.
- Our ability to successfully develop, obtain regulatory approval of and commercialize the products within our pipeline, which include, but are not limited to, our closed-loop Percept PC and RC devices with adaptive DBS (aDBS), our hemorrhagic stroke intravascular device, and our next-generation spine enabling technologies.

Diabetes

Diabetes' products include insulin pumps, continuous glucose monitoring (CGM) systems, consumables, and smart insulin pen systems. Diabetes' sales for fiscal year 2022 were $2.3 billion, a decrease of 3 percent as compared to fiscal year 2021. Currency had an unfavorable impact on net sales for fiscal year 2022 of $2 million. Diabetes' net sales decline for fiscal year 2022 was primarily attributable to declines in the U.S. partially offset by growth in the MiniMed 780G insulin pump system and integrated CGM in the international markets.

In addition to the macro-economic and geopolitical factors described in the Executive Level Overview, looking ahead we expect Diabetes could be affected by the following:

- Patient demand for the MiniMed 770G insulin pump system, which launched in the U.S. in November 2020 and in Japan in January 2022. The system is powered by SmartGuard technology and features the added benefits of smartphone connectivity and an expanded age indication to children as young as age two.
- Continued growth internationally for the MiniMed 780G insulin pump system. The MiniMed 780G system was approved in the E.U. in June 2020 and has launched in over 40 countries on four continents outside the U.S. The global adoption of sensor-augmented insulin pump systems has resulted in strong sensor attachment rates.
- Continued acceptance and growth of the Guardian Connect CGM system which displays glucose information directly to a smartphone to help ensure patients have access to their glucose levels seamlessly and discretely. The Guardian Connect CGM system is available on both Apple iOS and Android devices.

- Strengthening our position in the diabetes market as a result of the September 2020 acquisition of Companion Medical. Companion Medical offered a U.S. FDA cleared InPen smart pen system that combines the freedom of a reusable Bluetooth pen with the intelligence of an intuitive mobile application that helps users administer the appropriate insulin dose. During the third quarter of fiscal year 2021, we integrated our CGM data into the InPen application, which allows users to have their Medtronic CGM readings in real-time alongside insulin dose information, all in one view.
- Continued pump and CGM competition in an expanding global market.
- Changes in medical reimbursement policies and programs, along with additional payor coverage on insulin pumps.

- Resolution of findings contained in a December 2021 U.S. FDA warning letter relating to the MiniMed 600 series insulin pump and a remote controller device for MiniMed 508 and Paradigm pumps. We are currently working with the U.S. FDA to resolve the findings. The existence of the warning letter may limit our ability to launch certain new Diabetes products in the U.S. prior to resolution of the findings.
- Our ability to successfully develop, obtain regulatory approval of and commercialize the products within our pipeline, which include, but are not limited to, our MiniMed 780G insulin pump and the Guardian 4 sensor, which have been submitted to the U.S. FDA.

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:

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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 fiscal year 2022 was $10.1 billion as compared to $10.5 billion for fiscal year 2021. The decrease in cost of products sold as a percentage of net sales was largely due to the conditions of the pandemic during fiscal year 2021, which resulted in recognizing a portion of our fixed overhead costs as period expenses, increases in our reserves in our excess and obsolete inventory, as well as negative impact from mix, as products in higher demand had lower gross margins. The decrease was also attributable to charges from field correction actions in the prior year. Fiscal year 2022 included $58 million of inventory write-downs associated with our June 2021 decision to stop the distribution and sale of Medtronic's HVAD System (MCS charges). Looking forward, our cost of products sold likely will be further negatively impacted by inflation and higher labor and direct material costs.

Research and Development Expense We remain committed to deliver the best possible experiences for every patient, physician, and caregiver we serve; to create technologies that expand what’s possible across the entire human body to transform lives; to turn data and insights into real action to serve real patient needs, dramatically improving care; and to expand healthcare access and deliver positive outcomes that go far beyond our products. Research and development expense for fiscal year 2022 was $2.7 billion as compared to $2.5 billion for fiscal year 2021. Fiscal year 2022 included $101 million of acquisitions of, and license payments for, technology not approved by regulators, primarily in our Diabetes segment.

Selling, General, and Administrative Expense Our goal is to continue to leverage selling, general, and administrative expense initiatives. 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 fiscal year 2022 was $10.3 billion as compared to $10.1 billion for fiscal year 2021. The decrease in selling, general, and administrative expense as a percentage of net sales was primarily driven by net sales growth as a result of the recovery of procedural volumes partially offset by increases in employee travel as compared to the corresponding period in the prior year when travel was limited.

The following is a summary of other costs and expenses (income):

(in millions)	Fiscal Year 2022	Fiscal Year 2021
Amortization of intangible assets	$ 1,733	$ 1,783
Restructuring charges, net	60	293
Certain litigation charges	95	118
Other operating expense, net	862	315
Other non-operating income, net	(318)	(336)
Interest expense	553	925

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.

Restructuring Charges, Net

Enterprise Excellence

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. Further program details are described in Note 4 of the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Since inception, the Company has incurred pre-tax exit and disposal costs and other costs, across all segments, of $1.6 billion in connection with the Enterprise Excellence program. In total, the Company estimates it will recognize approximately $1.8 billion of exit and disposal costs and other costs related to the Enterprise Excellence program by the end of fiscal year 2023.

For fiscal years 2022 and 2021, the Company recognized net charges of $259 million and $349 million, respectively, including $31 million and $52 million, respectively within *restructuring charges, net* in the consolidated statements of income which were primarily comprised of employee termination benefits. For fiscal years 2022 and 2021, charges also included costs incurred as a direct result of the restructuring program, such as salaries for employees supporting the program and consulting, including $116 million and $128 million, respectively, recognized within *cost of products sold,* and $112 million and $169 million, respectively, recognized within *selling, general, and administrative expense* in the consolidated statements of income.

Simplification

In the first quarter of fiscal year 2021, we initiated our Simplification restructuring program designed to make the Company a more nimble and competitive organization. Further program details are described in Note 4 of the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Since inception, the Company has incurred pre-tax exit and disposal costs and other costs, across all segments, of $349 million in connection with the Simplification program. In total, the Company estimates it will recognize approximately $450 million of exit and disposal costs and other costs related to the Simplification program by the end of fiscal year 2023.

For fiscal years 2022 and 2021, the Company recognized net charges of $82 million and $268 million, respectively, including $35 million and $241 million, respectively, within *restructuring charges, net* in the consolidated statements of income which were primarily comprised of employee termination benefits. For fiscal years 2022 and 2021, charges also included costs incurred as a direct result of the restructuring program, such as salaries for employees supporting the program and consulting, including $45 million and $27 million, respectively, recognized within *selling, general, and administrative expense* in the consolidated statements of income. The net charges for fiscal year 2021 included $97 million of incremental defined benefit pension and post-retirement related expenses for employees that accepted voluntary early retirement packages.

Certain Litigation Charges We classify specified certain litigation charges and gains related to significant legal matters as *certain litigation charges* in the consolidated statements of income. For additional information, refer to Note 18 of the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

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, changes in amounts accrued for certain contingent liabilities for a past acquisition, MCS charges, impairment charges, and income from funded research and development arrangements.

The increase in other operating expense, net was primarily driven by MCS charges recorded in fiscal year 2022. The charges of $823 million primarily included $409 million of intangible asset impairments and $366 million for commitments and obligations, including

customer support obligations, restructuring, and other associated costs. The increase was partially offset by changes in fair value of contingent consideration, which resulted in $103 million of income for fiscal year 2022 as compared to $36 million of expense in fiscal year 2021. The net currency impact of remeasurement expense and our hedging programs also partially offset the increase with $70 million of income in fiscal year 2022 and $47 million of expense in fiscal year 2021. Finally, contributing to the change was a $132 million gain related to amounts accrued for certain contingent liabilities for a past acquisition and $76 million of impairment charges related to the abandonment of certain intangible assets, both in fiscal year 2021. Additional information regarding the MCS charges is described in Note 4 of the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

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. The decrease in other non-operating income, net for fiscal year 2022 is driven by our equity method and minority investments portfolio offset by an increase in income from the non-service component of net periodic pension and postretirement benefit cost. Gains on equity method and minority investments were $30 million and $61 million for fiscal year 2022 and 2021, respectively, and income related to the non-service component of net periodic pension and postretirement benefits were $107 million and $86 million, 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. The decrease in interest expense for fiscal year 2022 was primarily due to the $308 million charge incurred as a result of the early redemption of approximately $6.0 billion of debt during fiscal year 2021.

INCOME TAXES

	Fiscal Year	
(in millions)	**2022**	**2021**
Income tax provision (benefit)	$ 456	$ 265
Income before income taxes	5,517	3,895
Effective tax rate	8.3 %	6.8 %
Non-GAAP income tax provision	$ 1,084	$ 802
Non-GAAP income before income taxes	8,609	6,804
Non-GAAP Nominal Tax Rate	12.6 %	11.8 %
Difference between the effective tax rate and Non-GAAP Nominal Tax Rate	4.3 %	5.0 %

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 21.0 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 37.5 percent. Our earnings in Puerto Rico are subject to certain tax incentive grants which provide for tax rates lower than the country's statutory tax rates. Unless our tax incentive grants are extended, they will expire between fiscal years 2023 and 2034. The tax incentive grants, which expired during fiscal year 2022, did not have a material impact on our financial results. See Note 13 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K for additional information.

Our effective tax rate for fiscal year 2022 was 8.3 percent, as compared to 6.8 percent in fiscal year 2021. Our Non-GAAP Nominal Tax Rate for fiscal year 2022 was 12.6 percent, as compared to 11.8 percent in fiscal year 2021. The increase in both the effective tax rate and the Non-GAAP Nominal Tax Rate was primarily due to year-over-year changes in operational results by jurisdiction.

During fiscal year 2022, we recognized $89 million of operational tax benefits. The operational tax benefits included a $46 million benefit from excess tax benefits associated with stock-based compensation, and a $43 million net benefit associated with the resolution of certain income tax audits, finalization of certain tax returns, changes to uncertain tax position reserves, and changes to certain deferred income tax balances.

During fiscal year 2021, we recognized $51 million of operational tax benefits, which included a $46 million benefit from excess tax benefits associated with stock-based compensation.

An increase in our Non-GAAP Nominal Tax Rate of one percent would result in an additional income tax provision for fiscal years 2022 and 2021 of approximately $86 million and $68 million, respectively.

Certain Tax Adjustments

During fiscal year 2022, the net benefit from certain tax adjustments of $50 million, recognized in *income tax provision (benefit)* in the consolidated statement of income, included the following:

- A benefit of $82 million associated with a step up in tax basis for Swiss Cantonal purposes.
- A benefit of $82 million related to a change in tax rates on intangible assets.
- A cost of $47 million associated with the amortization of the previously established deferred tax assets from intercompany intellectual property transactions.
- A cost of $41 million associated with a change in the Company's permanent reinvestment assertion on certain historical earnings.
- A net cost of $26 million primarily associated with an intercompany sale of assets.

During fiscal year 2021, the net benefit from certain tax adjustments of $41 million, recognized in *income tax provision (benefit)* in the consolidated statement of income, included the following:

- A net benefit of $106 million associated with the resolution of an audit at the IRS Appellate level for fiscal years 2012, 2013, and 2014. The issues resolved relate to the utilization of certain net operating losses and the allocation of income between Medtronic, Inc. and its wholly owned subsidiary operating in Puerto Rico for businesses that are not the subject of the U.S. Tax Court Case for fiscal years 2005 and 2006.
- A net cost of $73 million related to a tax basis adjustment of previously established deferred tax assets from intercompany intellectual property transactions. The cumulative amount of deferred tax benefit previously recognized from intercompany intellectual property transactions and recorded as Certain Tax Adjustments is $1.5 billion. The corresponding deferred tax assets will be amortized over a period of approximately 20 years.
- A cost of $50 million associated with the amortization of the previously established deferred tax assets from intercompany intellectual property transactions.
- A net cost of $25 million associated with an internal restructuring and intercompany sale of assets.
- A benefit of $83 million related to the capitalization of certain research and development costs for U.S. income tax purposes and the establishment of a deferred tax asset at the U.S. federal statutory tax rate.

Certain tax adjustments will affect the comparability of our operating results between periods. Therefore, we consider these Non-GAAP Adjustments. Refer to the "Executive Level Overview" section of this Management's Discussion and Analysis for further discussion of these adjustments.

LIQUIDITY AND CAPITAL RESOURCES

We are currently in a strong financial position, and we believe our balance sheet and liquidity as of April 29, 2022 provide us with flexibility, and our cash, cash equivalents, and current investments, along with our credit facility and related commercial paper programs will satisfy our foreseeable operating needs.

Our liquidity and capital structure are evaluated regularly within the context of our annual operating and strategic planning processes. 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:

	Fiscal Year	
(in millions)	2022	2021
Cash provided by (used in):		
Operating activities	$ 7,346	$ 6,240
Investing activities	(1,659)	(2,866)
Financing activities	(5,336)	(4,136)
Effect of exchange rate changes on cash and cash equivalents	(231)	215
Net change in cash and cash equivalents	$ 121	$ (547)

Operating Activities The $1.1 billion increase in net cash provided was primarily driven by an increase in cash collected from customers along with a decrease in cash paid for income taxes. The increase in net cash provided was partially offset by an increase in cash paid to employees. The increase in cash collected from customers was primarily related to COVID-19 driving decreased sales in the fourth quarter of fiscal year 2020 and first quarter of fiscal year 2021. The decrease in cash paid for income taxes was primarily due to increased estimated federal tax payments and tax payments associated with IRS audit settlements in fiscal year 2021. Cash paid to employees increased due to higher annual incentive plan payouts compared to the prior fiscal year.

Investing Activities The $1.2 billion decrease in net cash used was primarily attributable to a decrease in cash paid for acquisitions of $903 million, as well as a decrease of net purchases of investments of $273 million as compared to fiscal year 2021.

Financing Activities The $1.2 billion increase in net cash used was largely the result of the increase of share repurchases of $1.9 billion. The increase in net cash used was offset by a decrease in short-term borrowings of $311 million. For fiscal year 2021, financing cash flows were impacted by the Mizuho Bank term loan under which we borrowed ¥300 billion in the first quarter of fiscal year 2021, which was subsequently repaid in the fourth quarter of fiscal year 2021. Fiscal year 2021 financing cash flows were also impacted by the issuance of $7.2 billion of Euro-denominated senior notes offset by the early redemption of $6.0 billion of senior notes for $6.3 billion of total consideration, and repayment of an additional $911 million of Euro-denominated senior notes. For more information on the Mizuho Bank term loan, and issuances and redemptions of senior notes, refer to Note 6 of the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Debt and Capital

Our capital structure consists of equity and interest-bearing debt. We primarily utilize unsecured senior debt obligations to meet our financing needs and, to a lesser extent, bank borrowings. From time to time, we may repurchase our outstanding debt obligations in the open market or through privately negotiated transactions.

Total debt at April 29, 2022 was $24.1 billion, as compared to $26.4 billion at April 30, 2021. The decrease in total debt was driven by fluctuations in exchange rates as it pertains to our Euro-denominated senior notes.

Subsequent to fiscal year 2022, on May 2, 2022, we entered into a term loan agreement (Fiscal 2023 Loan Agreement) with Mizuho Bank, Ltd. for an aggregate principal amount of up to ¥300 billion with a term of 364 days. In May and June 2022, Medtronic Luxco borrowed an aggregate of ¥297 billion, or approximately $2.3 billion, of the term loan, under the Fiscal 2023 Loan Agreement. The Company used the net proceeds of the borrowings to fund the early redemption of $1.9 billion of Medtronic Inc. Senior Notes for $1.9 billion of total consideration, and $368 million of Medtronic Luxco Senior Notes for $376 million of total consideration. The Company will recognize a total loss on debt extinguishment of $53 million in the quarter ended July 29, 2022, which primarily includes cash premiums and accelerated amortization of deferred financing costs and debt discounts and premiums. The loss will be recognized in *interest expense* in the consolidated statements of income.

We repurchase our ordinary shares on occasion as part of our focus on returning value to our shareholders. In March 2019, the Company's Board of Directors authorized the repurchase of $6.0 billion of the Company's ordinary shares. There is no specific time period associated with these repurchase authorizations. During fiscal years 2022 and 2021, we repurchased a total of 22 million and 4 million shares, respectively, under these programs at an average price of $113.11 and $126.80, respectively. At April 29, 2022, we had approximately $3.0 billion remaining under the share repurchase program authorized by our Board of Directors.

For more information on credit arrangements, see Note 6 of the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Liquidity

Our liquidity sources at April 29, 2022 included $3.7 billion of cash and cash equivalents and $6.9 billion of current investments. Additionally, we maintain commercial paper programs and a Credit Facility.

Our investments primarily include available-for-sale debt securities, including U.S. and non-U.S. government and agency securities, corporate debt securities, mortgage-backed securities, certificates of deposit, and other asset-backed securities. See Note 5 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K for additional information regarding fair value measurements.

We maintain multicurrency commercial paper programs for short-term financing, which allow 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 April 29, 2022 and April 30, 2021, 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 2026. At each anniversary date of the Credit Facility, we can request a one-year extension of the maturity date. The Credit Facility provides backup funding for the commercial paper programs 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 April 29, 2022 and April 30, 2021, 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). Facility fees are payable on the Credit Facility and are determined in the same manner as the interest rates. We are in compliance with all covenants related to the Credit Facility.

The following table is a summary of our S&P and Moody's long-term debt ratings and short-term debt ratings:

	Agency Rating [1]	
	April 29, 2022	April 30, 2021
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 April 29, 2022 were unchanged as compared to the ratings at April 30, 2021. 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, Credit Facility, and related commercial paper programs.

Contractual Obligations and Cash Requirements

We have future contractual obligations and other minimum commercial commitments that are entered into in the normal course of business, some of which are recorded in our consolidated balance sheet. 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.

Presented below is a summary of our off-balance sheet contractual obligations and other minimum commercial commitments at April 29, 2022, as well as long-term contractual obligations reflected in the balance sheet at April 29, 2022.

	Maturity by Fiscal Year						
(in millions)	Total	2023	2024	2025	2026	2027	Thereafter
Contractual obligations related to off-balance sheet arrangements:							
Commitments to fund minority investments, milestone payments, and royalty obligations[1]	$ 233	$ 95	$ 54	$ 30	$ 18	$ 18	$ 19
Interest payments[2]	6,902	466	460	460	394	391	4,732
Other[3]	995	445	235	121	66	34	94
Contractual obligations reflected in the balance sheet[4]:							
Debt obligations[5]	$ 24,275	$ 3,744	$ 6	$ 1,895	$ 2,133	$ 1,969	$ 14,528
Operating leases	976	213	164	130	103	82	284
Contingent consideration[6]	119	35	49	33	1	—	—
Tax obligations[7]	1,496	176	330	440	550	—	—

(1) Includes commitments related to the funding of minority investments, estimated milestone payments, and royalty obligations. While it is not certain if and/or when payments will be made, the maturity dates included in the table reflect our best estimates.

(2) Includes the contractual interest payments on our outstanding debt and excludes the impacts of debt premium and discount amortization. See Note 6 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K for additional information on our debt agreements.

(3) Includes inventory purchase commitments, research and development, and other arrangements that are legally binding and specify minimum purchase quantities or spending amounts. These purchase commitments do not exceed our projected requirements and are in the normal course of business. Excludes open purchase orders with a remaining term of less than one year.

(4) Excludes defined benefit plan obligations, guarantee obligations, uncertain tax positions, non-current tax liabilities, and litigation settlements for which we cannot make a reliable estimate of the period of cash settlement. For further information, see Notes 13, 15, and 18 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

(5) Includes the current and non-current portion of our Senior Notes and bank borrowings. Excludes debt premium and discount, unamortized gains from terminated interest rate swap agreements, and commercial paper. See Notes 6 and 7 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K for additional information on our debt agreements and interest rate swap agreements, respectively.

(6) Includes the fair value of our current and non-current portions of contingent consideration. While it is not certain if and/or when payments will be made, the maturity dates included in this table reflect our best estimates.

(7) Represents the tax obligations associated with the transition tax that resulted from U.S. Tax Reform. The transition tax will be paid over an eight-year period and will not accrue interest. See Note 13 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K for further information.

In the normal course of business, we periodically enter into agreements that require us to indemnify customers or suppliers for specific risks, such as claims for injury or property damage arising as a result of our products or the negligence of our personnel or claims alleging that our products infringe third-party patents or other intellectual property. Our maximum exposure under these indemnification provisions is unable to be estimated, and we have not accrued any liabilities within our consolidated financial statements or included any indemnification provisions in the table above. Historically, we have not experienced significant losses on these types of indemnification agreements.

Note 18 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K 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 we consider to be permanently reinvested. 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.

Beyond the contractual obligations and other minimum commercial commitments outlined above, we have recurring cash requirements arising from the normal operation of our business that include capital expenditures, research and developments costs, and other operational costs.

We believe our balance sheet and liquidity provide us with flexibility, and our cash, cash equivalents, current investments, Credit Facility and related commercial paper programs as well as our ability to generate operating cash flows will satisfy our current and future contractual obligations and cash requirements. We regularly review our capital needs and consider various investing and financing alternatives to support our requirements.

ACQUISITIONS

Affera, Inc. Pending Acquisition

On January 10, 2022, Medtronic and Affera, Inc. (Affera) entered into a definitive agreement in which Medtronic will acquire Affera for $925 million, including up to $250 million of contingent consideration related to certain technical and regulatory milestones. The acquisition is pending clearance of anti-trust filings and other closing conditions.

Intersect ENT Acquisition

Subsequent to fiscal year 2022, on May 13, 2022, the Company acquired Intersect ENT. Total consideration for the transaction was approximately $1.2 billion to acquire all outstanding shares of Intersect ENT for $28.25 per share.

Additional information regarding acquisitions is included in Note 3 of the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" within this Annual Report on Form 10-K.

SUBSEQUENT EVENTS

On May 25, 2022, the Company and DaVita Inc. (“DaVita”) entered into a definitive agreement with the intent to form a new, independent kidney care-focused medical device company (“NewCo”) with equal equity ownership. The transaction is expected to close in calendar year 2023, subject to customary regulatory approvals and closing conditions. We are contributing our entire Renal Care Solutions business (“RCS”) to NewCo. RCS is part of the Respiratory, Gastrointestinal, and Renal division in our Medical Surgical portfolio, and had revenue of $325 million in fiscal year 2022. We expect to record a non-cash pre-tax impairment of long-lived assets of $60 million to $90 million in the quarter ending July 29, 2022 related to goodwill.

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 in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

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, 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. The Company records a liability in the consolidated financial statements for loss contingencies 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. Our significant legal proceedings are discussed in Note 18 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

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 in-process research and development. 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, and the assessment of the asset's life cycle. The estimates could be impacted by legal, technical, regulatory, economic, and competitive risks.

The test for impairment of goodwill requires us to make several estimates related to projected future cash flows to determine the fair value of the goodwill reporting units. 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 as of the first day of the third quarter and whenever an event occurs or circumstances change that would indicate that the carrying amount may be impaired.

We also 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. 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 tests for goodwill and intangible assets 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 the highest and best use of the assets based on 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.

NEW ACCOUNTING PRONOUNCEMENTS

Information regarding new accounting pronouncements is included in Note 1 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

SUPPLEMENTAL 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. Medtronic plc and Medtronic, Inc. each have provided a full and unconditional guarantee of the obligations of Medtronic Luxco under the Senior Notes (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 tables present summarized financial information for the fiscal year ended April 29, 2022 for the obligor groups of Medtronic and Medtronic Luxco Senior Notes, and CIFSA Senior Notes. The obligor group consists of the parent company guarantor, subsidiary issuer, and subsidiary guarantors for the applicable senior notes. The summarized financial information is presented after elimination of (i) intercompany transactions and balances among the guarantors and issuers and (ii) equity in earnings from and investments in any subsidiary that is a non-guarantor or issuer.

The summarized results of operations information for the fiscal year ended April 29, 2022 was as follows:

(in millions)	Medtronic & Medtronic Luxco Senior Notes [1]	CIFSA Senior Notes [2]
Net sales	$ 2,063	$ —
Operating profit	469	(5)
Loss before income taxes	(518)	(974)
Net loss attributable to Medtronic	(529)	(1,005)

The summarized balance sheet information for the fiscal year ended April 29, 2022 was as follows:

(in millions)	Medtronic & Medtronic Luxco Senior Notes [1]	CIFSA Senior Notes [2]
Total current assets[3]	$ 20,767	$ 6,881
Total noncurrent assets[4]	12,099	8,293
Total current liabilities[5]	32,647	24,302
Total noncurrent liabilities[6]	50,542	60,292
Noncontrolling interests	171	171

(1) The Medtronic Senior Notes and Medtronic Luxco Senior Notes obligor group consists of the following entities: Medtronic plc, Medtronic Luxco, and Medtronic, Inc. Refer to the guarantee summary above for further details.

(2) The CIFSA Senior Notes obligor group consists of the following entities: Medtronic plc, Medtronic Luxco, CIFSA, and CIFSA Subsidiary Guarantors. Please refer to the guarantee summary above for further details.
(3) Includes receivables due from non-guarantor subsidiaries of $20.2 billion and $6.9 billion for Medtronic & Medtronic Luxco Senior Notes, and CIFSA Senior Notes, respectively.
(4) Includes loans receivable due from non-guarantor subsidiaries of $6.5 billion and $8.3 billion for Medtronic & Medtronic Luxco Senior Notes, and CIFSA Senior Notes, respectively.
(5) Includes payables due to non-guarantor subsidiaries of $26.4 billion and $20.2 billion for Medtronic & Medtronic Luxco Senior Notes, and CIFSA Senior Notes, respectively.
(6) Includes loans payable due to non-guarantor subsidiaries of $29.0 billion and $46.4 billion for Medtronic & Medtronic Luxco Senior Notes, and CIFSA Senior Notes, respectively.

Item 7A. 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. 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. The gross notional amount of all currency exchange rate derivative instruments outstanding at April 29, 2022 and April 30, 2021 was $13.8 billion and $14.7 billion, respectively. At April 29, 2022, these contracts were in a net unrealized gain position of $586 million. Additional information regarding our currency exchange rate derivative instruments is included in Note 7 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

A sensitivity analysis of changes in the fair value of all currency exchange rate derivative contracts at April 29, 2022 and April 30, 2021 indicates that, if the U.S. dollar uniformly strengthened/weakened by 10 percent against all currencies, it would have the following impact on the fair value of these contracts:

	Increase (decrease)	
(in millions)	**April 29, 2022**	**April 30, 2021**
10% appreciation in the U.S. dollar	$ 903	$ 995
10% depreciation in the U.S. dollar	(903)	(995)

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.

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 April 29, 2022 was comprised of debt predominantly 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, as compared to interest rates at April 29, 2022 and April 30, 2021, would have the following impact on the fair value of these instruments:

	Increase (decrease)	
(in millions)	**April 29, 2022**	**April 30, 2021**
10 basis point increase in interest rates	$ 53	$ 21
10 basis point decrease in interest rates	(53)	(21)

For a discussion of current market conditions and the impact on our financial condition and results of operations, see the “Liquidity” section of the Management's Discussion and Analysis in "Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations" in this Annual Report on Form 10-K. For additional discussion of market risk, see Notes 5 and 7 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Medtronic plc

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Medtronic plc and its subsidiaries (the "Company") as of April 29, 2022 and April 30, 2021, and the related consolidated statements of income, of comprehensive income, of equity and of cash flows for each of the three years in the period ended April 29, 2022, including the related notes and schedule of valuation and qualifying accounts for each of the three years in the period ended April 29, 2022 appearing under Item 15(a)(1) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of April 29, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of April 29, 2022 and April 30, 2021, and the results of its operations and its cash flows for each of the three years in the period ended April 29, 2022 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of April 29, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in fiscal year 2020.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Annual Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the

company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Income Tax Reserve for the Uncertain Tax Position Related to Puerto Rico Manufacturing

As described in Notes 13 and 18 to the consolidated financial statements, management records reserves for uncertain tax positions related to unresolved matters with the Internal Revenue Service (IRS) and other taxing authorities. A remaining unresolved issue with the IRS, 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 manufacturing sites. These reserves are subject to a high degree of estimation and management judgment. Total reserves relating to uncertain tax positions as of April 29, 2022 were $1.661 billion, of which the Puerto Rico manufacturing reserve makes up a significant portion.

The principal considerations for our determination that performing procedures relating to the income tax reserve for the uncertain tax position related to Puerto Rico manufacturing is a critical audit matter are the significant judgment by management when determining the reserve, including a high degree of estimation uncertainty relative to the unresolved issue with the IRS involving one of the Company's manufacturing sites. This in turn led to a high degree of auditor judgment, effort, and subjectivity in performing procedures and evaluating audit evidence to support management's accurate measurement of the income tax reserve for the uncertain tax position related to Puerto Rico manufacturing, as the nature of the evidence is often highly subjective.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the recognition of the income tax reserves for uncertain tax positions, as well as controls over measurement of the reserves. These procedures also included, among others (i) testing management's process for determining the reserve for the uncertain tax position, (ii) evaluating the status and results of the related U. S. Tax Court case, and (iii) evaluating the consistency of the reserve calculation with the relevant documents related to the tax court case.

/s/ PricewaterhouseCoopers LLP
Minneapolis, Minnesota
June 23, 2022

We have served as the Company's auditor since 1963.

Medtronic plc
Consolidated Statements of Income

(in millions, except per share data)	Fiscal Year 2022	2021	2020
Net sales	$ 31,686	$ 30,117	$ 28,913
Costs and expenses:			
Cost of products sold, excluding amortization of intangible assets	10,145	10,483	9,424
Research and development expense	2,746	2,493	2,331
Selling, general, and administrative expense	10,292	10,148	10,109
Amortization of intangible assets	1,733	1,783	1,756
Restructuring charges, net	60	293	118
Certain litigation charges	95	118	313
Other operating expense, net	862	315	71
Operating profit	5,752	4,484	4,791
Other non-operating income, net	(318)	(336)	(356)
Interest expense	553	925	1,092
Income before income taxes	5,517	3,895	4,055
Income tax provision (benefit)	456	265	(751)
Net income	5,062	3,630	4,806
Net income attributable to noncontrolling interests	(22)	(24)	(17)
Net income attributable to Medtronic	$ 5,039	$ 3,606	$ 4,789
Basic earnings per share	$ 3.75	$ 2.68	$ 3.57
Diluted earnings per share	$ 3.73	$ 2.66	$ 3.54
Basic weighted average shares outstanding	1,342.4	1,344.9	1,340.7
Diluted weighted average shares outstanding	1,351.4	1,354.0	1,351.1

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

Medtronic plc
Consolidated Statements of Comprehensive Income

(in millions)	Fiscal Year 2022	2021	2020
Net income	$ 5,062	$ 3,630	$ 4,806
Other comprehensive income (loss), net of tax:			
Unrealized (loss) gain on investment securities	(301)	92	45
Translation adjustment	(2,086)	1,699	(829)
Net investment hedge	2,299	(1,694)	405
Net change in retirement obligations	574	505	(544)
Unrealized (loss) gain on cash flow hedges	727	(519)	72
Other comprehensive income (loss)	1,213	83	(851)
Comprehensive income including noncontrolling interests	6,274	3,713	3,955
Comprehensive income attributable to noncontrolling interests	(16)	(32)	(15)
Comprehensive income attributable to Medtronic	$ 6,258	$ 3,681	$ 3,940

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

Medtronic plc
Consolidated Balance Sheets

(in millions)	April 29, 2022	April 30, 2021
ASSETS		
Current assets:		
Cash and cash equivalents	$ 3,714	$ 3,593
Investments	6,859	7,224
Accounts receivable, less allowances and credit losses of $230 and $241, respectively	5,551	5,462
Inventories, net	4,616	4,313
Other current assets	2,318	1,955
Total current assets	23,059	22,548
Property, plant, and equipment, net	5,413	5,221
Goodwill	40,502	41,961
Other intangible assets, net	15,595	17,740
Tax assets	3,403	3,169
Other assets	3,008	2,443
Total assets	$ 90,981	$ 93,083
LIABILITIES AND EQUITY		
Current liabilities:		
Current debt obligations	$ 3,742	$ 11
Accounts payable	2,276	2,106
Accrued compensation	2,121	2,482
Accrued income taxes	704	435
Other accrued expenses	3,551	3,475
Total current liabilities	12,394	8,509
Long-term debt	20,372	26,378
Accrued compensation and retirement benefits	1,113	1,557
Accrued income taxes	2,087	2,251
Deferred tax liabilities	884	1,028
Other liabilities	1,410	1,756
Total liabilities	38,260	41,481
Commitments and contingencies (Notes 3, 16, and 18)		
Shareholders' equity:		
Ordinary shares— par value $0.0001, 2.6 billion shares authorized, 1,330,743,395 and 1,345,400,671 shares issued and outstanding, respectively	—	—
Additional paid-in capital	24,566	26,319
Retained earnings	30,250	28,594
Accumulated other comprehensive loss	(2,265)	(3,485)
Total shareholders' equity	52,551	51,428
Noncontrolling interests	171	174
Total equity	52,722	51,602
Total liabilities and equity	$ 90,981	$ 93,083

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

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Medtronic plc
Consolidated Statements of Equity

(in millions, except per share data)	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	—	—	—	4,789	—	4,789	17	4,806
Other comprehensive loss	—	—	—	—	(849)	(849)	(2)	(851)
Dividends to shareholders ($2.16 per ordinary share)	—	—	—	(2,894)	—	(2,894)	—	(2,894)
Issuance of shares under stock purchase and award plans	12	—	564	—	—	564	—	564
Repurchase of ordinary shares	(12)	—	(1,228)	—	—	(1,228)	—	(1,228)
Stock-based compensation	—	—	297	—	—	297	—	297
Changes to noncontrolling ownership interests	—	—	—	—	—	—	(1)	(1)
Cumulative effect of change in accounting principle[1]	—	—	—	(33)	—	(33)	—	(33)
April 24, 2020	1,341	$ —	$ 26,165	$ 28,132	$ (3,560)	$ 50,737	$ 135	$ 50,872
Net income	—	—	—	3,606	—	3,606	24	3,630
Other comprehensive income	—	—	—	—	75	75	8	83
Dividends to shareholders ($2.32 per ordinary share)	—	—	—	(3,120)	—	(3,120)	—	(3,120)
Issuance of shares under stock purchase and award plans	8	—	382	—	—	382	—	382
Repurchase of ordinary shares	(4)	—	(559)	—	—	(559)	—	(559)
Stock-based compensation	—	—	344	—	—	344	—	344
Changes to noncontrolling ownership interests	—	—	(13)	—	—	(13)	7	(6)
Cumulative effect of change in accounting principle[1]	—	—	—	(24)	—	(24)	—	(24)
April 30, 2021	1,345	$ —	$ 26,319	$ 28,594	$ (3,485)	$ 51,428	$ 174	$ 51,602
Net income	—	—	—	5,039	—	5,039	22	5,062
Other comprehensive income	—	—	—	—	1,219	1,219	(6)	1,213
Dividends to shareholders ($2.52 per ordinary share)	—	—	—	(3,383)	—	(3,383)	—	(3,383)
Issuance of shares under stock purchase and award plans	7	—	329	—	—	329	—	329
Repurchase of ordinary shares	(21)	—	(2,442)	—	—	(2,442)	—	(2,442)
Stock-based compensation	—	—	359	—	—	359	—	359
Changes to noncontrolling ownership interests	—	—	1	—	—	1	(19)	(18)
April 29, 2022	1,331	$ —	$ 24,566	$ 30,250	$ (2,265)	$ 52,551	$ 171	$ 52,722

(1) See Note 1 to the consolidated financial statements for discussion regarding the adoption of accounting standards during fiscal year 2021 and fiscal year 2020.

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

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Medtronic plc

Consolidated Statements of Cash Flows

(in millions)	Fiscal Year 2022	2021	2020
Operating Activities:			
Net income	$ 5,062	$ 3,630	$ 4,806
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	2,707	2,702	2,663
Provision for credit losses	58	128	99
Deferred income taxes	(604)	(422)	(1,315)
Stock-based compensation	359	344	297
Loss on debt extinguishment	—	308	406
Asset impairment charges	515	—	—
Other, net	138	251	217
Change in operating assets and liabilities, net of acquisitions and divestitures:			
Accounts receivable, net	(477)	(761)	1,291
Inventories, net	(560)	78	(577)
Accounts payable and accrued liabilities	213	531	(44)
Other operating assets and liabilities	(65)	(549)	(609)
Net cash provided by operating activities	7,346	6,240	7,234
Investing Activities:			
Acquisitions, net of cash acquired	(91)	(994)	(488)
Additions to property, plant, and equipment	(1,368)	(1,355)	(1,213)
Purchases of investments	(9,882)	(11,808)	(11,039)
Sales and maturities of investments	9,692	11,345	9,574
Other investing activities, net	(10)	(54)	(37)
Net cash used in investing activities	(1,659)	(2,866)	(3,203)
Financing Activities:			
Change in current debt obligations, net	—	(311)	(17)
Proceeds from short-term borrowings (maturities greater than 90 days)	—	2,789	—
Repayments from short-term borrowings (maturities greater than 90 days)	—	(2,853)	—
Issuance of long-term debt	—	7,172	5,568
Payments on long-term debt	(1)	(7,367)	(6,110)
Dividends to shareholders	(3,383)	(3,120)	(2,894)
Issuance of ordinary shares	429	474	662
Repurchase of ordinary shares	(2,544)	(652)	(1,326)
Other financing activities	163	(268)	(81)
Net cash used in financing activities	(5,336)	(4,136)	(4,198)
Effect of exchange rate changes on cash and cash equivalents	(231)	215	(86)
Net change in cash and cash equivalents	121	(547)	(253)
Cash and cash equivalents at beginning of period	3,593	4,140	4,393
Cash and cash equivalents at end of period	$ 3,714	$ 3,593	$ 4,140
Supplemental Cash Flow Information			
Cash paid for:			
Income taxes	$ 996	$ 1,250	$ 878
Interest	540	582	643

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

Medtronic plc
Notes to Consolidated Financial Statements

1. Summary of Significant Accounting Policies

Nature of Operations Medtronic plc (Medtronic or the Company) is the leading global healthcare technology company– alleviating pain, restoring health, and extending life for millions of people around the world. The Company provides innovative products and therapies to serve healthcare systems, physicians, clinicians, and patients. Medtronic was founded in 1949 and is headquartered in Dublin, Ireland.

Principles of Consolidation The 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 fully eliminated in consolidation. Certain reclassifications have been made to prior year financial statements to conform to classifications used in the current year. Amounts reported in millions within this annual report are computed based on the amounts in thousands, and therefore, the sum of the components may not equal the total amount reported in millions due to rounding. Additionally, certain columns and rows within tables may not sum due to rounding.

Use of Estimates The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States (U.S.) (U.S. GAAP) requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Estimates are used when accounting for items such as income taxes, contingencies, intangible asset, and liability valuations. Actual results may or may not differ from those estimates.

COVID-19 has had, and may continue to have, an adverse effect on our business, results of operations, financial condition, and cash flows, and its future impacts remain uncertain and unpredictable. The Company has considered the disruptions caused by COVID-19 and has assessed the potential impact on certain accounting estimates including, but not limited to, the allowance for doubtful accounts, inventory reserves, return reserves, the valuation of goodwill, intangible assets, other long-lived assets, investments and contingent consideration, as of April 29, 2022 and through the date of this report. There was not a material impact to accounting estimates associated with the Company's consolidated financial statements as of and for each of the three fiscal years ended April 29, 2022, April 30, 2021, and April 24, 2020.

Fiscal Year-End The Company utilizes a 52/53-week fiscal year, ending the last Friday in April, for the presentation of its consolidated financial statements and related notes thereto at April 29, 2022 and April 30, 2021 and for each of the three fiscal years ended April 29, 2022 (fiscal year 2022), April 30, 2021 (fiscal year 2021), and April 24, 2020 (fiscal year 2020). Fiscal year 2021 was a 53-week year, with the extra week having occurred in the first fiscal month of the first quarter.

Cash Equivalents The Company considers highly liquid investments with maturities of three months or less from the date of purchase to be cash equivalents. These investments are carried at cost, which approximates fair value.

Investments The Company invests in marketable debt and equity securities, investments that do not have readily determinable fair values, and investments accounted for under the equity method.

Marketable debt securities are classified and accounted for as available-for-sale. These investments are recorded at fair value in the consolidated balance sheets. The change in fair value for available-for-sale securities is recorded, net of taxes, as a component of *accumulated other comprehensive loss* on the consolidated balance sheets. The Company determines the appropriate classification of its investments in marketable debt securities at the time of purchase and reevaluates such determinations at each balance sheet date. The classification of marketable debt securities as current or long-term is based on the nature of the securities and the availability for use in current operations consistent with the Company's management of its capital structure and liquidity.

Certain of the Company's investments in marketable equity securities and other securities are long-term, strategic investments in companies that are in various stages of development and are included in *other assets* on the consolidated balance sheets. Marketable equity securities are recorded at fair value in the consolidated balance sheets. The change in fair value of marketable equity securities is recognized within *other non-operating income, net* in the consolidated statements of income. At each reporting period, the Company makes a qualitative assessment considering impairment indicators to evaluate whether the investment is impaired. Equity securities accounted for under the equity method are initially recorded at the amount of the Company's investment and are adjusted each period for the Company's share of the investee's income or loss and dividends paid. Securities accounted for under the equity method are reviewed quarterly for changes in circumstance or the occurrence of events that suggest other than temporary impairment has occurred.

Accounts Receivable and Allowance for Doubtful Accounts and Credit Losses The Company grants credit to customers in the normal course of business and maintains an allowance for doubtful accounts for potential credit losses. When evaluating allowances for doubtful accounts, the Company considers various factors, including historical experience and customer-specific information. Uncollectible accounts are written-off against the allowance when it is deemed that a customer account is uncollectible.

Inventories Inventories are stated at the lower of cost or net realizable value, with cost determined on a first-in, first-out basis. The Company reduces the carrying value of inventories for items that are potentially excess, obsolete, or slow-moving based on changes in customer demand, technology developments, or other economic factors.

Property, Plant, and Equipment Property, plant, and equipment is stated at cost and depreciated over the useful lives of the assets using the straight-line method. Additions and improvements that extend the lives of the assets are capitalized, while expenditures for repairs and maintenance are expensed as incurred. The Company assesses property, plant, and equipment for impairment whenever events or changes in circumstances indicate that the carrying amount of property, plant, and equipment asset groupings may not be recoverable. The cost of interest that is incurred in connection with significant ongoing construction projects is capitalized using a weighted average interest rate. These costs are included in property, plant, and equipment and amortized over the useful life of the related asset. Upon retirement or disposal of property, plant, and equipment, the costs and related amounts of accumulated depreciation or amortization are eliminated from the asset and accumulated depreciation accounts. The difference, if any, between the net asset value and the proceeds, is recognized in earnings.

Goodwill and Intangible Assets Goodwill is the excess of the purchase price over the estimated fair value of net assets of acquired businesses. 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 the carrying amount may be impaired. Impairment testing for goodwill is performed at a reporting unit level. The test for impairment of goodwill requires the Company to make several estimates related to projected future cash flows to determine the fair value of the goodwill reporting units. The Company calculates the excess of each reporting unit's fair value over its carrying amount, including goodwill, utilizing a discounted cash flow analysis. Internal operational budgets and long-range strategic plans are used as a basis for the cash flow analysis. The Company also utilizes assumptions for working capital, capital expenditures, and terminal growth rates. The discount rate applied to the cash flow analysis is based on the weighted average cost of capital ("WACC") for each reporting unit. An impairment is recognized when the carrying amount of the reporting unit's net assets exceeds the estimated fair value of the reporting unit.

Intangible assets include patents, trademarks, tradenames, customer relationships, purchased technology, and in-process research and development (IPR&D). Intangible assets with a definite life are amortized on a straight-line basis with estimated useful lives typically ranging from three to 20 years. Amortization is recognized within *amortization of intangible assets* in the consolidated statements of income. Intangible assets with a definite life are tested for impairment whenever events or changes in circumstances indicate that the carrying amount of an intangible asset (asset group) may not be recoverable. When events or changes in circumstances indicate that the carrying amount 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 is recognized based on the amount by which the carrying value exceeds the fair value. The fair value of an intangible asset (asset group) is estimated by utilizing a discounted cash flow analysis.

Acquired IPR&D represents the fair value assigned to those research and development projects that were acquired in a business combination for which the related products have not received regulatory approval and have no alternative future use. IPR&D is capitalized at its fair value as an indefinite-lived intangible asset, and any development costs incurred after the acquisition are expensed as incurred. The fair value of IPR&D is determined by estimating the future cash flows of each project and discounting the net cash flows back to their present values. Upon achieving regulatory approval or commercial viability for the related product, the indefinite-lived intangible asset is accounted for as a definite-lived asset and is amortized on a straight-line basis over the estimated useful life. If the project is not completed or is terminated or abandoned, the Company may have an impairment related to the IPR&D, which is charged to expense. Indefinite-lived intangible assets are tested for impairment annually in the third quarter of the fiscal year and whenever events or changes in circumstances indicate that the carrying amount may be impaired. Impairment is calculated as the excess of the asset's carrying value over its fair value. Fair value is generally determined using a discounted future cash flow analysis. IPR&D with no alternative future use acquired outside of a business combination is expensed immediately.

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. The Company records contingent consideration at fair value at the date of acquisition based on the consideration expected to be transferred, estimated as the probability-weighted future cash flows, discounted back to present value. The fair value of contingent consideration is measured using projected payment dates, discount rates, probabilities of payment, and projected revenues (for revenue-based considerations). Projected revenues are based on the Company's most recent internal operational budgets and long-range strategic plans. The discount rate used is determined at the time of measurement in accordance with accepted valuation methodologies. Changes in projected revenues, probabilities of payment, discount rates, and projected payment dates may result in adjustments to the fair value measurements. Contingent consideration is remeasured each reporting period using Level 3 inputs, and the change in fair value, including accretion for the passage of time, is recognized as income or expense 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.

Self-Insurance The Company self-insures the majority of its insurable risks, including medical and dental costs, disability coverage, physical loss to property, business interruptions, workers' compensation, comprehensive general, and product liability. Insurance coverage is obtained for risks required to be insured by law or contract. The Company uses claims data and historical experience, as applicable, to estimate liabilities associated with the exposures that the Company has self-insured.

Retirement Benefit Plan Assumptions 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. See Note 15 for assumptions used in determining pension and post-retirement benefit costs and liabilities.

Derivatives The Company recognizes all derivative financial instruments in its consolidated financial statements at fair value in accordance with authoritative guidance on derivatives and hedging, and presents assets and liabilities associated with derivative financial instruments on a gross basis in the consolidated financial statements. For derivative instruments that are designated and qualify as hedging instruments, the hedging instrument must be designated as a fair value hedge or a cash flow hedge, based upon the exposure being hedged. See Note 7 for more information on the Company's derivative instruments and hedging programs.

Fair Value Measurements The Company follows the authoritative guidance on fair value measurements and disclosures with respect to assets and liabilities that are measured at fair value on both a recurring and nonrecurring basis. Fair value is defined as the exit price, or the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. The authoritative guidance also establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs market participants would use in valuing the asset or liability, based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the factors market participants would use in valuing the asset or liability developed based upon the best information available in the circumstances. The categorization of financial assets and financial liabilities within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The hierarchy is broken down into three levels defined as follows:

- Level 1 - Inputs are quoted prices in active markets for identical assets or liabilities.
- Level 2 - Inputs include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, and inputs (other than quoted prices) that are observable for the asset or liability, either directly or indirectly.
- Level 3 - Inputs are unobservable for the asset or liability.

Financial assets that are classified as Level 1 securities include highly liquid government bonds within U.S. government and agency securities and marketable equity securities for which quoted market prices are available. In addition, the Company classifies currency forward contracts as Level 1 since they are valued using quoted market prices in active markets which have identical assets or liabilities.

The valuation for most fixed maturity securities are classified as Level 2. Financial assets that are classified as Level 2 include corporate debt securities, government and agency securities, other asset-backed securities, certificate of deposits, debt funds, and mortgage-backed securities whose value is determined using inputs that are observable in

the market or may be derived principally from, or corroborated by, observable market data such as pricing for similar securities, recently executed transactions, cash flow models with yield curves, and benchmark securities. In addition, total return swaps are included in Level 2 as the Company uses inputs other than quoted prices that are observable for the asset. The Level 2 derivative instruments are primarily valued using standard calculations and models that use readily observable market data as their basis.

Financial assets are considered Level 3 when their fair values are determined using pricing models, discounted cash flow methodologies, or similar techniques, and at least one significant model assumption or input is unobservable. Financial assets that are classified as Level 3 include certain investment securities for which there is limited market activity such that the determination of fair value requires significant judgment or estimation, and auction rate securities. With the exception of auction rate securities, these securities are valued using third-party pricing sources that incorporate transaction details such as contractual terms, maturity, timing, and amount of expected future cash flows, as well as assumptions about liquidity and credit valuation adjustments by market participants. The fair value of auction rate securities is estimated by the Company using a discounted cash flow model, which incorporates significant unobservable inputs. The significant unobservable inputs used in the fair value measurement of the Company's auction rate securities are years to principal recovery and the

illiquidity premium that is incorporated into the discount rate. For goodwill, other intangible assets, and IPR&D, 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.

Certain investments for which the fair value is measured using the net asset value per share (or its equivalent) practical expedient are excluded from the fair value hierarchy. Financial assets for which the fair value is measured using the net asset value per share practical expedient include certain debt funds, equity and fixed income commingled trusts, and registered investment companies.

Revenue Recognition The Company sells its products through direct sales representatives and independent distributors. Additionally, a portion of the Company's revenue is generated from consignment inventory maintained at hospitals. The Company recognizes revenue when control is transferred to the customer. For products sold through direct sales representatives and independent distributors, control is transferred upon shipment or upon delivery, based on the contract terms and legal requirements. For consignment inventory, control is transferred when the product is used or implanted. Payment terms vary depending on the country of sale, type of customer, and type of product.

If a contract contains more than one performance obligation, the transaction price is allocated to each performance obligation based on relative standalone selling price. Shipping and handling is treated as a fulfillment activity rather than a promised service, and therefore, is not considered a performance obligation. Taxes assessed by a governmental authority that are both imposed on, and concurrent with, a specific revenue producing transaction and collected by the Company from customers (for example, sales, use, value added, and some excise taxes) are not included in revenue. For contracts that have an original duration of one year or less, the Company uses the practical expedient applicable to such contracts and does not adjust the transaction price for the time value of money.

The amount of revenue recognized reflects sales rebates and returns, which are estimated based on sales terms, historical experience, and trend analysis. In estimating rebates, the Company considers the lag time between the point of sale and the payment of the rebate claim, the stated rebate rates, and other relevant information. The Company records adjustments to rebates and returns reserves as increases or decreases of revenue.

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 primarily represents remote monitoring services and equipment maintenance, for which consideration is received at the same time as consideration for the device or equipment. Revenue related to remote monitoring services and equipment maintenance is recognized over the service period as time elapses.

Shipping and Handling Shipping and handling costs incurred to physically move product from the Company's premises to the customer's premises are recognized in *selling, general, and administrative expense* in the consolidated statements of income and were $354 million, $308 million, and $347 million in fiscal years 2022, 2021, and 2020, respectively. Other shipping and handling costs incurred to store, move, and prepare products for shipment are recognized in *cost of products sold* in the consolidated statements of income.

Research and Development Research and development costs are expensed when incurred. Research and development costs include costs of research, engineering, and technical activities to develop a new product or service or make significant improvement to an existing product or manufacturing process. Research and development costs also include pre-approval regulatory and clinical trial expenses.

Contingencies The Company records a liability in the consolidated financial statements for loss contingencies 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.

Income Taxes The Company has deferred taxes that arise as a result of the different treatment of transactions for U.S. GAAP and income tax accounting, known as temporary differences. The Company records the tax effect of these temporary differences as deferred tax assets and deferred tax liabilities. Deferred tax assets generally represent items that may be used as a tax deduction or credit in a tax return in future years for which the Company has already recognized the tax benefit in the consolidated statements of income. The Company establishes valuation allowances for deferred tax assets when the amount of expected future taxable income is not likely to support the use of the deduction or credit. Deferred tax liabilities generally represent tax expense for which payment has been deferred or expense has already been taken as a deduction on the Company's tax return but has not yet been recognized as an expense in the consolidated statements of income. See Footnote 13 for more information on the Company's uncertain tax positions and tax policies.

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 fair value of contingent consideration, changes in amounts accrued for certain contingent liabilities for a past acquisition, charges related to the June 2021 decision to stop the distribution and sale of Medtronic's HVAD System within the Mechanical Circulatory Support Operating Unit (MCS) (MCS charges), impairment charges, and income from funded research and development arrangements.

Other Non-Operating Income, Net Other non-operating income, net includes the non-service component of net periodic pension and post-retirement benefit cost, investment gains and losses, and interest income.

Currency Translation Assets and liabilities of non-U.S. dollar functional currency entities are translated to U.S. dollars at period-end exchange rates, and the currency impacts arising from the translation of the assets and liabilities are recorded as a cumulative translation adjustment, a component of *accumulated other comprehensive loss,* on the consolidated balance sheets. Elements of the consolidated statements of income are translated at the average monthly currency exchange rates in effect during the period. Currency transaction gains and losses are included in *other operating expense, net* in the consolidated statements of income.

Stock-Based Compensation The Company measures stock-based compensation expense at the grant date based on the fair value of the award and recognizes the compensation expense over the requisite service period, which is generally the vesting period. The amount of stock-based compensation expense recognized during a period is based on the portion of the awards that are expected to vest. The Company estimates pre-vesting forfeitures at the time of grant and revises the estimates in subsequent periods.

Recently Adopted Accounting Standards

Current Expected Credit Losses

In June 2016, the Financial Accounting Standards Board (FASB) issued guidance changing the methodology to be used to measure credit losses for certain financial instruments and financial assets, including trade receivables. The new methodology requires the recognition of an allowance that reflects the current estimate of credit losses expected to be incurred over the life of the financial asset. The Company adopted this guidance using the modified retrospective method in the first quarter of fiscal year 2021. The adoption of this guidance did not have a material impact to the Company’s consolidated financial statements.

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, 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.

2. 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 healthcare systems, clinics, third-party

healthcare providers, distributors, and other institutions, including governmental healthcare programs and group purchasing organizations.

The table below illustrates net sales by segment and division for fiscal years 2022, 2021, and 2020:

	Net Sales by Fiscal Year		
(in millions)	2022	2021	2020
Cardiac Rhythm & Heart Failure	$ 5,908	$ 5,584	$ 5,141
Structural Heart & Aortic	3,055	2,834	2,842
Coronary & Peripheral Vascular	2,460	2,354	2,486
Cardiovascular	11,423	10,772	10,468
Surgical Innovations	6,060	5,438	5,513
Respiratory, Gastrointestinal, & Renal	3,081	3,298	2,839
Medical Surgical	9,141	8,737	8,352
Cranial & Spinal Technologies	4,456	4,288	4,082
Specialty Therapies	2,592	2,307	2,147
Neuromodulation	1,735	1,601	1,497
Neuroscience	8,784	8,195	7,725
Diabetes	2,338	2,413	2,368
Total	$ 31,686	$ 30,117	$ 28,913

The table below includes net sales by market geography and segment for fiscal years 2022, 2021, and 2020:

	U.S.[1]			Non-U.S. Developed Markets[2]			Emerging Markets[3]		
(in millions)	Fiscal Year 2022	Fiscal Year 2021	Fiscal Year 2020	Fiscal Year 2022	Fiscal Year 2021	Fiscal Year 2020	Fiscal Year 2022	Fiscal Year 2021	Fiscal Year 2020
Cardiovascular	$ 5,545	$ 5,248	$ 5,062	$ 3,866	$ 3,752	$ 3,519	$ 2,012	$ 1,773	$ 1,887
Medical Surgical	3,862	3,650	3,532	3,373	3,320	3,169	1,905	1,766	1,651
Neuroscience	5,753	5,456	5,122	1,801	1,724	1,659	1,229	1,015	945
Diabetes	974	1,171	1,204	1,085	1,019	940	279	222	224
Total	$ 16,135	$ 15,526	$ 14,919	$ 10,126	$ 9,815	$ 9,287	$ 5,426	$ 4,777	$ 4,707

(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 of 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.

At April 29, 2022, $981 million of rebates were classified as *other accrued expenses,* and $548 million of rebates were classified as a reduction of *accounts receivable* in the consolidated balance sheet. At April 30, 2021, $906 million of rebates were classified as *other accrued expenses,* and $485 million of rebates were classified as a reduction of *accounts receivable* in the consolidated balance sheet. During fiscal year 2022, 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

Deferred revenue at April 29, 2022 and April 30, 2021 was $399 million and $368 million, respectively. At April 29, 2022 and April 30, 2021, $305 million and $276 million was included in *other accrued expenses*, respectively, and $94 million and $93 million was included in *other liabilities*, respectively. During the fiscal year ended April 29, 2022, the Company recognized $243 million of revenue that was included in deferred revenue as of April 30, 2021.

Remaining performance obligations include goods and services that have not yet been delivered or provided under existing, noncancellable contracts with minimum purchase commitments. At April 29, 2022, the estimated revenue expected to be recognized in future periods related to unsatisfied performance obligations for executed contracts with an original duration of one year or more was approximately $925 million. The Company expects to recognize revenue on the majority of these remaining performance obligations over the next three years.

3. Acquisitions

The Company had acquisitions during fiscal years 2022 and 2021 that were accounted for as business combinations. The assets and liabilities of 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 acquisitions during fiscal years 2022 and 2021 was not significant, either individually or in the aggregate, to the consolidated results of the Company. 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. Purchase price allocation adjustments for fiscal years 2022 and 2021 business combinations were not significant.

Fiscal Year 2022

The acquisition date fair value of net assets acquired during fiscal year 2022 was $125 million, consisting of $154 million of assets acquired and $29 million of liabilities assumed. Based upon preliminary valuations, assets acquired were primarily comprised of $50 million of technology-based intangible assets with estimated useful lives ranging from 15 to 16 years, and $80 million of goodwill. The goodwill is not deductible for tax purposes. The Company recognized $31 million of contingent consideration liabilities in connection with business combinations during fiscal year 2022, which are comprised of revenue and regulatory milestone-based payments.

Fiscal Year 2021

The acquisition date fair value of net assets acquired during fiscal year 2021 was $1.2 billion, consisting of $1.4 billion of assets acquired and $161 million of liabilities assumed. Based upon final valuations, assets acquired were primarily comprised of $417 million of technology-based intangible assets and $13 million of customer-related intangible assets with estimated useful lives ranging from 8 to 15 years, and $816 million of goodwill. The goodwill is not deductible for tax purposes. The Company recognized $253 million of contingent consideration liabilities in connection with business combinations during fiscal year 2021, which are comprised of revenue and regulatory milestone-based payments. Additionally, the Company recognized a gain of $132 million related to a change in amounts accrued for certain contingent liabilities from a past acquisition. The benefit was recognized in *other operating expense, net* in the consolidated statements of income as the purchase accounting was finalized in fiscal year 2020.

Subsequent Acquisitions

Subsequent to fiscal year 2022, on May 13, 2022, the Company's Neuroscience segment acquired Intersect ENT, a global ear, nose, and throat (ENT) medical technology leader. The acquisition expands Medtronic's portfolio of products used during ENT procedures and, combined with the Company's navigation, powered instruments, and existing tissue health products, will offer a broader suite of solutions to assist surgeons treating patients who suffer from chronic rhinosinusitis (CRS). Total consideration for the transaction, in which the Company acquired all outstanding shares of Intersect ENT for $28.25 per share, was approximately $1.2 billion. The transaction will be accounted for as a business combination using the acquisition method of accounting. This requires, among other things, that assets acquired and liabilities assumed be recognized at their fair values as of the acquisition date.

Due to the limited amount of time since the acquisition date and the significant limitations on access to Intersect ENT information prior to the acquisition date the preliminary acquisition valuation for the business combination is incomplete at this time. As a result, the Company is unable to provide the amounts recognized as of the acquisition date for the major classes of assets acquired and liabilities assumed, including the information required for valuation of intangible assets and goodwill. We will include such disclosures in our Form 10-Q for the quarter ending July 29, 2022.

Acquired In-Process Research & Development (IPR&D)

IPR&D with no alternative future use acquired outside of a business combination is expensed immediately. During fiscal year 2022, the Company acquired $101 million of IPR&D in connection with asset acquisitions of technology not approved by regulators, which was recognized in *research and development expense* in the consolidated statements of income. During fiscal year 2021, IPR&D acquired in connection with asset acquisitions was not significant.

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.

The fair value of contingent consideration at April 29, 2022 and April 30, 2021 was $119 million and $270 million, respectively. At April 29, 2022, $35 million was recorded in *other accrued expenses*, and $84 million was recorded in *other liabilities* on the consolidated balance sheets. At April 30, 2021, $78 million was reflected in *other accrued expenses*, and $192 million was reflected in *other liabilities* on the consolidated balance sheets.

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

	Fiscal Year	
(in millions)	**2022**	**2021**
Beginning Balance	$ 270	$ 280
Purchase price contingent consideration	31	253
Purchase price allocation adjustments	7	—
Payments	(86)	(299)
Change in fair value	(103)	36
Ending Balance	$ 119	$ 270

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 April 29, 2022**	**Unobservable Input**	**Range**	**Weighted Average** [1]
		Discount rate	11.2% - 27.2%	14.6%
Revenue and other performance-based payments	$ 104	Probability of payment	100%	100%
		Projected fiscal year of payment	2023 - 2027	2025
		Discount rate	5.5%	5.5%
Product development and other milestone-based payments	$ 15	Probability of payment	100%	100%
		Projected fiscal year of payment	2023 - 2024	2024

(1) Unobservable inputs were weighted by the relative fair value of the contingent consideration liability. For projected fiscal year of payment, the amount represents the median of the inputs and is not a weighted average.

4. Restructuring Charges

Enterprise Excellence

In the third quarter of fiscal year 2018, the Company announced its Enterprise Excellence restructuring program, which was designed 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.

Since inception, the Company has incurred pre-tax exit and disposal costs and other costs, across all segments, of $1.6 billion in connection with the Enterprise Excellence program. In total, the Company estimates it will recognize approximately $1.8 billion of exit and disposal costs and other costs related to the program by the end of fiscal year 2023. The remaining charges are costs associated with the restructuring program, such as salaries and benefits for employees supporting the program, including program management and transition teams, and strategic and

operational consulting services related to the three objectives of the program. 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 fiscal years 2022, 2021 and 2020, the Company recognized net charges of $259 million, $349 million, and $441 million, respectively, of which $116 million, $128 million, and $155 million, respectively, were recognized within *cost of products sold,* and $112 million, $169 million, and $168 million, respectively, were recognized within *selling, general, and administrative expense* in the consolidated statements of income.

Simplification

In the first quarter of fiscal year 2021, the Company initiated the Simplification restructuring program, designed to make the Company a more nimble and competitive organization focused on accelerating innovation, enhancing the customer experience, driving revenue growth, and winning market share, while also more efficiently and effectively leveraging the enterprise scale.

Since inception, the Company has incurred pre-tax exit and disposal costs and other costs, across all segments, of $349 million in connection with the program. In total, the Company estimates it will recognize approximately $450 million of exit and disposal costs and other costs related to the Simplification program by the end of fiscal year 2023. 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 fiscal years 2022 and 2021, the Company recognized net charges of $82 million and $268 million, respectively, of which $45 million and $27 million were recognized within *selling, general, and administrative expense* in the consolidated statements of income. The net charges for fiscal year 2021 included $97 million of incremental defined benefit pension and post-retirement related expenses for employees that accepted voluntary early retirement packages and are not included in the table below, as they are associated with costs that are accounted for under the pension and post-retirement rules. See Note 15 for further discussion on these charges.

The following table summarizes the activity related to the restructuring programs noted above for fiscal years 2022, 2021, and 2020:

(in millions)	Employee Termination Benefits	Associated Costs[1]	Asset Write-downs	Other Costs	Total
April 26, 2019	$ 101	$ 9	$ —	$ 12	$ 122
Charges	129	300	24	9	462
Cash payments	(128)	(290)	—	(9)	(427)
Settled non-cash	—	—	(24)	—	(24)
Accrual adjustments[2]	(13)	—	—	(8)	(21)
April 24, 2020	89	19	—	4	112
Charges	213	322	—	4	539
Cash payments	(162)	(319)	—	(5)	(486)
Accrual adjustments[2]	(17)	—	—	(2)	(19)
April 30, 2021	123	22	—	1	146
Charges	80	274	—	—	354
Cash payments	(109)	(269)	—	—	(378)
Accrual adjustments[2]	(13)	—	—	—	(13)
April 29, 2022	$ 81	$ 27	$ —	$ 1	$ 110

(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) Accrual adjustments relate to certain employees identified for termination finding other positions within the Company or contract terminations being settled for less than originally estimated.

Mechanical Circulatory Support (MCS)

On June 3, 2021, the Company announced the decision to stop the distribution and sale of the Medtronic HVAD System in light of a growing body of observational clinical comparisons indicating a lower frequency of neurological adverse events and mortality with another circulatory support device available to patients compared to the HVAD system. In connection with this decision, the Company recorded charges of $726 million (MCS charges) within the Cardiovascular segment during the first quarter of fiscal year 2022, including $58 million recognized in *costs of products sold* and $668 million recognized within *other operating expense, net* in the consolidated statement of income. The charges included $515 million of non-cash impairments and write-downs primarily related to $409 million of intangible asset impairments and $58 million of inventory write-downs. The Company also recorded

charges of $211 million for commitments and obligations associated with the decision, which included charges for patient support obligations, restructuring, and other associated costs. During the fourth quarter of fiscal year 2022, the Company recorded additional charges of $155 million within *other operating expense, net* primarily related to incremental commitments and obligations associated with the exit of the business. As of April 29, 2022, accruals were recorded in the consolidated balance sheet for these obligations, with $82 million reflected in *other accrued expenses* and $152 million recorded in *other liabilities*. Medtronic remains committed to serving the needs of the approximately 3,500 patients currently implanted with the HVAD system.

5. 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. 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 April 29, 2022 and April 30, 2021:

	April 29, 2022					
	Valuation				Balance Sheet Classification	
(in millions)	Cost	Unrealized Gains	Unrealized Losses	Fair Value	Investments	Other Assets
Level 1:						
U.S. government and agency securities	$ 533	$ 1	$ (15)	$ 518	$ 518	$ —
Level 2:						
Corporate debt securities	4,457	4	(140)	4,321	4,321	—
U.S. government and agency securities	910	—	(41)	869	869	—
Mortgage-backed securities	592	—	(35)	558	558	—
Non-U.S. government and agency securities	17	—	—	17	17	—
Certificates of deposit	20	—	—	20	20	
Other asset-backed securities	567	—	(11)	556	556	—
Total Level 2	6,563	4	(227)	6,341	6,341	—
Level 3:						
Auction rate securities	36	—	(3)	33	—	33
Total available-for-sale debt securities	$ 7,131	$ 5	$ (245)	$ 6,893	$ 6,859	$ 33

	April 30, 2021					
	Valuation				Balance Sheet Classification	
(in millions)	Cost	Unrealized Gains	Unrealized Losses	Fair Value	Investments	Other Assets
Level 1:						
U.S. government and agency securities	$ 505	$ 26	$ (3)	$ 528	$ 528	$ —
Level 2:						
Corporate debt securities	4,557	103	(13)	4,647	4,647	—
U.S. government and agency securities	810	—	(7)	804	804	—
Mortgage-backed securities	645	21	(16)	650	650	—
Non-U.S. government and agency securities	31	1	—	33	33	—
Certificates of deposit	19	—	—	19	19	—
Other asset-backed securities	534	4	(1)	537	537	—
Debt funds	7	—	—	7	7	—
Total Level 2	6,603	129	(36)	6,696	6,696	—
Level 3:						
Auction rate securities	36	—	(3)	33	—	33
Total available-for-sale debt securities	$ 7,144	$ 155	$ (42)	$ 7,257	$ 7,224	$ 33

The amortized cost of debt securities excludes accrued interest, which is reported in *other current assets* in the consolidated balance sheets.

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 April 29, 2022 and April 30, 2021:

	April 29, 2022			
	Less than 12 months		More than 12 months	
(in millions)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. government and agency securities	$ —	$ —	$ 945	$ (56)
Corporate debt securities	222	(1)	2,993	(139)
Mortgage-backed securities	—	—	507	(35)
Other asset-backed securities	—	—	526	(11)
Auction rate securities	—	—	33	(3)
Total	$ 222	$ (1)	$ 5,004	$ (244)

	April 30, 2021			
	Less than 12 months		More than 12 months	
(in millions)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. government and agency securities	$ 946	$ (10)	$ —	$ —
Corporate debt securities	—	—	3,209	(13)
Mortgage-backed securities	—	—	650	(16)
Other asset-backed securities	—	—	531	(1)
Auction rate securities	—	—	33	(3)
Total	$ 946	$ (10)	$ 4,423	$ (32)

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. There were no transfers into or out of Level 3 during the fiscal years ended April 29, 2022 and April 30, 2021. 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.

Activity related to the Company's available-for-sale debt securities portfolio is as follows:

(in millions)	April 29, 2022	April 30, 2021	April 24, 2020
Proceeds from sales and maturities	$ 9,611	$ 10,420	$ 9,559
Gross realized gains	15	15	25
Gross realized losses	(18)	(14)	(22)

During the fiscal year ended April 30, 2021, the Company had proceeds from maturities of investments classified as held to maturity of $911 million.

The April 29, 2022 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)	April 29, 2022
Due in one year or less	$ 1,501
Due after one year through five years	3,465
Due after five years through ten years	1,271
Due after ten years	656
Total debt securities	$ 6,893

Equity Securities, Equity Method Investments, and Other Investments

The Company holds investments in equity securities with readily determinable fair values, equity investments without readily determinable fair values, investments accounted for under the equity method, and other investments. Equity securities with readily determinable fair values are included in Level 1 of the fair value hierarchy, as they are measured using quoted market prices. 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 April 29, 2022 and April 30, 2021, which are classified as *other assets* in the consolidated balance sheets:

(in millions)	April 29, 2022	April 30, 2021
Investments with readily determinable fair value (marketable equity securities)	$ 64	$ 74
Investments without readily determinable fair values	732	537
Equity method and other investments	85	76
Total equity and other investments	$ 881	$ 687

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.

(in millions)	April 29, 2022	April 30, 2021	April 24, 2020
Proceeds from sales	$ 81	$ 13	$ 15
Gross gains	99	68	17
Gross losses	(52)	(3)	(30)
Impairment losses recognized	(17)	(4)	(4)

During the fiscal year ended April 29, 2022, there were $8 million of net unrealized gains on equity securities and other investments still held at April 29, 2022. During the fiscal year ended April 30, 2021, there were $63 million of net unrealized gains on equity securities and other investments still held at April 30, 2021.

6. Financing Arrangements

Current debt obligations consisted of the following:

(in millions)	April 29, 2022	April 30, 2021
Bank borrowings	$ 12	$ 2
0.000 percent three-year 2019 senior notes	798	—
0.375 percent four-year 2019 senior notes	1,596	—
0.000 percent two-year 2020 senior notes	1,330	—
Finance lease obligations	6	9
Current debt obligations	$ 3,742	$ 11

Bank Borrowings Outstanding bank borrowings at April 29, 2022 and April 30, 2021 were not significant.

Commercial Paper On January 26, 2015, Medtronic Global Holdings S.C.A. (Medtronic Luxco), an entity organized under the laws of Luxembourg, entered into various agreements pursuant to which Medtronic Luxco may issue United States Dollar-denominated unsecured commercial paper notes (the 2015 CP Program) on a private placement basis, and on January 31, 2020 Medtronic Luxco entered into various agreements pursuant to which Medtronic Luxco may issue Euro-denominated unsecured commercial paper notes (the 2020 CP Program) on a private placement basis. The Maximum aggregate amount outstanding at any time under the 2015 CP Program and the 2020 CP Program together may not exceed the equivalent of $3.5 billion. The Company and Medtronic, Inc. have guaranteed the obligations of Medtronic Luxco under the 2015 CP Program and the 2020 CP Program.

There was no commercial paper outstanding at April 29, 2022 and April 30, 2021, or during fiscal year 2021. During fiscal year 2022, the weighted average original maturity of the commercial paper outstanding was approximately fifteen days and the weighted average interest

rate was 0.70 percent. The issuance of commercial paper reduces the amount of credit available under the Company's existing credit facility, defined below.

Line of Credit On December 12, 2021, Medtronic Luxco, as borrower, entered into an amendment to its amended and restated credit agreement (Credit Facility), by and among Medtronic, Medtronic, Inc., Medtronic Luxco, the lenders from time to time party thereto, and Bank of America, N.A., as administrative agent and issuing bank, extending the maturity date of the Credit Facility to December 2026 and removing the cap on the number of extension options available.

The Credit Facility provides for a $3.5 billion five-year unsecured revolving credit facility (Credit Facility). At each anniversary date of the Credit Facility we can request a one-year extension of the maturity date. The Credit Facility provides the Company with the ability to increase its borrowing capacity by an additional $1.0 billion at any time during the term of the agreement. The Company and Medtronic, Inc. have guaranteed the obligations of the borrowers under the Credit Facility, and Medtronic Luxco will also guarantee the obligations of any designated borrower. The Credit Facility includes a multi-currency borrowing feature for certain specified foreign currencies. At April 29, 2022 and April 30, 2021, 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 Company is in compliance with all covenants related to the Credit Facility.

The Company's long-term debt obligations consisted of the following:

(in millions, except interest rates)	Maturity by Fiscal Year	April 29, 2022 Amount	April 29, 2022 Effective Interest Rate	April 30, 2021 Amount	April 30, 2021 Effective Interest Rate
0.000 percent three-year 2019 senior notes	2023	$ —	— %	$ 907	0.08 %
0.375 percent four-year 2019 senior notes	2023	—	—	1,813	0.55
0.000 percent two-year 2020 senior notes	2023	—	—	1,511	0.12
3.500 percent ten-year 2015 senior notes	2025	1,890	3.74	1,890	3.74
0.250 percent six-year 2019 senior notes	2026	1,064	0.45	1,209	0.43
0.000 percent five-year 2020 senior notes	2026	1,064	0.25	1,209	0.22
1.125 percent eight-year 2019 senior notes	2027	1,596	1.26	1,813	1.24
3.350 percent ten-year 2017 senior notes	2027	368	3.53	368	3.53
0.375 percent eight-year 2020 senior notes	2029	1,064	0.52	1,209	0.51
1.625 percent twelve-year 2019 senior notes	2031	1,064	1.75	1,209	1.74
1.000 percent twelve-year 2019 senior notes	2032	1,064	1.06	1,209	1.05
0.750 percent twelve-year 2020 senior notes	2033	1,064	0.81	1,209	0.81
4.375 percent twenty-year 2015 senior notes	2035	1,932	4.47	1,932	4.47
6.550 percent thirty-year 2007 CIFSA senior notes	2038	253	4.67	253	4.67
2.250 percent twenty-year 2019 senior notes	2039	1,064	2.35	1,209	2.34
6.500 percent thirty-year 2009 senior notes	2039	158	6.56	158	6.56
1.500 percent twenty-year 2019 senior notes	2040	1,064	1.59	1,209	1.58
5.550 percent thirty-year 2010 senior notes	2040	224	5.58	224	5.58
1.375 percent twenty-year 2020 senior notes	2041	1,064	1.47	1,209	1.46
4.500 percent thirty-year 2012 senior notes	2042	105	4.54	105	4.54
4.000 percent thirty-year 2013 senior notes	2043	305	4.09	305	4.09
4.625 percent thirty-year 2014 senior notes	2044	127	4.67	127	4.67
4.625 percent thirty-year 2015 senior notes	2045	1,813	4.69	1,813	4.69
1.750 percent thirty-year 2019 senior notes	2050	1,064	1.88	1,209	1.87
1.625 percent thirty-year 2020 senior notes	2051	1,064	1.76	1,209	1.75
Finance lease obligations	2023-2035	56	9.15	62	9.29
Debt discount, net	2023-2051	(52)	—	(75)	—
Deferred financing costs	2023-2051	(109)	—	(125)	—
Long-term debt		$ 20,372		$ 26,378	

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 Company is in compliance with all covenants related to the Seniors Notes.

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 Company used the net proceeds of the offering to fund the cash tender offer and early redemption of $5.2 billion of Medtronic Inc., CIFSA, and Medtronic Luxco Senior Notes for $5.6 billion of total consideration. The Company recognized a loss on debt extinguishment of $413 million in fiscal year 2020, which primarily included cash premiums and accelerated amortization of deferred

financing costs and debt discounts and premiums. The loss was recognized in *interest expense* in the consolidated statement of income.

In September 2020, Medtronic Global Holdings S.C.A. (Medtronic Luxco) issued an additional six tranches of Euro-denominated Senior Notes with an aggregate principal of €6.3 billion, with maturities ranging from fiscal year 2023 to fiscal year 2051, resulting in cash proceeds of approximately $7.2 billion, net of discounts and issuance costs. The Company used the net proceeds of the offering to fund the

early redemption of $4.3 billion of Medtronic Inc. and CIFSA Senior Notes and €1.5 billion of Medtronic Luxco Senior Notes for $6.3 billion of total consideration in October 2020. Additionally, the Company used the proceeds to repay its €750 million floating rate senior notes at maturity in March 2021. The Company recognized a loss on debt extinguishment of $308 million in fiscal year 2021, which primarily included cash premiums and accelerated amortization of deferred financing costs and debt discounts and premiums. The loss was recognized in *interest expense* in the consolidated statement of income.

The Euro-denominated debt issued in June 2019 and September 2020 is designated as a net investment hedge of certain of the Company's European operations. Refer to Note 7 for additional information regarding the net investment hedge.

Term Loan Agreements On May 12, 2020, Medtronic Luxco entered into a term loan agreement (Fiscal 2021 Loan Agreement) by and among Medtronic Luxco, Medtronic plc, Medtronic, Inc., and Mizuho Bank, Ltd. as administrative agent and as lender. The Fiscal 2021 Loan Agreement provided an unsecured term loan in an aggregate principal amount of up to ¥300 billion, with a term of six months and the option to extend for an additional six months at Medtronic Luxco's option. On May 13, 2020, Medtronic Luxco borrowed the entire amount of the term loan under the Fiscal 2021 Loan Agreement. The Japanese Yen-denominated debt was designated as a net investment hedge for certain of the Company's Japanese operations. Borrowings under the Fiscal 2021 Loan Agreement carried interest at the TIBOR Rate (as defined in the Fiscal 2021 Loan Agreement) plus a margin of 0.50% per annum. Medtronic plc and Medtronic, Inc. guaranteed the obligations of Medtronic Luxco under the Fiscal 2021 Loan Agreement. On November 12, 2020, the Company exercised its option to extend the term loan for an additional six months. During the fourth quarter of fiscal year 2021, the Company de-designated the Yen-denominated debt as a net investment hedge and repaid the term loan in full, including interest.

Subsequent to fiscal year 2022, on May 2, 2022, Medtronic Luxco entered into a term loan agreement (Fiscal 2023 Loan Agreement) by and among Medtronic Luxco, Medtronic plc, Medtronic, Inc., and Mizuho Bank, Ltd. as administrative agent and as lender. The Fiscal 2023 Loan Agreement provides an unsecured term loan in an aggregate principal amount of up to ¥300 billion with a term of 364 days. Borrowings under the Fiscal 2023 Loan Agreement bear interest at the TIBOR Rate (as defined in the Fiscal 2023 Loan Agreement) plus a margin of 0.40% per annum. Medtronic plc and Medtronic, Inc. have guaranteed the obligations of Medtronic Luxco under the Fiscal 2023 Loan Agreement. In May and June 2022, Medtronic Luxco borrowed an aggregate of ¥297 billion, or approximately $2.3 billion, of the term loan, under the Fiscal 2023 Loan Agreement. The Company used the net proceeds of the borrowings to fund the early redemption of $1.9 billion of Medtronic Inc.'s 3.500% Senior Notes due 2025 for $1.9 billion of total consideration, and $368 million of Medtronic Luxco's 3.350% Senior Notes due 2027 for $376 million of total consideration. The Company will recognize a total loss on debt extinguishment of $53 million in the quarter ended July 29, 2022, which primarily includes cash premiums and accelerated amortization of deferred financing costs and debt discounts and premiums. The loss will be recognized in *interest expense* in the consolidated statements of income.

Contractual maturities of debt for the next five fiscal years and thereafter, excluding deferred financing costs and debt discount, net, are as follows:

(in millions)	
2023	$ 3,744
2024	6
2025	1,895
2026	2,133
2027	1,969
Thereafter	14,528
Total	$ 24,275

Financial Instruments Not Measured at Fair Value

At April 29, 2022, the estimated fair value of the Company's Senior Notes was $22.9 billion compared to a principal value of $24.2 billion. At April 30, 2021 the estimated fair value was $28.6 billion compared to a principal value of $26.5 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.

7. 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. Currencies of our derivative instruments include the Euro, Japanese Yen, Chinese Yuan, and others. 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 $13.8 billion and $14.7 billion at April 29, 2022 and April 30, 2021, 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 freestanding currency exchange rate contracts outstanding at April 29, 2022 and April 30, 2021 was $4.9 billion and $5.7 billion, respectively. 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 April 29, 2022 and April 30, 2021 was $226 million and $243 million, respectively. 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 or financing activities, depending on the nature of the underlying hedged item, in the consolidated statements of cash flows.

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 April 29, 2022 and April 30, 2021 was $8.8 billion and $9.0 billion, respectively, and will mature within the subsequent three-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* or *cost of products sold* 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 fiscal years 2022, 2021, or 2020.

At April 29, 2022 and April 30, 2021, the Company had $474 million in after-tax unrealized gains and $253 million in after-tax unrealized losses, respectively, associated with cash flow hedging instruments recorded in *accumulated other comprehensive loss*. The Company expects that $368 million of after-tax net unrealized gains at April 29, 2022 will be recognized in the consolidated statements of income over the next 12 months.

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 April 29, 2022, the Company had €16.0 billion, or $17.0 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 year 2023 through fiscal year 2051.

In February 2021, the Company de-designated ¥300 billion of outstanding Yen-denominated debt previously designated as a net investment hedge and concurrently entered into freestanding forward derivative contracts with a total notional value of ¥300 billion, or approximately $2.9 billion. These forward contracts were not designated as hedges. The Company used the proceeds from these forward derivative contracts to repay the ¥300 billion of Yen-denominated debt in conjunction with the maturity of these forward contracts in March and April of 2021.

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 April 29, 2022 and April 30, 2021, the Company had $841 million in after-tax unrealized gains and $1.5 billion in after-tax unrealized losses associated with net investment hedges recorded in *accumulated other comprehensive loss,* respectively. The Company does not expect any of the after-tax unrealized gains at April 29, 2022 to be recognized in the consolidated statements of income over the next 12 months.

The Company did not recognize any gains or losses during fiscal years 2022, 2021, or 2020 on instruments that no longer qualify as net investment hedges.

Gains and Losses on Hedging Instruments and Derivatives not Designated as Hedging Instruments

The amount of the gains and losses on our hedging instruments and the classification of those gains and losses within our consolidated financial statements for fiscal years 2022, 2021, and 2020 were as follows:

	(Gain) Loss Recognized in Accumulated Other Comprehensive Income			(Gain) Loss Reclassified into Income			
	Fiscal Year			Fiscal Year			
(in millions)	2022	2021	2020	2022	2021	2020	Location of (Gain) Loss in Income Statement
Cash flow hedges							
Currency exchange rate contracts	$ (953)	$ 519	$ (397)	$ (144)	$ (17)	$ (335)	Other operating expense, net
Currency exchange rate contracts	18	108	—	61	15	—	Cost of products sold
Net investment hedges	(2,299)	1,694	(405)	—	—	(9)	Other operating expense, net
Total	$ (3,234)	$ 2,321	$ (802)	$ (83)	$ (2)	$ (344)	

The amount of the gains and losses on our derivative instruments not designated as hedging instruments and the classification of those gains and losses within our consolidated financial statements for fiscal years 2022, 2021, and 2020 were as follows:

	(Gain) Loss Recognized in Income			
	Fiscal Year			
(in millions)	2022	2021	2020	Location of (Gain) Loss in Income Statement
Derivatives not designated as hedging instruments				
Currency exchange rate contracts	$ (54)	$ 247	$ (133)	Other operating expense, net
Total return swaps	1	(81)	7	Other operating expense, net
Total	$ (53)	$ 166	$ (126)	

Balance Sheet Presentation

The following tables summarize the balance sheet classification and fair value of derivative instruments included in the consolidated balance sheets at April 29, 2022 and April 30, 2021. 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.

	Fair Value - Assets			Fair Value - Liabilities		
(in millions)	April 29, 2022	April 30, 2021	Balance Sheet Classification	April 29, 2022	April 30, 2021	Balance Sheet Classification
Derivatives designated as hedging instruments						
Currency exchange rate contracts	$ 481	$ 49	Other current assets	$ 43	$ 190	Other accrued expenses
Currency exchange rate contracts	168	22	Other assets	16	94	Other liabilities
Total derivatives designated as hedging instruments	**649**	**70**		**60**	**285**	
Derivatives not designated as hedging instruments						
Currency exchange rate contracts	46	14	Other current assets	49	11	Other accrued expenses
Total return swaps	—	18	Other current assets	20	—	Other accrued expenses
Total derivatives not designated as hedging instruments	**46**	**32**		**69**	**11**	
Total derivatives	**$ 695**	**$ 102**		**$ 129**	**$ 296**	

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

	April 29, 2022		April 30, 2021	
(in millions)	Level 1	Level 2	Level 1	Level 2
Derivative assets	$ 695	$ 109	$ 85	$ 18
Derivative liabilities	—	20	296	—

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.

	April 29, 2022			
		Gross Amount Not Offset on the Balance Sheet		
(in millions)	Gross Amount of Recognized Assets (Liabilities)	Financial Instruments	Cash Collateral (Received) Posted	Net Amount
Derivative assets:				
Currency exchange rate contracts	$ 695	$ (109)	$ (254)	$ 332
Derivative liabilities:				
Currency exchange rate contracts	(109)	109	—	—
Total return swaps	(20)	—	—	(20)
	(129)	109	—	(20)
Total	$ 566	$ —	$ (254)	$ 312

	April 30, 2021			
		Gross Amount Not Offset on the Balance Sheet		
(in millions)	Gross Amount of Recognized Assets (Liabilities)	Financial Instruments	Cash Collateral (Received) Posted	Net Amount
Derivative assets:				
Currency exchange rate contracts	$ 85	$ (83)	$ —	$ 1
Total return swaps	18	—	—	18
	102	(83)	—	19
Derivative liabilities:				
Currency exchange rate contracts	(296)	83	46	(167)
Total	$ (194)	$ —	$ 46	$ (148)

Concentrations of Credit Risk

Financial instruments, which potentially subject the Company to significant concentrations of credit risk, consist principally of interest-bearing investments, forward exchange derivative contracts, and trade accounts receivable. Global concentrations of credit risk with respect to trade accounts receivable are limited due to the large number of customers and their dispersion across many geographic areas. The Company monitors the creditworthiness of its customers to which it grants credit terms in the normal course of business.

The Company maintains cash and cash equivalents, investments, and certain other financial instruments (including currency exchange rate and interest rate derivative contracts) with various major financial institutions. The Company performs periodic evaluations of the relative credit standings of these financial institutions and limits the amount of

credit exposure with any one institution. In addition, the Company has collateral credit agreements with its primary derivatives counterparties. Under these agreements, either party is required to post eligible collateral when the market value of transactions covered by the agreement exceeds specific thresholds, thus limiting credit exposure for both parties. As of April 29, 2022, the Company received net cash collateral of $254 million from its counterparties. As of April 30, 2021, the Company posted net cash collateral of $46 million to its counterparties. Cash collateral posted is recorded as a reduction in *cash and cash equivalents*, with the offset recorded as an increase in *other current assets* in the consolidated balance sheets. Cash collateral received is recorded as an increase in *cash and cash equivalents* with the offset recorded in *other accrued expenses* in the consolidated balance sheets.

8. Inventories

Inventory balances, net of reserves, were as follows:

(in millions)	April 29, 2022	April 30, 2021
Finished goods	$ 3,070	$ 2,906
Work-in-process	682	611
Raw materials	864	796
Total	$ 4,616	$ 4,313

9. Goodwill and Other Intangible Assets

Goodwill

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

(in millions)	Cardiovascular	Medical Surgical	Neuroscience	Diabetes	Total
April 24, 2020	$ 6,831	$ 20,176	$ 10,920	$ 1,914	$ 39,841
Goodwill as a result of acquisitions	248	12	210	346	816
Purchase accounting adjustments	(2)	(5)	3	(4)	(8)
Currency translation and other	132	1,012	167	1	1,312
April 30, 2021	7,209	21,195	11,300	2,257	41,961
Goodwill as a result of acquisitions	55	—	26	—	80
Purchase accounting adjustments	21	3	3	(2)	25
Currency translation and other	(125)	(1,241)	(196)	(1)	(1,563)
April 29, 2022	$ 7,160	$ 19,957	$ 11,132	$ 2,254	$ 40,502

The Company did not recognize any goodwill impairments during fiscal years 2022, 2021, or 2020.

Intangible Assets

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

(in millions)	April 29, 2022 Gross Carrying Amount	April 29, 2022 Accumulated Amortization	April 30, 2021 Gross Carrying Amount	April 30, 2021 Accumulated Amortization
Definite-lived:				
Customer-related	$ 16,953	$ (7,005)	$ 17,036	$ (6,058)
Purchased technology and patents	10,802	(5,667)	11,286	(5,156)
Trademarks and tradenames	473	(266)	475	(251)
Other	80	(69)	82	(68)
Total	$ 28,308	$ (13,006)	$ 28,879	$ (11,533)
Indefinite-lived:				
IPR&D	$ 293	$ —	$ 394	$ —

During fiscal year 2022, the Company recognized $409 million of definite-lived intangible asset impairment charges in connection with MCS within the Cardiovascular Portfolio. The intangible asset impairment charge primarily related to purchased technology and patents. Refer to Note 4 Restructuring Charges for additional information on what led to the impairment. During fiscal year 2021, the Company recognized $30 million of definite-lived intangible asset charges in connection with the abandonment of certain intangible assets within the Neuroscience segment. During fiscal year 2020, the Company recognized $37 million of definite-lived intangible asset charges, including $33 million and $4 million recognized in connection with business exits in the Neuroscience and Cardiovascular segments, respectively. Definite-lived intangible asset charges are recognized in *other operating expense, net* in the consolidated statements of income.

Indefinite-lived intangible asset impairment charges were not significant for fiscal year 2022. During fiscal year 2021, the Company recognized $45 million of indefinite-lived intangible asset impairment charges related to the abandonment of certain IPR&D projects in the Neuroscience segment. During fiscal year 2020, the Company recognized $35 million of indefinite-lived intangible asset impairment charges, including $25 million relating to a partial impairment of an IPR&D project within the Neuroscience segment and $10 million in connection with the discontinuation of an IPR&D project within the Cardiovascular segment. Indefinite-lived intangible asset impairment charges are recognized in *other operating expense, net* in the consolidated statements of income. 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 such clinical trials, delays or failures to obtain required market clearances, other failures to achieve a commercially viable product, or the discontinuation of certain projects, and as a result, may recognize impairment losses in the future.

Amortization Expense

Intangible asset amortization expense was $1.7 billion for fiscal year 2022 and $1.8 billion for fiscal years 2021 and 2020. Estimated aggregate amortization expense by fiscal year based on the current carrying value and remaining estimated useful lives of definite-lived intangible assets at April 29, 2022, excluding any possible future amortization associated with acquired IPR&D which has not met technological feasibility, is as follows:

(in millions)	Amortization Expense
2023	$ 1,659
2024	1,624
2025	1,602
2026	1,588
2027	1,564

10. Property, Plant, and Equipment

Property, plant, and equipment balances and corresponding estimated useful lives were as follows:

(in millions)	April 29, 2022	April 30, 2021	Estimated Useful Lives (in years)
Equipment	$ 6,489	$ 6,308	Generally 2-7, up to 15
Computer software	2,617	2,346	Up to 5
Land and land improvements	170	178	Up to 20
Buildings and leasehold improvements	2,351	2,370	Up to 40
Construction in progress	1,737	1,498	—
Property, plant, and equipment	13,365	12,700	
Less: Accumulated depreciation	(7,952)	(7,479)	
Property, plant, and equipment, net	$ 5,413	$ 5,221	

Depreciation expense of $974 million, $919 million, and $907 million was recognized in fiscal years 2022, 2021, and 2020, respectively.

11. Shareholders' Equity

Share Capital Medtronic plc is authorized to issue 2.6 billion Ordinary Shares, $0.0001 par value; 40 thousand Euro Deferred Shares, €1.00 par value; 127.5 million Preferred Shares, $0.20 par value; and 500 thousand A Preferred Shares, $1.00 par value.

Euro Deferred Shares The authorized share capital of the Company includes 40 thousand Euro Deferred Shares, with a par value of €1.00 per share. At April 29, 2022, no Euro Deferred Shares were issued or outstanding.

Preferred Shares The authorized share capital of the Company includes 127.5 million of Preferred Shares, with a par value of $0.20 per share. At April 29, 2022, no Preferred Shares were issued or outstanding.

A Preferred Shares The authorized share capital of the Company includes 500 thousand A Preferred Shares, with a par value of $1.00 per share. During the third quarter of fiscal year 2022 the Company redeemed the previously outstanding 1,872 A Preferred Shares for $0.075 million. At April 29, 2022, no A Preferred Shares were outstanding.

Dividends The timing, declaration, and payment of future dividends to holders of the Company's ordinary shares falls within the discretion of the Company's Board of Directors and depends upon many factors, including the statutory requirements of Irish law, the Company's earnings and financial condition, the capital requirements of the Company's businesses, industry practice and any other factors the Board of Directors deems relevant.

Ordinary Share Repurchase Program Shares are repurchased on occasion to support the Company's stock-based compensation programs and to return capital to shareholders. During fiscal years 2022 and 2021, the Company repurchased approximately 22 million and 4 million shares, respectively, at an average price of $113.11 and $126.80, respectively.

In March 2019, the Company's Board of Directors authorized $6.0 billion for repurchase of the Company's ordinary shares. There is no specific time-period associated with these repurchase authorizations. At April 29, 2022, the Company had used $3.0 billion of the $6.0 billion authorized under the repurchase program, leaving approximately $3.0 billion available for future repurchases. The Company accounts for repurchases of ordinary shares using the par value method and shares repurchased are cancelled.

12. Stock Purchase and Award Plans

In fiscal year 2022, the Company granted stock awards under the Medtronic plc 2013 Plan (2013 Plan) and the 2021 Medtronic plc Long Term Incentive Plan (2021 Plan). The 2021 Plan was approved by the Company's shareholders on December 9, 2021, and provides for a maximum of 115 million ordinary shares to be issued, in addition to the 14 million ordinary shares previously approved for issuance under the 2013 Plan. The 2021 Plan provides for the grant of non-qualified and incentive stock options, stock appreciation rights, restricted stock, restricted stock units, performance awards, and other stock and cash-based awards. At April 29, 2022, there were approximately 127 million shares available for future grants under the 2021 Plan.

Stock-Based Compensation Expense The following table presents the components and classification of stock-based compensation expense recognized for stock options, restricted stock, performance share units, and employee stock purchase plan (ESPP) in fiscal years 2022, 2021, and 2020:

	Fiscal Year		
(in millions)	**2022**	**2021**	**2020**
Stock options	$ 70	$ 72	$ 61
Restricted stock	184	185	205
Performance share units	66	49	—
Employee stock purchase plan	39	38	31
Total stock-based compensation expense	$ 359	$ 344	$ 297
Cost of products sold	$ 36	$ 35	$ 28
Research and development expense	40	38	36
Selling, general, and administrative expense	283	272	233
Total stock-based compensation expense	359	344	297
Income tax benefits	(62)	(59)	(51)
Total stock-based compensation expense, net of tax	$ 297	$ 285	$ 246

Stock Options Options are granted at the exercise price, which is equal to the closing price of the Company's ordinary shares on the grant date. The majority of the Company's options are non-qualified options with a 10-year life and a 4-year ratable vesting term. The Company uses the Black-Scholes option pricing model (Black-Scholes model) to determine the fair value of stock options at the grant date. The fair value of stock options under the Black-

Scholes model requires management to make assumptions regarding projected employee stock option exercise behaviors, risk-free interest rates, volatility of the Company's stock price, and expected dividends.

The following table provides the weighted average fair value of options granted to employees and the related assumptions used in the Black-Scholes model:

	Fiscal Year		
	2022	2021	2020
Weighted average fair value of options granted	$ 22.83	$ 16.15	$ 15.49
Assumptions used:			
Expected life (years)	6.0	6.0	6.1
Risk-free interest rate	0.90 %	0.33 %	1.88 %
Volatility	23.04 %	24.17 %	17.97 %
Dividend yield	1.95 %	2.36 %	2.09 %

The following table summarizes stock option activity during fiscal year 2022:

	Options (in thousands)	Wtd. Avg. Exercise Price	Wtd. Avg. Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Outstanding at April 30, 2021	27,972	$ 84.38		
Granted	4,153	129.03		
Exercised	(3,222)	70.52		
Expired/Forfeited	(641)	107.42		
Outstanding at April 29, 2022	28,263	92.00	5.5	$ 450
Expected to vest at April 29, 2022	8,818	110.27	8.4	35
Exercisable at April 29, 2022	18,804	82.62	4.0	414

The following table summarizes the total cash received from the issuance of new shares upon stock option award exercises, the total intrinsic value of options exercised, and the related tax benefit during fiscal years 2022, 2021, and 2020:

	Fiscal Year		
(in millions)	2022	2021	2020
Cash proceeds from options exercised	$ 209	$ 277	$ 484
Intrinsic value of options exercised	174	205	349
Tax benefit related to options exercised	40	47	75

Unrecognized compensation expense related to outstanding stock options at April 29, 2022 was $90 million and is expected to be recognized over a weighted average period of 2.5 years.

Restricted Stock Restricted stock units are expensed over the vesting period and are subject to forfeiture if employment terminates prior to the lapse of the restrictions. The expense recognized for restricted stock units is equal to the grant date fair value, which is equal to the closing stock price on the date of grant. Restricted stock units either have a 4-year ratable vesting term or cliff vest after three years. The Company also grants shares of performance-based restricted stock units that typically cliff vest after three years only if the Company has also achieved certain performance objectives. Performance awards are expensed over the performance period based on the probability of achieving the performance objectives. Restricted stock units are not considered issued or

outstanding ordinary shares of the Company. Dividend equivalent units are accumulated on restricted stock units during the vesting period.

The following table summarizes restricted stock activity during fiscal year 2022:

	Units (in thousands)	Wtd. Avg. Grant Price
Nonvested at April 30, 2021	5,980	$ 97.66
Granted	1,935	127.47
Vested	(2,089)	93.05
Forfeited	(456)	107.53
Nonvested at April 29, 2022	5,370	108.92

The following table summarizes the weighted-average grant date fair value of restricted stock granted, total fair value of restricted stock vested and related tax benefit during fiscal years 2022, 2021, and 2020:

	Fiscal Year		
(in millions, except per share data)	2022	2021	2020
Weighted-average grant-date fair value per restricted stock	$ 127.47	$ 99.48	$ 103.52
Fair value of restricted stock vested	194	280	242
Tax benefit related to restricted stock vested	52	65	62

Unrecognized compensation expense related to restricted stock as of April 29, 2022 was $316 million and is expected to be recognized over a weighted average period of 2.5 years.

Performance Share Units Beginning in fiscal year 2021, the Company granted performance share units to officers and key employees. Performance share units typically cliff vest after three years. The awards include three metrics: relative total shareholder return (rTSR), revenue growth, and return on investor capital (ROIC). rTSR is considered a market condition metric, and the expense is determined at the grant date and will not be adjusted even if the market condition is not met. Revenue growth and ROIC are considered performance metrics, and the expense is recorded over the performance period, which will be reassessed each reporting period based on the probability of achieving the various performance conditions. The number of shares earned at the end of the three-year period will vary, based on only actual performance, from 0% to 200% of the target number of performance share units granted. Performance share units are subject to forfeiture if employment terminates prior to the lapse of the restrictions. Performance share units are not considered issued or outstanding ordinary shares of the Company. Dividend equivalent units are accumulated on performance share units for each component of the award during the vesting period.

The Company calculates the fair value of the performance share units for each component individually. The fair value of the rTSR metric will be determined using the Monte Carlo valuation model. The fair value of the revenue growth and ROIC metrics are equal to the closing stock price on the grant date.

The following table summarizes performance share unit activity during fiscal year 2022:

	Units (in thousands)	Wtd. Avg. Grant Price
Nonvested at April 30, 2021	828	$ 129.05
Granted	831	149.16
Forfeited	(78)	138.31
Nonvested at April 29, 2022	1,581	138.95

The following table summarizes the weighted-average grant date fair value of performance share units granted, total fair value of performance share units vested and related tax benefit during fiscal year 2022 and 2021:

	Fiscal Year	
(in millions, except per share data)	**2022**	**2021**
Weighted-average grant-date fair value per performance share units	$ 149.16	$ 129.04
Fair value of performance share units vested	—	—
Tax benefit related to performance share units vested	—	—

Unrecognized compensation expense related to performance share units as of April 29, 2022 was $84 million and is expected to be recognized over a weighted average period of 1.9 years.

Employees Stock Purchase Plan The Medtronic plc Amended and Restated 2014 Employees Stock Purchase Plan allows participating employees to purchase the Company's ordinary shares at a discount through payroll deductions. The expense recognized for shares purchased under the Company's ESPP is equal to the 15 percent discount the employee receives. Employees purchased 2 million shares at an average price of $98.75 per share in fiscal year 2022. At April 29, 2022, approximately 7 million ordinary shares were available for future purchase under the ESPP.

13. Income Taxes

The income tax provision (benefit) is based on income before income taxes reported for financial statement purposes. The components of income before income taxes, based on tax jurisdiction, are as follows:

	Fiscal Year		
(in millions)	**2022**	**2021**	**2020**
U.S.	$ 436	$ (358)	$ 466
International	5,081	4,253	3,589
Income before income taxes	$ 5,517	$ 3,895	$ 4,055

The income tax provision (benefit) consists of the following:

	Fiscal Year		
(in millions)	**2022**	**2021**	**2020**
Current tax expense:			
U.S.	$ 467	$ 287	$ 151
International	599	439	375
Total current tax expense	1,066	726	526
Deferred tax (benefit) expense:			
U.S.	(402)	(625)	(138)
International	(209)	165	(1,139)
Net deferred tax benefit	(611)	(461)	(1,277)
Income tax provision (benefit)	$ 456	$ 265	$ (751)

Tax assets (liabilities), shown before jurisdictional netting of deferred tax assets (liabilities), are comprised of the following:

(in millions)	April 29, 2022	April 30, 2021[1]
Deferred tax assets:		
Intangible assets	$ 2,334	$ 1,536
Net operating loss, capital loss, and credit carryforwards	5,982	6,114
Capitalization of research and development	597	408
Other accrued liabilities	483	442
Accrued compensation	332	411
Pension and post-retirement benefits	66	234
Stock-based compensation	146	132
Inventory	146	164
Lease obligations	92	106
Federal and state benefit on uncertain tax positions	60	55
Interest limitation	386	352
Other	374	336
Gross deferred tax assets	10,998	10,290
Valuation allowance	(6,583)	(5,822)
Total deferred tax assets	4,415	4,468
Deferred tax liabilities:		
Intangible assets	(1,488)	(1,856)
Realized loss on derivative financial instruments	(66)	(75)
Right of use leases	(89)	(102)
Unrealized gain on available-for-sale securities and derivative financial instruments	—	(16)
Accumulated depreciation	(121)	(151)
Outside basis difference of subsidiaries	(129)	(101)
Other	(70)	(81)
Total deferred tax liabilities	(1,963)	(2,382)
Prepaid income taxes	474	458
Income tax receivables	358	353
Tax assets, net	$ 3,284	$ 2,897
Reported as (after valuation allowance and jurisdictional netting):		
Other current assets	$ 765	$ 756
Tax assets	3,403	3,169
Deferred tax liabilities	(884)	(1,028)
Tax assets, net	$ 3,284	$ 2,897

(1) Certain prior year amounts have been reclassified to conform to current year presentation

No deferred taxes have been provided on the approximately $79.3 billion and $74.2 billion of undistributed earnings of the Company's subsidiaries at April 29, 2022 and April 30, 2021, respectively, since these earnings have been, and under current plans will continue to be, permanently reinvested in these subsidiaries. Due to the number of legal entities and jurisdictions involved, the complexity of the legal entity structure of the Company, and the complexity of the tax laws in the relevant jurisdictions, the Company believes it is not practicable to estimate, within any

reasonable range, the amount of additional taxes which may be payable upon distribution of these undistributed earnings.

At April 29, 2022, the Company had approximately $25.4 billion of net operating loss carryforwards in certain non-U.S. jurisdictions, of which $20.0 billion have no expiration, and the remaining $5.4 billion will expire during fiscal years 2023 through 2042. Included in these net operating loss carryforwards are $18.6 billion of net operating losses related to a subsidiary of the Company, substantially all of which

were recorded in fiscal year 2008 as a result of the receipt of a favorable tax ruling from certain non-U.S. taxing authorities. The Company has recorded a full valuation allowance against these net operating losses, as management does not believe that it is more likely than not that these net operating losses will be utilized. Certain of the remaining non-U.S. net operating loss carryforwards of $6.8 billion have a valuation allowance recorded against the carryforwards, as management does not believe that it is more likely than not that these net operating losses will be utilized.

At April 29, 2022, the Company had $222 million of U.S. federal net operating loss carryforwards, of which $47 million have no expiration. The remaining loss carryforwards will expire during fiscal years 2023 through 2036. For U.S. state purposes, the Company had $1.4 billion of net operating loss carryforwards at April 29, 2022, $72 million of which have no expiration. The remaining U.S. state loss carryforwards will expire during fiscal years 2023 through 2042.

At April 29, 2022, the Company also had $254 million of tax credits available to reduce future income taxes payable, of which $120 million have no expiration. The remaining credits will expire during fiscal years 2023 through 2042.

The Company has established valuation allowances of $6.6 billion and $5.8 billion at April 29, 2022 and April 30, 2021, respectively, primarily related to the uncertainty of the utilization of certain deferred tax assets which are primarily comprised of tax loss and credit carryforwards in various jurisdictions. The increase in the valuation allowance during fiscal year 2022 is primarily related to the step up in tax basis for Swiss Cantonal purposes, the generation of certain net operating losses and the effects of currency fluctuations. These valuation allowances would result in a reduction to the income tax provision in the consolidated statements of income if they are ultimately not required.

The Company's effective income tax rate varied from the U.S. federal statutory tax rate as follows:

	Fiscal Year		
	2022	2021	2020
U.S. federal statutory tax rate	21.0 %	21.0 %	21.0 %
Increase (decrease) in tax rate resulting from:			
U.S. state taxes, net of federal tax benefit	0.2	(1.1)	0.5
Research and development credit	(1.3)	(2.3)	(2.1)
Puerto Rico excise tax	(1.1)	(2.0)	(1.5)
International	(11.2)	(12.6)	(10.0)
Stock based compensation	(0.8)	(0.8)	(1.5)
Interest on uncertain tax positions	0.5	0.9	1.3
Base erosion anti-abuse tax	0.9	0.5	2.6
Foreign derived intangible income benefit	(1.0)	(1.9)	(1.2)
Certain tax adjustments	(0.9)	(1.0)	(30.8)
Legal entity restructuring	—	1.8	—
U.S. tax on foreign earnings	2.2	3.4	2.8
Other, net	(0.2)	0.9	0.4
Effective tax rate	8.3 %	6.8 %	(18.5)%

During fiscal year 2022, the net benefit from certain tax adjustments of $50 million, recognized in *income tax provision (benefit)* in the consolidated statement of income, included the following:

- A benefit of $82 million associated with a step up in tax basis for Swiss Cantonal purposes.
- A benefit of $82 million related to a change in tax rates on intangible assets.
- A cost of $47 million associated with the amortization of the previously established deferred tax assets from intercompany intellectual property transactions.
- A cost of $41 million associated with a change in the Company's permanent reinvestment assertion on certain historical earnings.
- A net cost of $26 million primarily associated with an intercompany sale of assets.

During fiscal year 2021, the net benefit from certain tax adjustments of $41 million, recognized in *income tax provision (benefit)* in the consolidated statement of income, included the following:

- A net benefit of $106 million associated with the resolution of an audit at the IRS Appellate level for fiscal years 2012, 2013, and 2014. The issues resolved relate to the utilization of certain net operating losses and the allocation of income between Medtronic, Inc. and its wholly owned subsidiary operating in Puerto Rico for businesses that are not the subject of the U.S. Tax Court Case for fiscal years 2005 and 2006.

- A net cost of $73 million related to a tax basis adjustment of previously established deferred tax assets from intercompany intellectual property transactions. The cumulative amount of deferred tax benefit previously recognized from intercompany intellectual property transactions and recorded as Certain Tax Adjustments is $1.5 billion. The corresponding deferred tax assets will be amortized over a period of approximately 20 years.

- A cost of $50 million associated with the amortization of the previously established deferred tax assets from intercompany intellectual property transactions.

- A net cost of $25 million associated with an internal restructuring and intercompany sale of assets.

- A benefit of $83 million related to the capitalization of certain research and development costs for U.S. income tax purposes and the establishment of a deferred tax asset at the U.S. federal statutory tax rate.

During fiscal year 2020, the net benefit from certain tax adjustments of $1.2 billion, recognized in *income tax provision (benefit)* in the consolidated statement of income, included the following:

- A net benefit of $63 million related to the finalization of certain state tax impacts from U.S. Tax Reform, and the issuance of certain final U.S. Treasury 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 $252 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 that will be amortized and deducted over a 10-year period.

- A benefit of $658 million related to the release of a valuation allowance previously recorded against certain net operating losses. Luxembourg enacted tax legislation during the year requiring the Company to reassess the realizability of certain net operating losses. The Company evaluated both the positive and negative evidence and released valuation allowance equal to the expected benefit from the utilization of certain net operating losses in connection with a planned intercompany sale of intellectual property.

- A benefit of $269 million associated with the intercompany sale of intellectual property and the establishment of a deferred tax asset.

Currently, the Company's operations in Puerto Rico, Singapore, Dominican Republic, Costa Rica, and China have various tax holidays and tax incentive grants. The tax reductions as compared to the local statutory rate favorably impacted earnings by $248 million, $301 million, and $231 million in fiscal years 2022, 2021, and 2020,

respectively, and diluted earnings per share by $0.18, $0.22, and $0.17, in fiscal years 2022, 2021, and 2020, respectively. The tax holidays are conditional upon the Company meeting certain thresholds required under statutory law. The tax incentive grants, unless extended, will expire between fiscal years 2023 and 2034. The Company's historical practice has been to renew, extend, or obtain new tax incentive grants upon expiration of existing tax incentive grants. If the Company is not able to renew, extend, or obtain new tax incentive grants, the expiration of existing tax incentive grants could have a material impact on the Company's financial results in future periods. The tax incentive grants which expired during fiscal year 2022 did not have a material impact on the Company's consolidated financial statements.

The Company had $1.7 billion, $1.7 billion, and $1.9 billion of gross unrecognized tax benefits at April 29, 2022, April 30, 2021, and April 24, 2020, respectively. A reconciliation of the beginning and ending amount of unrecognized tax benefits for fiscal years 2022, 2021, and 2020 is as follows:

	Fiscal Year		
(in millions)	**2022**	**2021**	**2020**
Gross unrecognized tax benefits at beginning of fiscal year	$ 1,668	$ 1,862	$ 1,836
Gross increases:			
Prior year tax positions	1	88	12
Current year tax positions	40	62	55
Gross decreases:			
Prior year tax positions	(29)	(106)	(9)
Settlements	(8)	(216)	(5)
Statute of limitation lapses	(11)	(21)	(27)
Gross unrecognized tax benefits at end of fiscal year	1,661	1,668	1,862
Cash advance paid to taxing authorities	(859)	(859)	(859)
Gross unrecognized tax benefits at end of fiscal year, net of cash advance	$ 802	$ 809	$ 1,003

If all of the Company's unrecognized tax benefits at April 29, 2022, April 30, 2021, and April 24, 2020 were recognized, $1.6 billion, $1.6 billion, and $1.8 billion would impact the Company's effective tax rate, respectively. Although the Company believes that it has adequately provided for liabilities resulting from tax assessments by taxing authorities, positions taken by these tax authorities could have a material impact on the Company's effective tax rate in future periods. The Company has recorded gross unrecognized tax benefits, net of cash advance, of $787 million as a noncurrent liability. The Company estimates that within the next 12 months it is reasonably possible that its uncertain tax positions excluding interest, could decrease by as much as $15 million, net as a result of statute of limitation lapses.

The Company recognizes interest and penalties related to income tax matters in *income tax provision (benefit)* in the consolidated statements of income and records the liability in the current or noncurrent *accrued income taxes* in the consolidated balance sheets, as appropriate. The Company had $117 million, $99 million, and $225 million of accrued gross interest and penalties at April 29, 2022, April 30, 2021, and April 24, 2020, respectively. During fiscal years 2022, 2021, and 2020, the Company recognized gross interest expense of $17 million, income of $44 million, and expense of $53 million, respectively, in *income tax provision (benefit)* in the consolidated statements of income.

The Company reserves for uncertain tax positions related to unresolved matters with the IRS and other taxing authorities. These reserves are subject to a high degree of estimation and management judgment. Resolution of these significant unresolved matters, or positions taken by the IRS or other tax authorities during future tax audits, could have a material impact on the Company's financial results in future periods. The Company continues to believe that its reserves for uncertain tax positions are appropriate and that it has meritorious defenses for its tax filings and will vigorously defend them during the audit process, appellate process, and through litigation in courts, as necessary.

The major tax jurisdictions where the Company conducts business which remain subject to examination are as follows:

Jurisdiction	Earliest Year Open
United States - federal and state	2005
Australia	2018
Brazil	2017
Canada	2013
China	2015
Costa Rica	2018
Dominican Republic	2019
France	2019
Germany	2014
India	2002
Ireland	2012
Israel	2010
Italy	2005
Japan	2018
Korea	2017
Luxembourg	2017
Mexico	2017
Puerto Rico	2011
Singapore	2016
Switzerland	2010
United Kingdom	2017

See Note 18 for additional information regarding the status of current tax audits and proceedings.

14. Earnings Per Share

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 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:

	Fiscal Year		
(in millions, except per share data)	2022	2021	2020
Numerator:			
Net income attributable to ordinary shareholders	$ 5,039	$ 3,606	$ 4,789
Denominator:			
Basic – weighted average shares outstanding	1,342.4	1,344.9	1,340.7
Effect of dilutive securities:			
Employee stock options	6.6	6.6	7.2
Employee restricted stock units	1.6	2.1	2.8
Other	0.8	0.5	0.4
Diluted – weighted average shares outstanding	1,351.4	1,354.0	1,351.1
Basic earnings per share	$ 3.75	$ 2.68	$ 3.57
Diluted earnings per share	$ 3.73	$ 2.66	$ 3.54

The calculation of weighted average diluted shares outstanding excludes options to purchase approximately 5 million ordinary shares in fiscal year 2022 and 4 million ordinary shares in fiscal years 2021 and 2020 because their effect would have been anti-dilutive on the Company's earnings per share.

15. 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 expense related to these plans was $459 million, $668 million, and $467 million in fiscal years 2022, 2021, and 2020, respectively.

In the U.S., the Company maintains qualified pension plans designed to provide guaranteed minimum retirement benefits to all eligible U.S. participants. Pension coverage for non-U.S. employees is provided, to the extent deemed appropriate, through separate plans. In addition to the benefits provided under the qualified pension plan, retirement benefits associated with wages in excess of the IRS allowable limits are provided to certain employees under a non-qualified plan. U.S. and Puerto Rico employees are also eligible to receive a medical benefit component, in addition to normal retirement benefits, through the Company's post-retirement benefits.

At April 29, 2022 and April 30, 2021, the funded status of the Company's benefit plans was $74 million overfunded and $705 million underfunded, respectively.

During fiscal year 2021, as part of the Simplification restructuring program, the Company offered certain eligible U.S. employees voluntary early retirement packages, resulting in incremental expense of $97 million recognized. Of this amount, $73 million related to U.S. pension benefits, $11 million related to defined contribution plans, $11 million related to U.S. post-retirement benefits, and $2 million related to cash payments and administrative fees. See Note 4 for additional information on the Simplification restructuring program.

As of April 24, 2020, the Company announced the freezing of U.S. pension benefits beginning in 2027. Employees will continue to earn benefits as required by the plan until April 30, 2027, after which date benefits will no longer be earned and employees will earn benefits under a new defined contribution structure. The Company recognized curtailment benefits of $94 million in fiscal year 2020 as a result of this change.

Defined Benefit Pension Plans The change in benefit obligation and funded status of the Company's U.S. and Non-U.S. pension benefits are as follows:

	U.S. Pension Benefits		Non-U.S. Pension Benefits	
	Fiscal Year		Fiscal Year	
(in millions)	2022	2021	2022	2021
Accumulated benefit obligation at end of year:	$ 3,396	$ 3,786	$ 1,638	$ 2,035
Change in projected benefit obligation:				
Projected benefit obligation at beginning of year	$ 3,979	$ 3,723	$ 2,294	$ 2,024
Service cost	98	106	64	70
Interest cost	102	109	26	28
Employee contributions	—	—	12	12
Plan curtailments and settlements	—	—	(11)	(4)
Actuarial (gain) loss[1]	(513)	99	(394)	6
Benefits paid	(141)	(129)	(48)	(41)
Special termination benefits	—	73	—	—
Currency exchange rate changes and other	—	—	(203)	200
Projected benefit obligation at end of year	$ 3,526	$ 3,979	$ 1,740	$ 2,294
Change in plan assets:				
Fair value of plan assets at beginning of year	$ 3,660	$ 2,982	$ 1,900	$ 1,404
Actual return on plan assets	15	715	(12)	232
Employer contributions	24	95	70	149
Employee contributions	—	—	12	12
Plan settlements	—	—	(1)	(4)
Benefits paid	(141)	(129)	(48)	(41)
Currency exchange rate changes and other	—	—	(188)	149
Fair value of plan assets at end of year	$ 3,559	$ 3,660	$ 1,732	$ 1,900
Funded status at end of year:				
Fair value of plan assets	$ 3,559	$ 3,660	$ 1,732	$ 1,900
Benefit obligations	3,526	3,979	1,740	2,294
Over (under) funded status of the plans	33	(319)	(8)	(394)
Recognized asset (liability)	$ 33	$ (319)	$ (8)	$ (394)
Amounts recognized on the consolidated balance sheets consist of:				
Non-current assets	$ 313	$ 110	$ 240	$ 48
Current liabilities	(21)	(20)	(6)	(6)
Non-current liabilities	(259)	(408)	(242)	(436)
Recognized asset (liability)	$ 33	$ (319)	$ (8)	$ (394)
Amounts recognized in accumulated other comprehensive loss:				
Prior service cost (credit)	$ —	$ —	$ (4)	$ (6)
Net actuarial loss	854	1,220	161	530
Ending balance	$ 854	$ 1,220	$ 157	$ 524

(1) Actuarial gains and losses result from changes in actuarial assumptions (such as changes in the discount rate and revised mortality rates). The actuarial gain in fiscal year 2022 was primarily related to increases in discount rates. The actuarial loss in fiscal year 2021 was primarily related to decreases in discount rates.

In certain countries outside the U.S., fully funding pension plans is not a common practice, as funding provides no income tax benefit. Consequently, certain pension plans were partially funded at April 29, 2022 and April 30, 2021. U.S. and non-U.S. pension plans with accumulated benefit obligations in excess of plan assets consist of the following:

	Fiscal Year	
(in millions)	2022	2021
Accumulated benefit obligation	$ 830	$ 5,089
Projected benefit obligation	880	5,198
Plan assets at fair value	356	4,561

U.S. and non-U.S. pension plans with projected benefit obligations in excess of plan assets consist of the following:

	Fiscal Year	
(in millions)	2022	2021
Projected benefit obligation	$ 907	$ 5,921
Plan assets at fair value	379	5,159

The net periodic benefit cost of the plans includes the following components:

	U.S. Pension Benefits			Non-U.S. Pension Benefits		
	Fiscal Year			Fiscal Year		
(in millions)	2022	2021	2020	2022	2021	2020
Service cost	$ 98	$ 106	$ 106	$ 64	$ 70	$ 59
Interest cost	102	109	126	26	28	28
Expected return on plan assets	(226)	(242)	(225)	(64)	(59)	(58)
Amortization of prior service cost	—	1	1	(1)	(1)	(1)
Amortization of net actuarial loss	64	69	56	22	25	14
Settlement and curtailment (gain) loss	—	—	—	(10)	1	—
Special termination benefits	—	73	—	—	—	—
Net periodic benefit cost	$ 39	$ 116	$ 64	$ 37	$ 64	$ 42

The other changes in plan assets and projected benefit obligations recognized in *other comprehensive income* for fiscal year 2022 are as follows:

(in millions)	U.S. Pension Benefits	Non-U.S. Pension Benefits
Net actuarial gain	$ (303)	$ (317)
Amortization of prior service credit	—	1
Amortization and settlement recognition of actuarial loss	(64)	(22)
Effect of exchange rates	—	(29)
Total recognized in other comprehensive income	(367)	(367)
Total recognized in net periodic benefit cost and other comprehensive income	$ (328)	$ (331)

The actuarial assumptions are as follows:

	U.S. Pension Benefits			Non-U.S. Pension Benefits		
	Fiscal Year			Fiscal Year		
	2022	2021	2020	2022	2021	2020
Critical assumptions – projected benefit obligation:						
Discount rate	4.23% - 4.48%	2.80% - 3.50%	3.10% - 3.70%	0.60% - 25.40%	0.30% - 13.30%	0.30% - 13.30%
Rate of compensation increase	4.83 %	4.83 %	3.90 %	2.70 %	2.90 %	2.91 %
Critical assumptions – net periodic benefit cost:						
Discount rate – benefit obligation	2.80% - 3.46%	3.10% - 3.70%	3.90% - 4.30%	0.25% - 12.80%	0.30% - 13.90%	0.40% - 13.90%
Discount rate – service cost	2.50% - 3.51%	2.60% - 3.90%	3.70% - 4.00%	0.24% - 12.80%	0.30% - 13.90%	0.40% - 13.90%
Discount rate – interest cost	2.08% - 2.87%	2.80% - 3.20%	3.50% - 4.30%	0.08% - 12.80%	0.30% - 13.90%	0.40% - 13.90%
Expected return on plan assets	5.60% - 7.40%	7.50 %	7.90 %	3.67 %	3.78 %	4.19 %
Rate of compensation increase	3.90% - 4.83%	3.90 %	3.90 %	2.90 %	2.91 %	2.87 %

The Company utilizes a full yield curve approach methodology to estimate the service and interest cost components of net periodic pension cost and net periodic post-retirement benefit cost for the Company's pension and other post-retirement benefits. The full yield curve approach applies specific spot rates along the yield curve to their underlying projected cash flows in estimation of the cost components. The current yield curves represent high quality, long-term fixed income instruments.

The expected long-term rate of return on plan assets assumptions are determined using a building block approach, considering historical averages and real returns of each asset class. In certain countries, where historical returns are not meaningful, consideration is given to local market expectations of long-term returns.

Retirement Benefit Plan Investment Strategy The Company sponsors trusts that hold the assets for U.S. pension plans and other U.S. post-retirement benefit plans, primarily retiree medical benefits. For investment purposes, the Medtronic U.S. pension and other U.S. post-retirement benefit plans employ similar investment strategies with different asset allocation targets.

The Company has a Qualified Plan Committee (the Plan Committee) that sets investment guidelines for U.S. pension plans and other U.S. post-retirement benefit plans with the assistance of external consultants. These guidelines are established based on market conditions, risk tolerance, funding requirements, and expected benefit payments. The Plan Committee also oversees the investment allocation process, selects the investment managers, and monitors asset performance. As pension liabilities are long-term in nature, the Company employs a long-term total return approach to maximize the long-term rate of return on plan assets for a prudent level of risk. An annual analysis on the risk versus the return of the investment portfolio is conducted to justify the expected long-term rate of return assumption.

The investment portfolios contain a diversified allocation of investment categories, including equities, fixed income securities, hedge funds, and private equity. Securities are also diversified in terms of domestic and international, short- and long-term, growth and value styles, large cap and small cap stocks, and active and passive management.

Outside the U.S., pension plan assets are typically managed by decentralized fiduciary committees. There is significant variation in policy asset allocation from country to country. Local regulations, funding rules, and financial and tax considerations are part of the funding and investment allocation process in each country. The weighted average target asset allocations at April 29, 2022 for the plans are 41% equity securities, 33% debt securities, and 26% other.

The plans did not hold any investments in the Company's ordinary shares at April 29, 2022 or April 30, 2021.

The Company's U.S. plans target asset allocations at April 29, 2022, compared to the U.S. plans actual asset allocations at April 29, 2022 and April 30, 2021 by asset category, are as follows:

U.S. Plans	Target Allocation	Actual Allocation	
	April 29, 2022	April 29, 2022	April 30, 2021
Asset Category:			
Equity securities	34 %	36 %	39 %
Debt securities	51	45	32
Other	15	19	29
Total	100 %	100 %	100 %

Strong performance on equity securities during the fiscal year resulted in asset allocations different than targets. Management expects to move the allocations closer to target over the intermediate term.

Retirement Benefit Plan Asset Fair Values The following is a description of the valuation methodologies used for retirement benefit plan assets measured at fair value:

Short-term investments: Valued at the closing price reported in the active markets in which the individual security is traded.

Mutual funds: Comprised of investments in equity and fixed income securities held in pooled investment vehicles. The valuations of mutual funds are based on the respective net asset values which are determined by the fund daily at market close. The net asset values are calculated based on the valuation of the underlying assets which are determined using observable inputs. The net asset values are publicly reported.

Equity commingled trusts: Comprised of investments in equity securities held in pooled investment vehicles. The valuations of equity commingled trusts are based on the respective net asset values which are determined by the fund daily at market close. The net asset values are calculated based on the valuation of the underlying assets which are determined using observable inputs. The net asset values are not publicly reported, and funds are valued at the net asset value practical expedient.

Fixed income commingled trusts: Comprised of investments in fixed income securities held in pooled investment vehicles. The valuations of fixed income commingled trusts are based on the respective net asset values which are determined by the fund daily at market close. The net asset values are calculated based on the valuation of the underlying assets which are determined using observable inputs. The net asset values are not publicly reported, and funds are valued at the net asset value practical expedient.

Partnership units: Valued based on the year-end net asset values of the underlying partnerships. The net asset values of the partnerships are based on the fair values of the underlying investments of the partnerships. Quoted market prices are used to value the underlying investments of the partnerships, where the partnerships consist of the investment pools which invest primarily in common stocks. Partnership units include partnerships, private equity investments, and real asset investments. Partnerships primarily include long/short equity and absolute return strategies. These investments may be redeemed monthly with notice periods ranging from 45 to 95 days. At April 29, 2022, there are no funds in the process of liquidation. Private equity investments consist of common stock and debt instruments of private companies. For private equity funds, the sum of the unfunded commitments at April 29, 2022 is $204 million, and the estimated liquidation period of these funds is expected to be one to 15 years. Real asset investments consist of commodities, derivatives, Real Estate Investment Trusts, and illiquid real estate holdings. These investments have redemption and liquidation periods ranging from 30 days to 10 years. At April 29, 2022, there are no real estate investments in the process of liquidation. Valuation procedures are utilized to arrive at fair value if a quoted market price is not available for a partnership investment.

Registered investment companies: Valued at net asset values which are not publicly reported. The net asset values are calculated based on the valuation of the underlying assets. The underlying assets are valued at the quoted market prices of shares held by the plan at year-end in the active market on which the individual securities are traded.

Insurance contracts: Comprised of investments in collective (group) insurance contracts, consisting of individual insurance policies. The policyholder is the employer, and each member is the owner/beneficiary of their individual insurance policy. These policies are a part of the insurance company's general portfolio and participate in the insurer's profit-sharing policy on an excess yield basis.

The methods described above may produce fair values that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Company believes its valuation methodologies are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

The following tables provide information by level for the retirement benefit plan assets that are measured at fair value, as defined by U.S. GAAP. Certain investments for which the fair value is measured using the net asset value per share (or its equivalent) practical expedient are not presented within the fair value hierarchy. The fair value amounts presented for these investments are intended to permit reconciliation to the total fair value of plan assets at April 29, 2022 and April 30, 2021.

U.S. Pension Benefits

(in millions)	Fair Value at April 29, 2022	Fair Value Measurements Using Inputs Considered as			Investments Measured at Net Asset Value
		Level 1	Level 2	Level 3	
Short-term investments	$ 73	$ 73	$ —	$ —	$ —
Mutual funds	125	125	—	—	—
Equity commingled trusts	1,281	—	—	—	1,281
Fixed income commingled trusts	1,069	—	—	—	1,069
Partnership units	1,011	—	—	1,011	—
	$ 3,559	$ 197	$ —	$ 1,011	$ 2,350

(in millions)	Fair Value at April 30, 2021	Fair Value Measurements Using Inputs Considered as			Investments Measured at Net Asset Value
		Level 1	Level 2	Level 3	
Short-term investments	$ 232	$ 232	$ —	$ —	$ —
Mutual funds	99	99	—	—	—
Equity commingled trusts	1,420	—	—	—	1,420
Fixed income commingled trusts	1,050	—	—	—	1,050
Partnership units	860	—	—	860	—
	$ 3,660	$ 331	$ —	$ 860	$ 2,470

The following tables provide a reconciliation of the beginning and ending balances of U.S. pension benefit assets measured at fair value that used significant unobservable inputs (Level 3):

(in millions)	Partnership Units
April 24, 2020	$ 625
Total realized gains, net	8
Total unrealized gains, net	89
Purchases and sales, net	139
April 30, 2021	860
Total realized gains, net	28
Total unrealized gains, net	72
Purchases and sales, net	51
April 29, 2022	$ 1,011

Non-U.S. Pension Benefits

(in millions)	Fair Value at April 29, 2022	Fair Value Measurements Using Inputs Considered as Level 1	Level 2	Level 3	Investments Measured at Net Asset Value
Registered investment companies	$ 1,689	$ —	$ —	$ —	$ 1,689
Insurance contracts	43	—	—	43	—
	$ 1,732	$ —	$ —	$ 43	$ 1,689

(in millions)	Fair Value at April 30, 2021	Fair Value Measurements Using Inputs Considered as Level 1	Level 2	Level 3	Investments Measured at Net Asset Value
Registered investment companies	$ 1,850	$ —	$ —	$ —	$ 1,850
Insurance contracts	49	—	—	49	—
	$ 1,900	$ —	$ —	$ 49	$ 1,850

Non-U.S. pension benefit assets that are valued using significant unobservable inputs (Level 3) was $43 million and $49 million as of April 29, 2022 and April 30, 2021, respectively. The decrease in the fair value of the assets was due to insurance contracts being sold.

There were no transfers into or out of Level 3 for both the U.S. and non-U.S. pension plans during the fiscal years ended April 29, 2022 and April 30, 2021.

Retirement Benefit Plan Funding It is the Company's policy to fund retirement costs within the limits of allowable tax deductions. During fiscal year 2022, the Company made discretionary contributions of approximately $24 million to the U.S. pension plan. Internationally, the Company contributed approximately $70 million for pension benefits during fiscal year 2022. The Company anticipates that it will make contributions of $21 million and $52 million to its U.S. pension benefit plans and non-U.S. pension benefit plans, respectively, in fiscal year 2023. Based on the guidelines under the U.S. Employee Retirement Income Security Act of 1974 and the various guidelines which govern the plans outside the U.S., the majority of anticipated fiscal year 2023 contributions will be discretionary. The Company believes that pension assets, returns on invested pension assets, and Company contributions will be able to meet its pension and other post-retirement obligations in the future.

Retiree benefit payments, which reflect expected future service, are anticipated to be paid as follows:

(in millions)	Gross Payments	
Fiscal Year	U.S. Pension Benefits	Non-U.S. Pension Benefits
2023	$ 150	$ 61
2024	160	55
2025	172	59
2026	182	59
2027	193	65
2028 – 2032	1,110	367
Total	$ 1,966	$ 666

Post-retirement Benefit Plans The net periodic benefit cost associated with the Company's post-retirement benefit plans was income of $20 million, $6 million, and $15 million in fiscal years 2022, 2021, and 2020, respectively. The Company's projected benefit obligation for all post-retirement benefit plans was $276 million and $337 million at April 29, 2022 and April 30, 2021, respectively. The Company's fair value of plan assets for all post-retirement benefit plans was $325 million and $345 million at April 29, 2022 and April 30, 2021, respectively. The post-retirement benefit plan assets at both April 29, 2022 and April 30, 2021 primarily comprised of equity and fixed commingled trusts, consistent with the U.S. retirement benefit plan assets outlined in the fair value leveling tables above.

Defined Contribution Savings Plans The Company has defined contribution savings plans that cover substantially all U.S. employees and certain non-U.S. employees. The general purpose of these plans is to provide additional financial security during retirement by providing employees with an incentive to make regular savings. Company contributions to the plans are based on employee contributions

and Company performance. Expense recognized under these plans was $403 million, $495 million, and $376 million in fiscal years 2022, 2021, and 2020, respectively.

Effective May 1, 2005, the Company froze participation in the original defined benefit pension plan in the U.S. and implemented two new plans: an additional defined benefit pension plan, the Personal Pension Account (PPA), and a new defined contribution plan, the Personal Investment Account (PIA). Employees in the U.S. hired on or after May 1, 2005 but before January 1, 2016 had the option to participate in either the PPA or the PIA. Participants in the PPA receive an annual allocation of their salary and bonus on which they will receive an annual guaranteed rate of return, which is based on the ten-year Treasury bond rate. Participants in the PIA also receive an annual allocation of their salary and bonus; however, they are allowed to determine how to invest their funds among identified fund alternatives. The cost associated with the PPA is included in U.S. Pension Benefits in the tables presented earlier. The defined contribution cost associated with the PIA was approximately $48 million, $50 million, and $52 million in fiscal years 2022, 2021, and 2020, respectively.

Effective January 1, 2016, the Company froze participation in the existing defined benefit (PPA) and contribution (PIA) pension plans in the U.S. and implemented a new form of benefit under the existing defined contribution plan for legacy Covidien employees and employees in the U.S. hired on or after January 1, 2016 or rehired after July 1, 2020. Participants in the Medtronic Core Contribution (MCC) also receive an annual allocation of their salary and bonus and are allowed to determine how to invest their funds among identified fund alternatives. The defined contribution cost associated with the MCC was approximately $83 million, $73 million, and $66 million and in fiscal years 2022, 2021, and 2020, respectively.

16. 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 fiscal year 2022, 2021, and 2020 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 were not material to the consolidated financial statements at April 29, 2022 or April 30, 2021 or for fiscal year 2022, 2021 and 2020. 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.

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 April 29, 2022 and April 30, 2021:

(in millions)	Balance Sheet Classification	April 29, 2022	April 30, 2021
Right-of-use assets	Other assets	$ 854	$ 998
Current liability	Other accrued expenses	167	186
Non-current liability	Other liabilities	703	829

The following table summarizes the weighted-average remaining lease term and weighted-average discount rate for the Company's operating leases at April 29, 2022, April 30, 2021, and April 24, 2020:

	April 29, 2022	April 30, 2021	April 24, 2020
Weighted-average remaining lease term	7.3 Years	7.5 years	7.2 years
Weighted-average discount rate	2.0%	2.3%	3.0%

The following table summarizes the components of total operating lease cost for fiscal year 2022, 2021, and 2020:

	Fiscal Year		
(in millions)	2022	2021	2020
Operating lease cost	$ 195	$ 216	$ 223
Short-term lease cost	65	35	46
Total operating lease cost	$ 260	$ 251	$ 269

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 fiscal year 2022, 2021, and 2020:

	Fiscal Year		
(in millions)	2022	2021	2020
Cash paid for amounts included in the measurement of operating lease liabilities	$ 174	$ 216	$ 221
Right-of-use assets obtained in exchange for operating lease liabilities	78	230	174

The following table summarizes the maturities of the Company's operating leases at April 29, 2022:

(in millions) Fiscal Year	Operating Leases
2023	$ 213
2024	164
2025	130
2026	103
2027	82
Thereafter	284
Total expected lease payments	976
Less: Imputed interest	(105)
Total lease liability	$ 871

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 fiscal year ended April 29, 2022 and April 30, 2021.

17. 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 (Loss) Gain 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	43	(827)	405	(596)	309	(666)
Reclassifications	2	—	—	52	(237)	(183)
Other comprehensive income (loss)	45	(827)	405	(544)	72	(849)
April 24, 2020	—	(2,210)	236	(1,852)	266	(3,560)
Other comprehensive income (loss) before reclassifications	92	1,691	(1,694)	432	(541)	(20)
Reclassifications	—	—	—	73	22	95
Other comprehensive income (loss)	92	1,691	(1,694)	505	(519)	75
April 30, 2021	92	(519)	(1,458)	(1,347)	(253)	(3,485)
Other comprehensive income (loss) before reclassifications	(304)	(2,080)	2,299	514	781	1,210
Reclassifications	3	—	—	60	(54)	9
Other comprehensive income (loss)	(301)	(2,080)	2,299	574	727	1,219
April 29, 2022	$ (209)	$ (2,599)	$ 841	$ (773)	$ 474	$ (2,265)

The income tax on gains and losses on investment securities in other comprehensive income before reclassifications during fiscal years 2022, 2021, and 2020 was a benefit of $51 million, an expense of $31 million and a benefit of $13 million, respectively. During fiscal years 2022, 2021, and 2020, realized gains and losses on investment securities reclassified from AOCI were reduced by income taxes of $1 million, $2 million and $3 million, respectively. When realized, gains and losses on investment securities reclassified from AOCI are recognized within *other non-operating income, net*. Refer to Note 5 for additional information.

During fiscal years 2022, 2021, and 2020, the income tax on cumulative translation adjustment was a benefit of $8 million, an expense of $7 million, and a benefit of $9 million, respectively.

During fiscal years 2022, 2021, and 2020, there were no tax impacts on net investment hedges. Refer to Note 7 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. The income tax on the net change in retirement obligations in other comprehensive income before reclassifications during fiscal years 2022, 2021, and 2020 resulted in an expense of $134 million and $115 million, and a benefit of $159 million, respectively. During fiscal years 2022, 2021, and 2020, the gains and losses on defined benefit and pension items reclassified from AOCI were reduced by income taxes of $20 million, $16 million, and $12 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 15 for additional information.

The income tax on unrealized gains and losses on cash flow hedges in other comprehensive income before reclassifications during fiscal years 2022, 2021, and 2020 was an expense of $152 million, a benefit of $87 million,

and an expense of $88 million, respectively. Amounts reclassified from AOCI related to cash flow hedges included income taxes of $26 million, $14 million, and $80 million for fiscal years 2022, 2021, and 2020, respectively. When realized, gains and losses on currency exchange rate contracts reclassified from AOCI are recognized within *other operating expense, net* or *cost of products sold.* Refer to Note 7 for additional information.

18. Commitments and Contingencies

Legal Matters

The Company and its affiliates are involved in a number of legal actions from time to time involving product liability, employment, intellectual property and commercial disputes, shareholder related matters, environmental proceedings, 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 certain specified litigation charges and gains related to significant legal matters as *certain litigation charges* in the consolidated statements of income. During fiscal years 2022, 2021, and 2020, the Company recognized $95 million, $118 million, and $313 million, respectively, of additional certain litigation charges. At April 29, 2022 and April 30, 2021, total accrued litigation charges were approximately $0.3 billion and $0.4 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 16,200 claimants have asserted or may assert claims involving products manufactured by Covidien's subsidiaries. As of June 1, 2022, the Company had reached agreements to settle approximately 15,900 of these claims. The Company's accrued expenses for this matter are included within accrued litigation as discussed above.

Hernia Mesh Litigation

Starting in fiscal year 2020, plaintiffs began filing lawsuits against certain subsidiaries of the Company in U.S. state and federal courts alleging personal injury from hernia mesh products sold by those subsidiaries. The majority of the pending cases are in Massachusetts state court, where they have been consolidated before a single judge. As of June

6, 2022, subsidiaries of the Company have been named as defendants in lawsuits filed on behalf of approximately 5,900 individual plaintiffs, and certain plaintiffs' law firms have advised the Company that they may file additional cases in the future. On June 6, 2022, the Judicial Panel on Multidistrict Litigation transferred 83 actions involving the Company's hernia mesh to a federal Multidistrict Litigation in the U.S. District Court for the District of Massachusetts for pretrial proceedings. The pending lawsuits relate almost entirely to hernia mesh products that have not been subject to recalls, withdrawals, or other adverse regulatory action. The Company has not recorded an expense related to damages in connection with these matters because any potential loss is not currently probable and reasonably estimable. 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 remediation 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. In March 2021, the parties notified the court that they had agreed on a settlement in principle of all issues in this matter. Finalization of the proposed settlement remains subject to court approval.

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

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 in June 2016, issued an opinion with respect to the allocation of income between the parties for fiscal years 2005 and 2006. The Tax Court generally rejected the IRS's position, but also made certain modifications to the Medtronic, Inc. tax returns as filed. In April 2017, the IRS filed a Notice of Appeal to the U.S. Court of Appeals for the Eighth Circuit regarding the Tax Court opinion. Oral argument for the Appeal occurred in March 2018. The Court of Appeals issued its opinion in August 2018 and remanded the case back to the Tax Court for additional factual findings. The Tax Court trial relating to the issues remanded by the Court of Appeals concluded during June 2021. The parties are awaiting the Tax Court decision, which will remain subject to appeal by either party upon its issuance.

The IRS has issued its audit reports on Medtronic, Inc. for fiscal years 2007 through 2016. Medtronic, Inc. and the IRS have reached agreement on all significant issues except for 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 matter for fiscal years 2005 and 2006.

Medtronic, Inc.'s fiscal years 2017, 2018, and 2019 U.S. federal income tax returns are currently being audited by the IRS.

Covidien LP (a wholly owned subsidiary of Medtronic plc) has either reached agreement with the IRS or the statute of limitations has lapsed on its U.S. federal income tax returns through fiscal year 2018.

Although 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 13 for additional discussion of income taxes.

Guarantees

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, and/or cash flows.

19. Segment and Geographic Information

There were no changes to the reportable segments during the fiscal year ended April 29, 2022. The Company's four principal operating and reportable segments are as follows: Cardiovascular Portfolio, Neuroscience Portfolio, Medical Surgical Portfolio, and Diabetes Operating Unit.

The Company's management has chosen to organize the entity based upon therapy solutions provided by each segment. The four principal segments are strategic businesses that are managed separately, as each one develops and manufactures products and provides services oriented toward targeted therapy solutions.

The primary products and services from which the Cardiovascular Portfolio segment derives its revenues include products for the diagnosis, treatment, and management of cardiac rhythm disorders and cardiovascular disease, as well as services to diagnose, treat, and manage heart and vascular-related disorders and diseases.

The primary products and services from which the Medical Surgical Portfolio segment derives its revenues include those focused on diseases of the respiratory system, gastrointestinal tract, renal system, lungs, pelvic region, kidneys, obesity, and other preventable complications.

The primary products and services from which the Neuroscience Portfolio segment derives its revenues include those focused on neurostimulation therapies and drug delivery systems for the treatment of chronic pain, as well as various areas of the spine and brain, along with pelvic health and conditions of the ear, nose, and throat.

The primary products from which the Diabetes Operating Unit segment derives its revenues include those focused on diabetes management, including insulin pumps, continuous glucose monitoring systems, smart insulin pens, and insulin pump consumables.

Segment disclosures are on a performance basis, consistent with internal management reporting. Net sales of the Company's segments include end-customer revenues from the sale of products the segment develops, manufactures, and distributes. Refer to Note 2 for discussion on net sales by segment. There are certain corporate and centralized expenses that are not allocated to the segments. The Company's management evaluates the performance of the segments and allocates resources based on net sales and 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 accounting policies of the segments are the same as those described in Note 1. 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.

Segment Operating Profit

	Fiscal Year		
(in millions)	2022	2021	2020
Cardiovascular	$ 4,512	$ 3,850	$ 3,719
Medical Surgical	3,572	3,021	3,044
Neuroscience	3,765	3,162	2,915
Diabetes	583	598	546
Segment operating profit	12,432	10,632	10,224
Interest expense	(553)	(925)	(1,092)
Other non-operating income, net	318	336	356
Amortization of intangible assets	(1,733)	(1,783)	(1,756)
Corporate	(1,724)	(1,577)	(1,239)
Centralized distribution costs	(1,752)	(1,877)	(1,420)
Restructuring and associated costs	(335)	(617)	(441)
Acquisition-related items	43	15	(66)
Certain litigation charges	(95)	(118)	(313)
Impairment charges	—	(76)	—
MCS impairment / costs	(881)	—	—
IPR&D charges	(101)	(31)	(25)
Exit of businesses	—	—	(52)
Debt tender premium and other charges	—	—	7
Medical device regulations	(102)	(83)	(48)
Contribution to Medtronic Foundation	—	—	(80)
Income before income taxes	$ 5,517	$ 3,895	$ 4,055

Total Assets and Depreciation Expense

	Total Assets		Depreciation Expense		
(in millions)	April 29, 2022	April 30, 2021	2022	2021	2020
Cardiovascular	$ 14,490	$ 15,027	$ 214	$ 212	$ 210
Medical Surgical	36,940	39,319	200	195	194
Neuroscience	16,917	17,151	265	236	233
Diabetes	3,797	3,671	67	53	38
Segments	72,144	75,168	746	696	675
Corporate	18,837	17,915	228	223	232
Total	$ 90,981	$ 93,083	$ 974	$ 919	$ 907

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. Geographic property, plant, and equipment are attributed to the country based on the physical location of the assets.

The following table presents net sales for fiscal years 2022, 2021, and 2020, and property, plant, and equipment, net at April 29, 2022 and April 30, 2021 for the Company's country of domicile, countries with significant concentrations, and all other countries:

	Net sales			Property, plant, and equipment, net	
(in millions)	2022	2021	2020	April 29, 2022	April 30, 2021
Ireland	$ 101	$ 100	$ 85	$ 177	$ 170
United States	16,135	15,526	14,919	3,821	3,688
Rest of world	15,450	14,491	13,909	1,415	1,363
Total other countries, excluding Ireland	31,585	30,017	28,828	5,236	5,051
Total	$ 31,686	$ 30,117	$ 28,913	$ 5,413	$ 5,221

No single customer represented over 10 percent of the Company’s consolidated net sales in fiscal years 2022, 2021, or 2020.

20. Subsequent Events

On May 25, 2022, the Company and DaVita Inc. (“DaVita”) entered into a definitive agreement with the intent to form a new, independent kidney care-focused medical device company (“NewCo”) with equal equity ownership. The transaction is expected to close in calendar year 2023, subject to customary regulatory approvals and closing conditions. Medtronic is contributing its entire Renal Care Solutions business (“RCS”) to NewCo. RCS is part of the Respiratory, Gastrointestinal, and Renal division in the Company’s Medical Surgical portfolio, and had revenue of $325 million in fiscal year 2022.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

Not applicable.

Item 9A. Controls and Procedures

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 annual report, our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act) are effective.

Management's Annual Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company (as defined in Exchange Act Rule 13a-15(f)). Management conducted an evaluation of the effectiveness of internal control over financial reporting based on the framework in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, management concluded that the Company's internal control over financial reporting was effective as of April 29, 2022. The effectiveness of the Company's internal control over financial reporting as of April 29, 2022 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Changes in Internal Control Over Financial Reporting

During the quarter ended April 29, 2022, there were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) under the Exchange Act) that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting. The Company has not experienced any material impacts to its internal controls over financial reporting despite the COVID-19 pandemic.

Item 9B. Other Information

As reported in our Quarterly Reports on Form 10-Q for the first three quarters of fiscal year 2022, Medtronic has engaged in certain activities that it is required to disclose pursuant to Section 13(r)(1)(D)(ii) of the Securities Exchange Act of 1934, as amended. In particular, during the first three quarters of fiscal year 2022, Medtronic engaged in certain regulatory activities involving Russia's Federal Security Service ("FSB") related to its medical devices that were expressly authorized by the U.S. Government under applicable economic sanctions regulations.

During the first three quarters of fiscal year 2022, in the normal course of business and consistent with the OFAC authorizations as in effect at the time, Medtronic Russia filed a total of nine notifications with the FSB, as required under local Russian law for the import of medical devices that make use of encryption functionality. These activities did not directly result in any revenues or profits for Medtronic. Medtronic did not engage in these activities during the fourth quarter of fiscal year 2022. To the extent that notifications with the FSB remain permissible under U.S. law, Medtronic may decide to continue engaging in such activities for the limited purposes of complying with local law requirements in Russia.

PART III

Part III of this Annual Report on Form 10-K incorporates information by reference from the Company's 2022 definitive proxy statement, which will be filed no later than 120 days after April 29, 2022.

Item 10. Directors, Executive Officers, and Corporate Governance

The sections entitled “Proposal 1 — Election of Directors — Directors and Nominees,” “Corporate Governance — Committees of the Board and Meetings,” and “Share Ownership Information — Delinquent Section 16(a) Report” in the Company's Proxy Statement for our 2022 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 29, 2022, are incorporated herein by reference.

Set forth below are the names and ages of our Executive Officers of Medtronic, as well as information regarding their positions with Medtronic, their periods of service in these capacities, and their business experiences. There are no family relationships among any of the officers named, nor is there any arrangement or understanding pursuant to which any person was selected as an officer.

The following table shows the name, age, and position as of April 29, 2022 of each of our Executive Officers:

Name	Age	Position with the Company
Geoffrey S. Martha	52	Chairman and Chief Executive Officer
Ivan K. Fong	60	Executive Vice President, General Counsel and Corporate Secretary of the Company
Karen L. Parkhill	56	Executive Vice President and Chief Financial Officer
Carol A. Surface	56	Executive Vice President and Chief Human Resources Officer
Robert ten Hoedt	61	Executive Vice President and President, EMEA Region, President, APAC Region
Robert J. White	59	Executive Vice President and President, Medical Surgical Portfolio
John Liddicoat, M.D.	58	Executive Vice President and President, Americas Region
Sean Salmon	57	Executive Vice President and President, Diabetes Operating Unit, President, Cardiovascular Portfolio
Brett Wall	57	Executive Vice President and President, Neuroscience Portfolio

Geoffrey S. Martha, age 52, is Chairman of the Board of Directors and Chief Executive Officer of Medtronic. Geoff assumed the role of CEO on April 27, 2020 and became Chairman of the Board on December 11, 2020. Prior to his role as Chairman and CEO, he served as President of Medtronic from November 2019 through April 2020 and joined the Board of Directors in November 2019. Previously, Mr. Martha served as Executive Vice President and President, Restorative Therapies Group, a role he held since August 2015. Mr. Martha previously served as Senior Vice President of Strategy and Business Development of the Company beginning in January 2015 and of Medtronic, Inc. beginning in August 2011. Prior to that, he served as Managing Director of Business Development at GE Healthcare from April 2007 to July 2011; General Manager for GE Capital Technology Finance Services from November 2003 to March 2007; Senior Vice President, Business Development for GE Capital Vendor Financial Services from February 2002 to October 2003; General Manager for GE Capital Colonial Pacific Leasing from February 2001 to January 2002; and Vice President, Business Development for Potomac Federal, the GE Capital federal financing investment bank from May 1998 to January 2001.

Ivan K. Fong, age 60, has been Executive Vice President, General Counsel and Corporate Secretary of the Company since February 2022. Prior to that, he held several leadership positions at 3M Company from 2012 to 2022, including Executive Vice President, Chief Legal and Policy Officer and Secretary. Prior to joining 3M Company, Mr. Fong served as General Counsel of the U.S. Department of Homeland Security from 2009 to 2012. Prior to his role with the U.S. Government, he was Chief Legal Officer and Secretary for Cardinal Health, Inc from 2005 to 2009. Mr. Fong currently serves on the Board of Cboe Global Markets.

Karen L. Parkhill, age 56, joined the Company as Executive Vice President and Chief Financial Officer in June 2016. From 2011 to 2016, Ms. Parkhill served as Vice Chairman and Chief Financial Officer of Comerica Incorporated. Ms. Parkhill was a member of Comerica’s Management Executive Committee and the Comerica Bank Board of Directors. Prior to joining Comerica, Ms. Parkhill worked for J.P. Morgan Chase & Co. in various

capacities from 1992 to 2011, including serving as Chief Financial Officer of the Commercial Banking business from 2007 to 2011. Ms. Parkhill is also a current member of the Board of Directors for American Express.

Carol A. Surface, age 56, has been Executive Vice President and Chief Human Resources Officer of the Company since January 2015 and of Medtronic, Inc. since September 2013. Prior to that, she was the Executive Vice President and Chief Human Resources Officer at Best Buy Co., Inc. from March 2010 to September 2013, and held a series of HR leadership roles at PepsiCo Inc., from May 2000 to March 2010.

Robert ten Hoedt, age 61, has been Executive Vice President and President, EMEA Region of the Company since January 2015 and of Medtronic, Inc. since May 2014, as well as President, APAC Region starting March 2022. Prior to that, he was Senior Vice President and President, EMEA and Canada from 2009 to 2014; Vice President CardioVascular Europe and Central Asia from 2006 to 2009; Vice President and General Manager, Vitatron from 1999 to 2006; Gastro-Uro leader from 1994 to 1999; and Marketing Manager, Neurological from 1991 to 1994.

Robert J. White, age 59, is Executive Vice President and President, Medical Surgical Portfolio. Since 2017, Mr. White has served as Executive Vice President and Group President of the Minimally Invasive Therapies Group of Medtronic. Prior to that, he was Senior Vice President and President, Asia Pacific from January 2015 to December 2017. He had served as President, Emerging Markets, President, Respiratory and Monitoring Solutions and Vice President and General Manager of Patient Monitoring at Covidien. He also held various leadership positions at GE Healthcare and IBM. Mr. White is also a current member of the Board of Directors of Smith & Nephew plc.

John Liddicoat, M.D.**,** age 58, was named Executive Vice President and President, Americas Region in September 2018. Dr. Liddicoat joined Medtronic in 2006 as Vice President of Atrial Fibrillation Technologies. In December of 2006, Dr. Liddicoat was named Vice President and General Manager of the Structural Heart Disease Business. Beginning in August 2014, Dr. Liddicoat served as Senior Vice President and President, Cardiac Rhythm and Heart Failure.

Sean Salmon, age 57, has been Executive Vice President and Group President, Diabetes Group of the company since October 2019, and also assumed the role of Executive Vice President and President, Cardiovascular Portfolio in January 2021. Mr. Salmon previously served as Senior Vice President and President of Coronary and Structural Heart Business within the Cardiac and Vascular Group of the Company beginning in July 2014. Mr. Salmon is a seasoned leader who has been with Medtronic since 2004 and spent the past 16 years in increasingly senior levels of management. Prior to joining Medtronic, Mr. Salmon worked at CR Bard and Johnson & Johnson.

Brett Wall, age 57, is Executive Vice President and President of Medtronic's Neuroscience Portfolio. Mr. Wall previously served as Senior Vice President and President of the Brain Therapies division of Medtronic within the Restorative Therapies Group from March 2016 to November 2019. Prior to that, Mr. Wall served as SVP and President of Medtronic's Neurovascular business. Prior to joining Medtronic, he served as Covidien's SVP and President of Neurovascular as well as Senior Vice President and President of the International Vascular Therapies business for Covidien. Mr. Wall also served as Senior Vice President and President, International at ev3, Inc. From 2000 to 2008, Brett held various marketing and sales positions with ev3, Inc. and Micro Therapeutics, Inc. Mr. Wall has also worked at Boston Scientific as Director of Marketing, Cardiovascular, Asia Pacifica and Marketing Manager, Japan, from September 1995 to September 2000.

Item 11. Executive Compensation

The sections entitled "Corporate Governance — Director Compensation," "Corporate Governance — Committees of the Board and Meetings," "Compensation Discussion and Analysis," and "Executive Compensation" in Medtronic's Proxy Statement for the Company's 2022 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 29, 2022, are incorporated herein by reference. The section entitled "Compensation Committee Report" in Medtronic's Proxy Statement for the Company's 2022 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 29, 2022, is furnished herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters

The sections entitled "Share Ownership Information – Significant Shareholders," "Share Ownership Information – Beneficial Ownership of Management," and "Executive Compensation — Equity Compensation Plan Information" in Medtronic's Proxy Statement for the Company's 2022 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 29, 2022, are incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The sections entitled "Corporate Governance — Director Independence" and "Corporate Governance — Related Party Transactions and Other Matters" in Medtronic's Proxy Statement for the Company's 2022 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 29, 2022, are incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The sections entitled “Corporate Governance — Committees of the Board and Meetings” and “Audit and Non-Audit Fees” in Medtronic's Proxy Statement for the Company's 2022 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 29, 2022, are incorporated herein by reference.

PART IV

(a) 1. Financial Statement Schedules

Schedule II. Valuation and Qualifying Accounts — years ended April
April 24, 2020.

Item 15. Exhibits and Financial Statement Schedules

MEDTRONIC PLC AND SUBSIDIARIES
SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS
(in millions)

		Additions		Deductions	
	Balance at Beginning of Fiscal Year	Charges to Income	Charges to Other Accounts	Other Changes (Debit) Credit	Balance at End of Fiscal Year
Allowance for doubtful accounts:					
Fiscal year ended April 29, 2022	$ 241	$ 58	$ —	$ (69) (a)	$ 230
Fiscal year ended April 30, 2021	208	128	—	(95) (a)	241
Fiscal year ended April 24, 2020	190	99	—	(81) (a)	208
Inventory reserve:					
Fiscal year ended April 29, 2022	$ 629	$ 156	$ —	$ (157) (b)	$ 628
Fiscal year ended April 30, 2021	544	483	—	(398) (b)	629
Fiscal year ended April 24, 2020	521	282	—	(259) (b)	544
Deferred tax valuation allowance:					
Fiscal year ended April 29, 2022	$ 5,822	$ 884	$ (19) (e)	$ (103) (d)	$ 6,583
Fiscal year ended April 30, 2021	5,482	342	170 (e)	(172) (d)	5,822
Fiscal year ended April 24, 2020	6,300	119	(6) (c)	(744) (d)	5,482
				(187) (e)	

(a) Primarily consists of uncollectible accounts written off, less recoveries.

(b) Primarily reflects utilization of the inventory reserve.

(c) Reflects the impact from acquisitions and amounts recognized in accumulated other comprehensive income/loss.

(d) Primarily reflects carryover attribute utilization and expiration.

(e) Primarily reflects the effects of currency fluctuations.

All other schedules are omitted because they are not applicable or the required information is shown in the financial statements or notes thereto.

2. Exhibits

Exhibit No.	Description
3.1	Certificate of Incorporation of Medtronic plc (incorporated by reference to Exhibit 3.1 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
3.2	Amended and Restated Memorandum and Articles of Association of Medtronic plc (incorporated by reference to Exhibit 3.2 to Medtronic plc's Registration Statement on Form S-3, filed on February 6, 2017, File No. 333-215895).
4.1	Form of Indenture between Medtronic, Inc. and Wells Fargo Bank, National Association regarding 2009 offering (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Registration Statement on Form S-3, filed on March 9, 2009, File No. 333-157777).

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4.2	First Supplemental Indenture, dated March 12, 2009, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 12, 2009, File No. 001-07707).
4.3	Second Supplemental Indenture, dated March 16, 2010, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 16, 2010, File No. 001-07707).
4.4	Third Supplemental Indenture, dated March 15, 2011, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current report on Form 8-K, filed on March 16, 2011, File No. 001-07707).
4.5	Fourth Supplemental Indenture, dated March 19, 2012, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.2 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 20, 2012, File No. 001-07707).
4.6	Fifth Supplemental Indenture, dated March 26, 2013, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 26, 2013, File No. 001-07707).
4.7	Sixth Supplemental Indenture, dated February 27, 2014, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Form of Global Note thereof) (incorporated by reference to Exhibit 4.2 to Medtronic, Inc.'s Current Report on Form 8-K, filed on February 27, 2014, File No. 001-07707).
4.8	Seventh Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic plc, Medtronic, Inc., Medtronic Global Holdings S.C.A. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.2 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.9	Indenture, dated December 10, 2014, between Medtronic, Inc. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K filed with the Commission on December 10, 2014, File No. 001-07707).
4.10	First Supplemental Indenture, dated December 10, 2014, between Medtronic, Inc. and Wells Fargo Bank, National Association (including Form of Floating Rate Senior Notes due 2020, Form of 1.500% Senior Notes due 2018, Form of 2.500% Senior Notes due 2020, Form of 3.150% Senior Notes due 2022, Form of 3.500% Senior Notes due 2025, Form of 4.375% Senior Notes due 2035 and Form of 4.625% Senior Notes due 2045) (incorporated by reference to Exhibit 4.2 of Medtronic, Inc.'s Current Report on Form 8-K filed with the Commission on December 10, 2014, File No. 001-07707).
4.11	Second Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic plc and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.3 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.12	Third Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic Global Holdings S.C.A. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.4 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.13	Indenture, dated as of October 22, 2007, by and among Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1(a) to Covidien plc's Current Report on Form 8-K filed on October 22, 2007, File No. 001-33259).
4.14	Fourth Supplemental Indenture, dated as of October 22, 2007, by and among Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1(e) to Covidien plc's Current Report on Form 8-K filed on October 22, 2007, File No. 001-33259).
4.15	Fifth Supplemental Indenture, dated as of June 4, 2009, by and among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K12G3 filed on June 5, 2009, File No. 001-33259).

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4.16	Sixth Supplemental Indenture, dated as of June 28, 2010, among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K filed on June 28, 2010, File No. 001-33259).
4.17	Seventh Supplemental Indenture, dated as of May 30, 2012, among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K filed on May 30, 2012, File No. 001-33259).
4.18	Eighth Supplemental Indenture, dated as of May 16, 2013, among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K filed on May 16, 2013, File No. 001-33259).
4.19	Ninth Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Covidien public limited company, Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.5 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.20	Senior Indenture, dated as of March 28, 2017, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Medtronic, Inc., and Wells Fargo Bank, N.A. (incorporated by reference to Exhibit 4.1 to Medtronic plc's Current Report on Form 8-K, filed on March 28, 2017, File No. 001-36820).
4.21	First Supplemental Indenture, dated as of March 28, 2017, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Medtronic, Inc., and Wells Fargo Bank, N.A. (incorporated by reference to Exhibit 4.2 to Medtronic plc's Current Report on Form 8-K, filed on March 28, 2017, File No. 001-36820).
4.22	Second Supplemental Indenture, dated as of March 7, 2019, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Medtronic, Inc., Wells Fargo Bank, N.A., and Elavon Financial Services DAC, UK Branch (incorporated by reference to Exhibit 4.1 to Medtronic plc's Current Report on Form 8-K, filed on March 7, 2019, File No. 001-36820).
4.23	Third Supplemental Indenture, dated as of July 2, 2019, among Medtronic Global Holdings S.C.A., Medtronic, Inc. and Medtronic plc, Wells Fargo Bank, N.A., as trustee, and Elavon Financial Services DAC (incorporated by reference to Exhibit 4.1 to Medtronic plc' Current Report on Form 8-K, filed July 2, 2019, File No. 001-36820).
4.24	Fourth Supplemental Indenture, dated as of September 29, 2020, among Medtronic Global Holdings S.C.A., Medtronic, Inc. and Medtronic plc, Wells Fargo Bank, N.A., as trustee, and Elavon Financial Services DAC, as paying agent (including the forms of the 2023 Notes, the 2025 Notes, the 2028 Notes, the 2032 Notes, the 2040 Notes and the 2050 Notes) (incorporated by reference to Exhibit 4.1 to Medtronic plc' Current Report on Form 8-K, filed September 29, 2020, File No. 001-36820).
#4.25	Description of Registrant's Securities.
10.1	Amended and Restated Credit Agreement, dated as of December 12, 2018, by and among Medtronic Global Holdings, SCA, certain subsidiaries named therein, Medtronic, Inc., Medtronic PLC, the lenders from time to time party thereto, and Bank of America, N.A. as Administration Agent (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K, filed on December 13, 2018, File No. 001-36820).
10.2	Amendment No. 1 and Extension Agreement to the Amended and Restated Credit Agreement, dated as of December 12, 2019, among Medtronic Global Holdings S.C.A., Medtronic, Inc., Medtronic PLC, the Lenders party thereto and Bank of America, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 10-Q, filed on February 28, 2020, File No. 001-36820).
10.3	Term Loan Agreement, dated as of May 12, 2020, among Medtronic Global Holdings S.C.A., Medtronic, Inc., Medtronic PLC, the Lenders party thereto and Mizuho Bank, LTD., as Administrative Agent (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K, filed on May 12, 2020, File No. 001-36820).

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10.4	Form of Deed of Indemnification (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
10.5	Form of Indemnification Agreement (incorporated by reference to Exhibit 10.2 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
*10.6	Change of Control Severance Plan - Section 16B Officers (as amended and restated as of January 26, 2015) (incorporated by reference to Exhibit 10.14 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.7	Letter Agreement by and between Medtronic, Inc. and Carol Surface dated August 22, 2013 (incorporated by reference to Exhibit 10.44 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2014, filed on June 20, 2014, File No. 001-07707).
*10.8	Letter Agreement by and between Medtronic, Inc. and Bradley E. Lerman dated May 2, 2014 (incorporated by reference to Exhibit 10.4 of Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2014, filed on August 29, 2014, File No. 001-07707).
*10.9	Letter Agreement by and between Medtronic, Inc. and Karen Parkhill dated May 2, 2016 (incorporated by reference to Exhibit 10.1 to Medtronic, plc's Current Report on Form 8-K, filed on May 4, 2016, File No. 001-36820).
*10.10	Office of Chairman and Chief Executive Officer Letter Agreement (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-Q, filed on December 3, 2019, File No. 001-36820).
*10.11	Form of Offer Letter Amendment (incorporated by reference to Exhibit 10.25 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.12	1998 Outside Director Stock Compensation Plan (as amended and restated effective as of January 1, 2008) (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 25, 2008, filed on, filed on March 4, 2008, File No. 001-07707).
*10.13	Amendment to the 1998 Outside Director Stock Compensation Plan (incorporated by reference to Exhibit 10.2 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.14	2003 Long-Term Incentive Plan (as amended and restated effective January 1, 2008) (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2008, filed on March 4, 2008, File No. 001-07707).
*10.15	Amendment to the 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.16	Form of Restricted Stock Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2005, filed on March 7, 2005, File No. 001-07707).
*10.17	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan (four year vesting) (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2005, filed on March 7, 2005, File No. 001-07707).
*10.18	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan (immediate vesting) (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2005, filed on March 7, 2005, File No. 001-07707).
*10.19	Form of Restricted Stock Units Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.20 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 29, 2005, filed on June 29, 2005, File No. 001-07707).
*10.20	Form of Performance Share Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.21 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 29, 2005, filed on June 29, 2005, File No. 001-07707).
*10.21	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.23 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).

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*10.22	Form of Restricted Stock Award Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.24 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.23	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.25 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.24	Form of Performance Award Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.26 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.25	Form of Restricted Stock Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 26, 2007, filed on December 4, 2007, File No. 001-07707).
*10.26	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 26, 2007, filed on December 4, 2007, File No. 001-07707).
*10.27	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.39 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2008, filed on June 24, 2008, File No. 001-07707).
*10.28	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.40 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2008, filed on June 24, 2008, File No. 001-07707).
*10.29	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.41 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2008, filed on June 24, 2008, File No. 001-07707).
*10.30	Israeli Amendment to the 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 25, 2008, filed on March 4, 2008, File No. 001-07707).
*10.31	2008 Stock Award and Incentive Plan (as amended and restated effective August 27, 2009) (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 30, 2009, filed on December 9, 2009, File No. 001-07707).
*10.32	Amendment to the 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.33	Form of Restricted Stock Unit Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.34	Form of Restricted Stock Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.35	Form of Restricted Stock Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.36	Form of Restricted Stock Unit Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.37	Form of Non-Qualified Stock Option Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.6 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.38	Terms of Non-Employee Director Compensation under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.42 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 27, 2012, filed on June 26, 2012, File No. 001-07707).
*10.39	Form of Non-Employee Director Initial Option Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).

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*10.40	Form of Non-Employee Director Annual Option Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.41	Form of Non-Employee Director Deferred Unit Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.42	Form of Non-Employee Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.65 to Medtronic plc's Annual Report on Form 10-K for the year ended April 24, 2015, filed on June 23, 2015, File No. 001-36820).
*10.43	Israeli Amendment to the Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.10 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.44	Form of Restricted Stock Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-K for the quarter ended July 28, 2017, filed on September 1, 2017, File No. 001-36820).
*10.45	Medtronic plc Amended and Restated 2013 Stock Award and Incentive Plan (as amended and restated generally effective December 8, 2017) (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K, filed on December 12, 2017, File No. 001-36820).
*10.46	Form of Non-qualified Stock Option Agreement Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.50 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820).
*10.47	Form of Restricted Stock Unit Award Agreement Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.51 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820).
*10.48	Form of Restricted Stock Award Agreement Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.52 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820)
*10.49	Form of Long Term Performance Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.53 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820).
*10.50	Form of Non-Qualified Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.31 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.51	Form of Performance Share Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended October 30, 2020, filed on December 3, 2020, File No. 001-36820).
*10.52	Form of Non-Employee Director Deferred Unit Award Agreement under the 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.53	Form of Non-Qualified Stock Option Agreement under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.54	Form of Restricted Stock Unit Award Agreement (U.S. Employees) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.55	Form of Restricted Stock Unit Award Agreement (Non-U.S. Employees) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.56	Form of Restricted Stock Unit Award Agreement (Time-Based) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).

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*10.57	Form of Restricted Stock Unit Award Agreement (Israeli-Employees) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.8 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.58	Form of Non-Qualified Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.48 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.59	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.49 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.60	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.50 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.61	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.51 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.62	Form of Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.53 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.63	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.54 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.64	Form of Restricted Stock Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.69 to Medtronic plc's Annual Report on Form 10-K for the year ended April 24, 2020, filed on June 19, 2020, File No. 001-36820).
*10.65	Form of Non-Qualified Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.70 to Medtronic plc's Annual Report on Form 10-K for the year ended April 24, 2020, filed on June 19, 2020, File No. 001-36820).
*10.66	Medtronic plc 2014 Amended and Restated Employees Stock Purchase Plan (incorporated by reference to Exhibit 10.8 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.67	Medtronic plc Incentive Plan (as amended and restated effective January 26, 2015) (incorporated by reference to Exhibit 10.11 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.68	Medtronic plc Supplemental Executive Retirement Plan (as restated generally effective January 26, 2015) (incorporated by reference to Exhibit 10.15 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.69	Medtronic Non-Qualified Retirement Plan Supplemental (restated November 6, 2020, and formerly known as the Supplemental Executive Retirement Plan) (incorporated by reference to Exhibit 10.3 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended October 30, 2020, filed on December 3, 2020, File No. 001-36820).
*10.70	Medtronic plc Savings and Investment Plan (as amended and restated generally effective January 26, 2015) (incorporated by reference to Exhibit 4.22 to Medtronic plc's Registration Statement on Form S-8 filed on January 28, 2015, File No. 333-201737).
*10.71	Medtronic plc Puerto Rico Employees' Savings and Investment Plan (as amended and restated generally effective January 26, 2015) (incorporated by reference to Exhibit 4.23 to Medtronic plc's Registration Statement on Form S-8 filed on January 28, 2015, File No. 333-201737).
*10.72	Medtronic plc Capital Accumulation Plan Deferral Program (as amended and restated generally effective January 26, 2015) (incorporated by reference to Exhibit 10.13 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).

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*10.73	Capital Accumulation Plan Deferral Program (as amended and restated generally effective January 1, 2017) (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended October 28, 2016, filed on December 5, 2016, File No. 001-36820).
*10.74	Amended and Restated Covidien Supplemental Savings and Retirement Plan (restated November 6, 2020) (incorporated by reference to Exhibit 10.2 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended October 30, 2020, filed on December 3, 2020, File No. 001-36820).
*10.75	Medtronic Capital Accumulation Plan Deferral Program (restated November 6, 2020) (incorporated by reference to Exhibit 10.4 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended October 30, 2020, filed on December 3, 2020, File No. 001-36820).
10.76	Amendment No. 3 and Extension Agreement to the Amended and Restated Credit Agreement, dated as of December 13, 2021, by and among Medtronic Global Holdings S.C.A., certain subsidiaries of Medtronic plc from time to time party thereto, Medtronic, Inc., Medtronic plc, the lenders from time to time party thereto and Bank of America N.A., as administrative agent. (incorporated by reference to Exhibit 10.01 to Medtronic plc's Current Report on Form 8-K, filed on December 14, 2021, File No. 001-36820).
*10.77	Medtronic Capital Accumulation Plan Deferral Program (as restated generally effective January 1, 2017) (Conformed through the Amendment generally effective as of January 1, 2022) (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 28, 2022, filed on March 3, 2022, File No. 001-36820).
*10.78	2021 Medtronic plc Long Term Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 28, 2022, filed on March 3, 2022, File No. 001-36820).
*10.79	Performance Share Unit Agreement 2021 Medtronic plc Long Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 28, 2022, filed on March 3, 2022, File No. 001-36820).
*10.80	Non-Qualified Stock Option Agreement 2021 Medtronic plc Long Term Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 28, 2022, filed on March 3, 2022, File No. 001-36820).
*10.81	Restricted Stock Unit Award Agreement for awards vesting 100% on the third anniversary of the grant date - 2021 Medtronic plc Long Term Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 28, 2022, filed on March 3, 2022, File No. 001-36820).
*10.82	Restricted Stock Unit Award Agreement for awards vesting ratably on the first, second, third, and fourth anniversary of the grant date - 2021 Medtronic plc Long Term Incentive Plan (incorporated by reference to Exhibit 10.6 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 28, 2022, filed on March 3, 2022, File No. 001-36820).
#21	List of Subsidiaries of Medtronic plc.
#22	List of Senior Notes, Issuers and Guarantors.
#23	Consent of Independent Registered Public Accounting Firm.
#24	Power of Attorney.
#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	XBRL Taxonomy Extension Schema Document
#101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
#101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
#101.LAB	XBRL Taxonomy Extension Label Linkbase Document
#101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
#104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

*Exhibits that are management contracts or compensatory plans or arrangements.
#Filed herewith

Item 16. Form 10-K Summary

Registrants may voluntarily include a summary of information required by Form 10-K under this Item 16. The Company has not elected to include such summary information.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Medtronic plc

Dated: June 23, 2022	**By:**	**/s/ Geoffrey S. Martha**
		Geoffrey S. Martha
		Chairman and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, the report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Medtronic plc

Dated: June 23, 2022	**By:**	**/s/ Geoffrey S. Martha**
		Geoffrey S. Martha
		Chairman and Chief Executive Officer
		(Principal Executive Officer)
Dated: June 23, 2022	**By:**	/s/ **Karen L. Parkhill**
		Karen L. Parkhill
		Executive Vice President and Chief Financial Officer
		(Principal Financial Officer)
Dated: June 23, 2022	**By:**	**/s/ Jennifer M. Kirk**
		Jennifer M. Kirk
		Global Controller and Chief Accounting Officer
		(Principal Accounting Officer)

Directors

Richard H. Anderson*
Craig Arnold*
Scott C. Donnelly*
Andrea J. Goldsmith, PH.D.*
Randall J. Hogan,*
Kevin E. Lofton*
Geoffrey S. Martha
Elizabeth G. Nabel, M.D.*
Denise M. O'Leary*
Kendall J. Powell*

*Ivan K. Fong, by signing his name hereto, does hereby sign this document on behalf of each of the above named directors of the registrant pursuant to powers of attorney duly executed by such persons.

Dated: June 23, 2022	**By:**	**/s/ Ivan K. Fong**
		Ivan K. Fong

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

FORM 10-K

☒ **Annual report pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934.**
For the fiscal year ended April 30, 2021.

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

Commission File No. 1-36820
mdt-20210430_g1.jpg®

Medtronic plc

(Exact name of registrant as specified in its charter)

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

20 On Hatch, Lower Hatch Street
Dublin 2, Ireland
(Address of principal executive offices)
+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	Nar
Ordinary shares, par value $0.0001 per share	MDT	
0.00% Senior Notes due 2022	MDT/22B	
0.375% Senior Notes due 2023	MDT/23B	
0.000% Senior Notes due 2023	MDT/23C	
0.25% Senior Notes due 2025	MDT/25	
0.000% Senior Notes due 2025	MDT/25A	
1.125% Senior Notes due 2027	MDT/27	
0.375% Senior Notes due 2028	MDT/28	
1.625% Senior Notes due 2031	MDT/31	
1.00% Senior Notes due 2031	MDT/31A	
0.750% Senior Notes due 2032	MDT/32	
2.250% Senior Notes due 2039	MDT/39A	
1.50% Senior Notes due 2039	MDT/39B	
1.375% Senior Notes due 2040	MDT/40A	
1.75% Senior Notes due 2049	MDT/49	
1.625% Senior Notes due 2050	MDT/50	

Securities registered pursuant to section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act. Yes ☐ No ☒

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

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

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes ☒ No ☐

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

Aggregate market value of voting and non-voting common equity of Medtronic plc held by non-affiliates of the registrant as of October 30, 2020, based on the closing price of $100.57 as reported on the New York Stock Exchange: approximately $135.3 billion. Number of Ordinary Shares outstanding on June 23, 2021: 1,343,904,180

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for its 2021 Annual General Meeting are incorporated by reference into Part III hereof.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, and other written reports of Medtronic public limited company, organized under the laws of Ireland (together with its consolidated subsidiaries, Medtronic, the Company, or we, us, or our), 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 Annual Report on Form 10-K, 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, the potential or anticipated direct or indirect impact of COVID-19 on our business, results of operations and/or financial condition, restructuring and cost-saving initiatives, intellectual property rights, litigation and tax matters, governmental proceedings and 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 Annual 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 United States (U.S.) Food and Drug Administration (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 healthcare 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 governmental proceedings and 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, results of operations, financial condition, and cash flows. These forward-looking statements speak only as of the date of this Annual Report on Form 10-K and are subject to a number of risks, uncertainties and assumptions described in the "Risk Factors" section and elsewhere in this 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" within "Item 1. Business" and "Item 1A. Risk Factors" in this Annual Report on Form 10-K, as well as those related to:

- the COVID-19 pandemic;
- competition in the medical device industry;
- reduction or interruption in our supply;
- laws and governmental regulations;

- quality problems;
- liquidity shortfalls;
- decreasing prices and pricing pressure;
- fluctuations in currency exchange rates;
- changes in applicable tax rates;

- positions taken by taxing authorities;
- adverse regulatory action;
- delays in regulatory approvals;
- litigation results;
- self-insurance;
- commercial insurance;
- healthcare 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.

PART I

Item 1. Business

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Medtronic plc, headquartered in Dublin, Ireland, is among the world's largest medical technology, services, and solutions companies. Medtronic was founded in 1949 and today serves healthcare systems, physicians, clinicians, and patients in more than 150 countries worldwide. We remain committed to a mission written by our founder in 1960 that directs us “to contribute to human welfare by the application of biomedical engineering in the research, design, manufacture, and sale of products to alleviate pain, restore health, and extend life.”

Our Mission — to alleviate pain, restore health, and extend life — is one of our most powerful assets. We remain committed to being recognized as a company of dedication, honesty, integrity, and service. Building on this strong foundation, we are embracing our role as a healthcare technology leader and evolving our business strategy in four key areas:

- Leveraging our pipeline to win market share: The combination of our strong base business, recent product launches and robust pipeline is expected to continue accelerating our growth over both the near-and long-term. We aim to bring inventive and disruptive technology to large healthcare opportunities which enables us to better meet patient needs. Patients around the world deserve access to our life-saving products, and we are driven to use our local presence and scale to increase the adoption of our products and services in markets around the globe.
- Serving more patients by accelerating innovation driven growth and delivering shareholder value: We listen to our patients, customers, and employees to better understand the challenges they face. From the patient journey, to creating agile partnerships that produce novel solutions, to making it easier for our customers to deploy our therapies — everything we do is anchored in deep insight, and creates simpler, superior experiences for everyone.
- Creating and disrupting markets with our technology by putting the “tech” in medtech: We are confident in our ability to maximize new technology, artificial intelligence (AI), and data and analytics to tailor therapies in real-time, facilitating remote monitoring and care delivery that conveniently manages conditions, and creates new standards of care.
- Empowering our operating units to become more nimble and more competitive: Our new operating model simplifies our organization in order to accelerate decision making, improve commercial execution, and more effectively leverage the scale of our company.

Our new operating model was effective February 1, 2021. The new operating model moved from a Group structure to a Portfolio structure: Cardiovascular Portfolio (formerly Cardiac and Vascular Group), Neuroscience Portfolio (formerly Restorative Therapies Group), Medical Surgical Portfolio (formerly Minimally Invasive Therapies Group), and Diabetes Operating Unit (formerly Diabetes Group). There were no changes to the operating and reportable segments as a result of this new operating model.

We have four operating and reportable segments that primarily develop, manufacture, distribute, and sell device-based medical therapies and services: the Cardiovascular Portfolio, the Medical Surgical Portfolio, the Neuroscience Portfolio, and the Diabetes Operating Unit. For more information regarding our segments, please see Note 19 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

CARDIOVASCULAR PORTFOLIO

The Cardiovascular Portfolio is made up of the Cardiac Rhythm & Heart Failure, Structural Heart & Aortic, and Coronary & Peripheral Vascular divisions. The primary medical specialists who use our Cardiovascular products include electrophysiologists, implanting cardiologists, heart failure specialists, cardiovascular, cardiothoracic, and vascular surgeons, and interventional cardiologists and radiologists.

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Cardiac Rhythm & Heart Failure

Our Cardiac Rhythm & Heart Failure division includes the following Operating Units: Cardiac Rhythm Management, Cardiac Ablation Solutions, Cardiovascular Diagnostics, and Mechanical Circulatory Support. The division develops, manufactures, and markets products for the diagnosis, treatment, and management of heart rhythm disorders and heart failure. Our products include implantable devices, leads and delivery systems, products for the treatment of atrial fibrillation (AF), products designed to reduce surgical site infections, information systems for the management of patients with Cardiac Rhythm & Heart Failure devices, and an integrated health solutions business. Principal products and services offered include:

- Implantable cardiac pacemakers including the Azure MRI SureScan, Adapta, Advisa MRI SureScan, and the Micra Transcatheter Pacing System. The Micra Transcatheter Pacing System, which is leadless and does not have a subcutaneous device pocket like a conventional pacemaker, includes the MicraVR and the Micra AV which can treat patients with atrioventricular block.
- Implantable cardioverter defibrillators (ICDs), including the Visia AF, Evera MRI SureScan, and the Cobalt and Crome portfolio of BlueSync-enabled ICDs, as well as defibrillator leads, including the Sprint Quattro Secure lead.
- Implantable cardiac resynchronization therapy devices (CRT-Ds and CRT-Ps) including the Claria/Amplia/Compia family of MRI Quad CRT-D SureScan systems and the Cobalt and Crome portfolio of BlueSync-enabled CRT-Ds, as well as the Percepta/Serena/Solara family of MRI Quad CRT-P SureScan systems.
- AF ablation products including the Arctic Front Cardiac CryoAblation Catheter System, designed for pulmonary vein isolation in the treatment of patients with drug refractory paroxysmal AF, as well as the DiamondTemp Ablation system, which is the first U.S. FDA-approved, temperature controlled, irrigated radiofrequency ablation system with diamonds available to deliver ablations.
- Insertable cardiac monitoring systems including the Reveal LINQ and LINQ II. These devices are for patients with abnormal heart rhythms who experience infrequent symptoms including dizziness, palpitations, syncope (fainting) and chest pain, thereby requiring long-term monitoring or ongoing management. The LINQ II device offers remote programming, improved device longevity, and enhanced accuracy to correctly detect abnormal heart rhythms, simplifying diagnosis and monitoring of patients.
- Mechanical circulatory support products including miniaturized implantable heart pumps, or ventricular assist devices, patient accessories and surgical tools to treat patients suffering from advanced heart failure.
- TYRX products including the Cardiac and Neuro Absorbable Antibacterial Envelopes, which are designed to stabilize electronic implantable devices and help prevent infection associated with implantable pacemakers, and defibrillators.
- Remote monitoring services and patient-centered software to enable efficient care coordination and specialized telehealth nurse support as well as services related to hospital operational efficiency.

Structural Heart & Aortic

Our Structural Heart & Aortic division includes the following Operating Units: Structural Heart & Aortic and Cardiac Surgery. The division includes therapies to treat heart valve disorders and aortic disease. Our devices include products for the repair and replacement of heart valves, perfusion systems, positioning and stabilization systems for beating heart revascularization surgery, surgical ablation products, and comprehensive line of products and therapies to treat aortic disease, such as aneurysms, dissections, and transections. Principal products offered include:

- CoreValve family of aortic valves, including the Evolut R, Evolut PRO, and Evolut PRO+ systems for transcatheter aortic valve replacement.
- Surgical valve replacement and repair products for damaged or diseased heart valves, including both tissue and mechanical valves, blood-handling products that form a circulatory support system to maintain and monitor blood circulation and coagulation status, oxygen supply, and body temperature during arrested heart surgery, and surgical ablation systems and positioning and stabilization technologies.
- Endovascular stent grafts and accessories including the Endurant II Stent Graft System for the treatment of abdominal aortic aneurysms, the Valiant Captivia Thoracic Stent Graft System for thoracic endovascular aortic repair procedures, and the Heli-FX EndoAnchor System.

Coronary & Peripheral Vascular

Our Coronary & Peripheral Vascular division includes the following Operating Units: Coronary & Renal Denervation and Peripheral Vascular Health. The division is comprised of a comprehensive line of products and therapies to treat coronary artery disease as well as peripheral vascular disease and venous disease. Our products include coronary stents and related delivery systems, including a broad line of balloon angioplasty catheters, guide catheters, guide wires, diagnostic catheters, and accessories, peripheral drug coated balloons, stent and angioplasty systems, carotid embolic protection systems for the treatment of vascular disease outside the heart, and products for superficial and deep venous disease. Principal products offered include:

- Percutaneous Coronary Intervention products including our Resolute Onyx drug-eluting stent, Euphoria balloons, and Launcher guide catheters.
- Percutaneous angioplasty balloons including the IN.PACT family of drug-coated balloons, vascular stents including the Abre venous stent, directional atherectomy products including the HawkOne directional atherectomy system, and other procedure support tools.
- Products to treat superficial venous diseases in the lower extremities including the ClosureFast radiofrequency ablation system and the VenaSeal Closure System.

MEDICAL SURGICAL PORTFOLIO

The Medical Surgical Portfolio is made up of the Surgical Innovations and Respiratory, Gastrointestinal, & Renal divisions. Products and therapies of this group are used primarily by healthcare systems, physicians' offices, ambulatory care centers, and other alternate site healthcare providers. While less frequent, some products and therapies are also used in home settings.

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Surgical Innovations

Our Surgical Innovations division includes the following Operating Units: Surgical Innovations and Surgical Robotics. The division develops, manufactures, and markets advanced and general surgical products including surgical stapling devices, vessel sealing instruments, wound closure, electrosurgery products, surgical artificial intelligence (AI) and robotic-assisted surgery products, hernia mechanical devices, mesh implants, gynecology and lung products, and therapies to treat diseases and conditions that are typically, but not exclusively, addressed by surgeons. Principal products and services offered include:

- Advanced stapling and energy products, including the Tri-Staple technology platform for endoscopic stapling, including the Endo GIA reloads and reinforced reloads with Tri-Staple Technology and the Endo GIA ultra universal stapler, the Signia Powered Stapling System, the LigaSure Exact Dissector and L-Hook Laparoscopic Sealer/Divider, and the Sonicision curved jaw cordless ultrasonic dissection system.
- Electrosurgical hardware and instruments, including the Valleylab FT10 energy platform, and the Force TriVerse electrosurgical pencils, and surgical AI, data and analytics, and digital education and training to support robotic assisted surgery platform.
- Products designed for the treatment of hernias, including the AbsorbaTack absorbable mesh fixation device for hernia repair, the Symbotex composite mesh for surgical laparoscopic and open ventral hernia repair, and Parietex ProGrip, a self-gripping, biocompatible solution for inguinal hernias.

Respiratory, Gastrointestinal, & Renal

Our Respiratory, Gastrointestinal, & Renal division includes the following Operating Units: Respiratory Interventions, Patient Monitoring, Gastrointestinal, and Renal Care Solutions. The division develops, manufactures, and markets products in the emerging fields of minimally invasive gastrointestinal and hepatologic diagnostics and therapies, patient monitoring, respiratory interventions including airway management and ventilation therapies, and for the treatment of renal disease. Principal products and services offered include:

- Gastrointestinal and endoscopy products, including the PillCam capsule endoscopy systems, the Bravo calibration-free reflux testing systems, the EndoFLIP imaging systems, the Emprint ablation system with Thermosphere Technology, the ManoScan Bravo system, the Barrx platform through ablation with the Barrx 360 Express catheter, the GI Genius intelligent endoscopy module, the Cool-tip radiofrequency ablation system, and the HET Bipolar System.
- Airway, ventilation, and inhalation therapies products, including the Puritan Bennett 980 and 840 ventilators, the Newport e360 and HT70 ventilators, the TaperGuard Evac tube, Shiley Endotracheal Tubes, Shiley Tracheostomy Tubes, McGRATH MAC video laryngoscopes, and DAR Filters.
- Products focused on patient monitoring, including Microstream capnography monitors, Nellcor pulse oximetry monitors, INVOS cerebral/somatic oximetry systems, Vital Sync remote monitoring, WarmTouch convective warming, and Bispectral Index (BIS) brain monitoring technology.
- Products providing solutions for the treatment of renal disease, including Palindrome, Mahurkar and Mahurkar Elite Dialysis Access Catheters for renal therapy, Argyle peritoneal dialysis catheters, and other products designed for use in treatment of both acute and chronic renal failure conditions.

NEUROSCIENCE PORTFOLIO

The Neuroscience Portfolio is made up of the Cranial & Spinal Technologies, Specialty Therapies, and Neuromodulation divisions. The primary medical specialists who use the products of this group include spinal surgeons, neurosurgeons, neurologists, pain management specialists, anesthesiologists, orthopedic surgeons, urologists, urogynecologists, interventional radiologists, and ear, nose, and throat specialists.

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Cranial & Spinal Technologies

Our Cranial & Spinal Technologies division and Operating Unit develops, manufactures, and markets an integrated portfolio of devices and therapies for surgical technologies designed to improve the precision and workflow of neuro procedures, and a comprehensive line of medical devices and implants used in the treatment of the spine and musculoskeletal system. The division also provides biologic solutions for the orthopedic and dental markets and offers unique and highly differentiated imaging, navigation, power instruments, nerve monitoring, and robotic guidance systems used in spine and cranial procedures. Principal products and services offered include:

- Neurosurgery products, including platform technologies, implant therapies, and advanced energy products. Our StealthStation S8 Navigation System, Stealth Autoguide cranial robotic guidance platform, and O-arm Imaging System are platforms used in cranial, spinal, sinus, and orthopedic procedures. Our Mazor X robotic guidance systems are used in robot-assisted spine procedures and combine the best-in-class robotics and navigation capability. Our Midas Rex Surgical Drills, including our new MR8 high-speed drill system, are used in cranial, spinal, ENT, and orthopedic procedures. Our cerebrospinal fluid (CSF) Management Portfolio is used in treating hydrocephalus and other conditions impacting the intracranial pressure, and our Visualase MRI-guided laser ablation is used in cranial procedures. Our PEAK Surgery System is a tissue dissection system that consists of the PEAK PlasmaBlade and PULSAR Generator and is cleared for use in a variety of settings, including plastic reconstructive surgery, general surgery, and certain conditions of ENT. Our Aquamantys Sealers use patented transcollation technology to provide haemostatic sealing of soft tissue and bone and are cleared for use in a variety of surgical procedures, including orthopedic surgery, spine, solid organ resection and thoracic procedures.

- Products to treat a variety of conditions affecting the spine, including degenerative disc disease, spinal deformity, spinal tumors, fractures of the spine, and stenosis. These products include our CD HORIZON SOLERA system, T2 STRATOSPHERE, and the CLYDESDALE, and ELEVATE interbody spacers. These products also include titanium interbody implants and surface technologies, such as our Adaptix interbody system and the Titan Interbody Fusion Device with NanoLOCK technology.

- Products that facilitate less invasive thoracolumbar surgeries, including the CD HORIZON SOLERA VOYAGER and LONGITUDE Percutaneous Fixation Systems.

- Products to treat conditions in the cervical region of the spine, including the ZEVO Anterior Cervical Plate System, the INFINITY OCT System, and PRESTIGE LP Cervical Artificial Discs.

- Biologic solutions products, including our INFUSE Bone Graft (InductOs in the European Union (E.U.)), which contains a recombinant human bone morphogenetic protein, rhBMP-2, for certain spinal, trauma, and oral maxillofacial applications.

- Demineralized Bone Matrix products, including MAGNIFUSE, GRAFTON/GRAFTON PLUS, COREX, and PROGENIX, and the MASTERGRAFT family of synthetic bone graft products - Matrix, Putty, and Granules.

Specialty Therapies

Our Specialty Therapies division includes the following Operating Units: Neurovascular, Ear, Nose, and Throat (ENT), and Pelvic Health. The division develops, manufactures, and markets products and therapies to treat diseases of ENT, patients afflicted with Acute Ischemic and Hemorrhagic stroke, and help control the systems of overactive bladder, (non-obstructive) urinary retention, and chronic fecal incontinence. Principal products and services offered include:

- Pelvic health and gastric therapies products, including our InterStim, InterStim Micro, and InterStim II neurostimulators, and InterStim SureScan MRI leads, to help control the systems of overactive bladder, (non-obstructive) urinary retention, and chronic fecal incontinence. Our NURO System delivers Percutaneous Tibial Neuromodulation therapy to treat overactive bladder and associated symptoms of urinary urgency, urinary frequency, and urge incontinence. Our Enterra gastric neurostimulator (approved under a Humanitarian Device Exemption (HDE) in the U.S.) is used for the treatment of chronic, intractable nausea and vomiting due to gastroparesis.

- ENT products, including the Straightshot M5 Microdebrider Handpiece, the IPC system, NIM Nerve Monitoring Systems, FUSION Compact and StealthStation ENT Navigation System, as well as products for hearing restoration and obstructive sleep apnea.

- Neurovascular products to treat diseases of the vasculature in and around the brain. This includes coils, neurovascular stent retrievers, and flow diversion products, as well as access and delivery products to support procedures. Products also include the Pipeline Flex Embolization Devices, endovascular treatments for large or giant wide-necked brain aneurysms, the portfolio of Solitaire revascularization devices for treatment of acute ischemic stroke, the Riptide Aspiration System and a portfolio of associated access catheters including our React aspiration catheters also for the treatment of acute ischemic stroke.

Neuromodulation

Our Neuromodulation division and Operating Unit develops, manufactures, and markets spinal cord stimulation systems, implantable drug infusion systems for chronic pain, as well as interventional products. Principal products and services offered include:

- Spinal cord stimulation products, including rechargeable and non-rechargeable devices and a large selection of leads used to treat chronic back and/or limb pain. This includes the Intellis Spinal Cord Stimulation System, with AdaptiveStim and SureScan MRI Technology, DTM (differential target multiplexed) proprietary waveform, the Evolve workflow algorithm, and Snapshot reporting. Products also include our RestoreSensor (rechargeable) SureScan MRI neurostimulation system, with its proprietary AdaptiveStim technology.

- Brain modulation products, including those for the treatment of the disabling symptoms of Parkinson's disease, essential tremor, refractory epilepsy, severe, treatment-resistant obsessive compulsive disorder (approved under a HDE in the U.S.), and chronic, intractable primary dystonia (approved under a HDE in the U.S.). Specifically, this includes our family of Activa Neurostimulators, including Activa SC (single-channel primary cell battery), Activa PC (dual channel primary cell battery), and Activa RC (dual channel rechargeable battery). This also includes our Percept PC Neurostimulator DBS system with BrainSense technology.

- Implantable drug infusion systems, including our SynchroMed II Implantable Infusion System, that deliver small quantities of drug directly into the intrathecal space surrounding the spinal cord.

- Interventional products, including the Xpander II Balloon Kyphoplasty system, the Kyphon-V vertebroplasty system and the OsteoCool RF Tumor ablation system.

- The Accurian nerve ablation system, which conducts radio frequency ablation of nerve tissues.

DIABETES OPERATING UNIT

The Diabetes Operating Unit develops, manufactures, and markets products and services for the management of Type 1 and Type 2 diabetes. The primary medical specialists who use and/or prescribe our Diabetes products are endocrinologists and primary care physicians.

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Principal products and services offered include:

- Insulin pumps and consumables, including the MiniMed 770G system and MiniMed 780G system, which are all powered by SmartGuard technology. The MiniMed 770G system provides smartphone and Bluetooth connectivity, continuously delivers background insulin, monitors sugar levels, and an expanded age indication to ages two and up. The MiniMed 780G enhances the insulin pump systems by including automatic correction boluses and an adjustable glucose target down to 100 mg/dl.
- Continuous glucose monitoring (CGM) systems and sensors, including the Guardian Connect smart CGM system and the Guardian Sensor 3, are products worn by patients capturing glucose data to reveal patterns and potential problems, such as hyperglycemic and hypoglycemic episodes.
- The InPen smart insulin pen system that combines a reusable Bluetooth-enabled insulin pen with an intuitive mobile app that helps users administer the appropriate insulin dose. The InPen application was integrated with our CGM data to provide real-time CGM readings alongside insulin dose information.
- Consumables and supplies, including infusion sets.

HUMAN CAPITAL

Medtronic Workforce Overview

Medtronic's employees deliver on our Mission every day. We strive to be the employer of choice for the best and brightest global talent, where employees can grow and develop fulfilling careers. We aspire to create a truly inclusive, diverse, and equitable workplace that fosters innovation and creativity, and where every employee feels a sense of belonging and well-being. More than 99 percent of Medtronic's 90,000+ employees work full-time. Forty-four percent of our employees are based in the U.S. or Puerto Rico.

Inclusion, Diversity & Equity

We believe that improving health for people from all walks of life depends on our ability to unleash the creative power of our diverse global employees. By breaking down barriers to Inclusion, Diversity and Equity, we open doors for everyone, driving progress and prosperity around the world. As of the end of fiscal year 2021, 38 percent of our U.S. workforce is ethnically diverse; women comprise 50 percent of our global workforce; and 40 percent of our people leaders, manager level and above, are women. Additionally, Medtronic employee resource groups (ERGs) are employee-led affinity groups that provide career development and networking opportunities for members and strengthen ties between employees of many different backgrounds, cultures, and interests. In fiscal year 2021, there were 12 ERGs across 70 countries with more than 26,000 members.

Pay Equity

For fiscal year 2021, in the United States we have achieved 100% pay equity for gender and 99% pay equity for ethnically diverse employees. Globally we have achieved 99% pay equity for gender. We are actively working to close any remaining pay gaps by continuing to expand the annual pay equity analyses for each country in which we operate.

Workforce Compensation

Our compensation framework is designed to celebrate the value and contributions of our employees. We aim to create a feeling of personal and professional security at Medtronic and are committed to transparent communications on compensation. Our competitive approach to compensation reflects industry benchmarks and local market standards. Our programs include annual and long-term incentives that provide the means to share in the company's success. To attract the best leaders, we offer competitive benefits and cash and equity incentives. We reward high-performing employees with an ownership stake in the company through restricted stock, and all employees have the opportunity to purchase stock at a discount.

Learning & Development

The skills and dedication of our employees drive our business performance. Our comprehensive professional development programs empower our people to build rewarding careers and help us attract world-class talent. Our suite of professional development programs ensures that our employees, regardless of level, location, language or learning preferences, have access to opportunities to develop and grow. Our investment in employee development has contributed to more than 30 percent of our open roles being filled with internal employees.

Employee Engagement

Through our organizational health survey, we gain valuable insight into the Medtronic employee experience and identify areas where we can improve in four key priority areas: 1) Employee Engagement, 2) Inclusion, 3) Innovation, and 4) Ethics. In our most recent survey ending in May 2021, more than 83 percent of our employees responded, an increase in participation over prior year (79 percent). Medtronic carefully reviews and implements actions based on employee feedback in order to partner and create an inclusive, innovative and supportive environment.

Health & Safety

As a large, global employer, it is our responsibility to maintain a safe workplace and support the well-being of our employees. As we navigate the COVID-19 pandemic, we have placed a high priority on employee health, providing accommodations and resources to support our workforce through this challenging time.

To help limit exposure to the coronavirus, we acted to ensure employees in business-critical functions who cannot work from home are protected, including those in research and development, quality, manufacturing, distribution, and sales. Personal protective equipment, increased sanitation, social distancing guidance, and facility updates (one-way hallways, cafeteria partitions and extra sinks) are provided to protect our employees.

The Medtronic Employee Assistance Program and the Medtronic Employee Emergency Assistance Fund have historically supported employees and their families when faced with difficult times by providing a variety of services such as mental health and financial counseling and support at no cost. Both programs have proven invaluable in navigating our employees through unique challenges during the pandemic.

For more information on Human Capital Management at Medtronic, please refer to our 2020 Integrated Report as well as Medtronic's 2020 Global Inclusion, Diversity and Equity Report available on our company website.

OTHER FACTORS IMPACTING OUR OPERATIONS

COVID-19 Pandemic

The global COVID-19 pandemic ("COVID-19" or the "pandemic"), together with the preventative and precautionary measures taken by businesses, communities and governments, has impacted, and may continue to impact significant aspects of our Company and business, including demand for our products, our operations, supply chains and distribution systems, and our ability to research and develop and bring new products and services to market. See "Item 1A. Risk Factors" in this Annual Report on Form 10-K.

Research and Development

The markets in which we participate are subject to rapid technological advances. Constant improvement of existing products and introduction of new products is necessary to maintain market leadership. Our research and development (R&D) efforts are directed toward maintaining or achieving technological leadership in each of the markets we serve to help ensure that patients using our devices and therapies receive the most advanced and effective treatment possible. We remain committed to developing technological enhancements and new indications for existing products, and less invasive and new technologies for new and emerging markets to address unmet patient needs. That commitment leads to our initiation and participation in many

clinical trials each fiscal year as the demand for clinical and economic evidence remains high. Furthermore, our development activities are intended to help reduce patient care costs and the length of hospital stays in the future. We have not engaged in significant customer or government-sponsored research.

Our R&D activities include improving existing products and therapies, expanding their indications and applications for use, developing new therapies and procedures, and entering into arrangements with third parties to fund the development of certain technologies. We continue to focus on optimizing innovation, improving our R&D productivity, driving growth in emerging markets, generating clinical evidence, and assessing our R&D programs based on their ability to address unmet clinical needs, produce better patient outcomes, and create new standards of care.

Intellectual Property

We rely on a combination of patents, trademarks, tradenames, copyrights, trade secrets, and agreements (non-disclosure and non-competition agreements) to protect our business and proprietary technology. In addition, we have entered into exclusive and non-exclusive licenses relating to a wide array of third-party technologies. In the aggregate, these intellectual property assets and licenses are of material importance to our business; however, we believe that no single intellectual property asset or license is material in relation to any segment of our business or to our business as a whole.

We operate in an industry characterized by extensive patent litigation. Patent litigation may result in significant damage awards and injunctions that could prevent the manufacture and sale of affected products or result in significant royalty payments in order to continue selling the products. At any given time, we are involved as both a plaintiff and a defendant in a number of patent infringement actions, the outcomes of which may not be known for prolonged periods of time. For additional information, see Note 18 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Sales and Distribution

We sell most of our medical devices and therapies through direct sales representatives in the U.S. and a combination of direct sales representatives and independent distributors in markets outside the U.S. For certain portions of our business, we also sell through distributors in the U.S. Additionally, a portion of the Company's revenue is generated from consignment inventory maintained at hospitals. Our medical supplies products are used primarily in hospitals, surgical centers, and alternate care facilities, such as home care and long-term care facilities, and are marketed to materials managers, GPOs and integrated delivery networks (IDNs). We often negotiate with GPOs and IDNs, which enter into supply contracts for the benefit of their member facilities. Our four largest markets are the U.S., Western Europe, China, and Japan. Emerging markets are an area of increasing focus and opportunity, as we believe they remain under-penetrated.

Our marketing and sales strategy is focused on rapid, cost-effective delivery of high-quality products to a diverse group of customers worldwide. To achieve this objective, our marketing and sales teams are organized around physician specialties. This focus enables us to develop highly knowledgeable and dedicated sales representatives who are able to foster strong relationships with physicians and other customers and enhance our ability to cross-sell complementary products.

We are not dependent on any single customer for more than 10 percent of our total net sales.

Competition, Industry, and Cost Containment

We compete in both the therapeutic and diagnostic medical markets in more than 150 countries throughout the world. These markets are characterized by rapid change resulting from technological advances and scientific discoveries. Our product lines face a mix of competitors ranging from large manufacturers with multiple business lines to small manufacturers offering a limited selection of products. In addition, we face competition from providers of other medical therapies, such as pharmaceutical companies.

Major shifts in industry market share have occurred in connection with product problems, physician advisories, safety alerts, results of clinical trials to support superiority claims, and publications about our products, reflecting the importance of product quality, product efficacy and quality systems in the medical device industry. In the current environment of managed care, economically motivated customers, consolidation among healthcare providers, increased competition, declining reimbursement rates, and national tender pricing, competitively priced product

offerings are essential to our business. In order to continue to compete effectively, we must continue to create or acquire advanced technology, incorporate this technology into proprietary products, obtain regulatory approvals in a timely manner, maintain high-quality manufacturing processes, and successfully market these products.

Government and private sector initiatives to limit the growth of healthcare costs, including price regulation, competitive pricing, bidding and tender mechanics, coverage and payment policies, comparative effectiveness of therapies, technology assessments and managed-care arrangements, are continuing in many countries where we do business, including the U.S. These initiatives

put increased emphasis on the delivery of more cost-effective medical devices and therapies. Government programs, including Medicare and Medicaid, private healthcare insurance and managed-care plans have attempted to control costs by limiting the amount of reimbursement they will pay for particular procedures or treatments, tying reimbursement to outcomes, shifting to population health management, and other mechanisms. Hospitals, which purchase our technology, are also seeking to reduce costs through a variety of mechanisms, including, for example, centralized purchasing, and in some cases, limiting the number of vendors that may participate in the purchasing program. Hospitals are also aligning interests with physicians through employment and other arrangements, such as gainsharing, where a hospital agrees with physicians to share any realized cost savings resulting from changes in practice patterns such as device standardization. This has created an increased level of price sensitivity among customers for our products.

Production and Availability of Raw Materials

We manufacture products at manufacturing facilities located in various countries throughout the world. We purchase many of the components and raw materials used in manufacturing our products from numerous suppliers in various countries. Certain components and raw materials are available only from a sole supplier. We work closely with our suppliers to help ensure continuity of supply while maintaining high quality and reliability. Generally, we have been able to obtain adequate supplies of such raw materials and components. However, due to the U.S. FDA's manufacturing requirements, we may not be able to quickly establish additional or replacement sources for certain components or materials if we experience a sudden or unexpected reduction or interruption in supply and are unable to develop alternative sources.

For additional information related to our manufacturing facilities refer to "Item 2. Properties" in this Annual Report on Form 10-K.

Government Regulation

Our operations and products are subject to extensive regulation by numerous government agencies, including the U.S. FDA, European regulatory authorities such as the Medicines and Healthcare Products Regulatory Agency in the United Kingdom Republic of Ireland and the Federal Institute for Drugs and Medical Devices in Germany, the China National Medical Product Administration (NMPA), and other government agencies inside and outside the U.S. To varying degrees, each of these agencies requires us to comply with laws and regulations governing the development, testing, manufacturing, labeling, marketing, distribution and post-marketing surveillance of our products. Our business is also affected by patient and data privacy laws and government payer cost containment initiatives, as well as environmental health and safety laws and regulations.

Product Approval and Monitoring

Many countries where we sell medical devices subject such medical devices and technologies to their own approval and other regulatory requirements regarding performance, safety, and quality of our products. Authorization to commercially distribute a new medical device in the U.S. is generally obtained in one of two ways. The first, known as pre-market notification or the 510(k) process, requires us to demonstrate that our medical device is substantially equivalent to a legally marketed medical device. The second, more rigorous process, known as pre-market approval, requires us to independently demonstrate that a medical device is safe and effective for its intended use. This process is generally much more time-consuming and expensive than the 510(k) process.

In the E.U., a single regulatory approval process exists, and conformity with the legal requirements is represented by the CE Mark. To obtain a CE Mark, defined products must meet minimum standards of performance, safety, and quality (i.e., the essential requirements), and then, according to their classification, comply with one or more of a selection of conformity assessment routes. The competent authorities of the E.U. countries separately regulate the clinical research for medical devices and the market surveillance of products once they are placed on the market. A new Medical Device Regulation was published by the E.U. in 2017 which imposes significant additional premarket and postmarket requirements (EU MDR). The regulation provided an implementation period and became effective on May 26, 2021. Medical devices marketed in the E.U. will require certification according to these new requirements, except that devices with valid CE certificates, issued pursuant to the Medical Device Directives before May 2020, can be placed on the market until May 2024.

The global regulatory environment is increasingly stringent and unpredictable. Several countries that did not have regulatory requirements for medical devices have established such requirements in recent years, and other countries

have expanded, or plan to expand, their existing regulations. While harmonization of global regulations has been pursued, requirements continue to differ significantly among countries. We expect this global regulatory environment will continue to evolve, which could impact the cost, the time needed to approve, and ultimately, our ability to maintain existing approvals or obtain future approvals for our products. Regulations of the U.S. FDA and other regulatory agencies in and outside the U.S. impose extensive compliance and monitoring obligations on our business. These agencies review our design and manufacturing practices, labeling, record keeping, and manufacturers' required reports of adverse experiences and other information to identify potential

problems with marketed medical devices. We are also subject to periodic inspections for compliance with applicable quality system regulations, which govern the methods used in, and the facilities and controls used for, the design, manufacture, packaging, and servicing of finished medical devices intended for human use. In addition, the U.S. FDA and other regulatory bodies, both in and outside the U.S. (including the Federal Trade Commission, the Office of the Inspector General of the Department of Health and Human Services, the U.S. Department of Justice, and various state Attorneys General), monitor the promotion and advertising of our products. Any adverse regulatory action, depending on its magnitude, may limit our ability to effectively market and sell our products, limit our ability to obtain future premarket approvals or result in a substantial modification to our business practices and operations. For additional information, see "Item 1A. Risk Factors" *We are subject to extensive and complex laws and governmental regulations and any adverse regulatory action may materially adversely affect our financial condition and business operations*.

In April 2015, we entered into a consent decree with the U.S. FDA relating to our Pain Therapies division's SynchroMed II drug infusion system and its associated quality system. The consent decree requires us to complete certain corrections and enhancements to the SynchroMed pump and the Neuromodulation quality system. The consent decree's limitations on our ability to manufacture and distribute the SynchroMed drug infusion system were lifted by the U.S. FDA in September 2017. The final required third-party expert audit is complete, and following a successful U.S. FDA inspection, and in coordination with the U.S. FDA, Medtronic can move to have the consent decree vacated.

Trade Regulations

The movement of products, services, and investment across borders subjects us to extensive trade regulations. A variety of laws and regulations in the countries in which we transact business apply to the sale, shipment and provision of goods, services and technology across borders. These laws and regulations govern, among other things, our import, export and other business activities. We are also subject to the risk that these laws and regulations could change in a way that would expose us to additional costs, penalties or liabilities. Some governments also impose economic sanctions against certain countries, persons or entities. In addition to our need to comply with such regulations in connection with our direct activities, we also sell and provide goods, technology and services to agents, representatives and distributors who may export such items to customers and end-users. If we, or the third parties through which we do business, are not in compliance with applicable import, export control or economic sanctions laws and regulations, we may be subject to civil or criminal enforcement action, and varying degrees of liability. Such actions may disrupt or delay sales of our products or services or result in restrictions on our distribution and sales of products or services that may materially impact our business.

Anti-Boycott Laws

Under U.S. laws and regulations, U.S. companies and their subsidiaries and affiliates outside the U.S. are prohibited from participating or agreeing to participate in unsanctioned foreign boycotts in connection with certain business activities, including the sale, purchase, transfer, shipping or financing of goods or services within the U.S. or between the U.S. and countries outside of the U.S. If we, or certain third parties through which we sell or provide goods or services, violate anti-boycott laws and regulations, we may be subject to civil or criminal enforcement action and varying degrees of liability.

Data Privacy and Security Laws and Regulations

As a business with a significant global footprint, compliance with evolving regulations and standards in data privacy and cybersecurity has resulted, and may continue to result, in increased costs, new compliance challenges, and the threat of increased regulatory enforcement activity. Our business relies on the secure electronic transmission, storage and hosting of sensitive information, including personal information, protected health information, financial information, intellectual property and other sensitive information related to our customers and workforce.

For example, in the U.S., the collection, maintenance, protection, use, transmission, disclosure and disposal of certain personal information and the security of medical devices are regulated at the U.S. federal and state, international and industry levels.

U.S. federal and state laws protect the confidentiality of certain patient health information, including patient medical records, and restrict the use and disclosure of patient health information by healthcare providers. Privacy and Security Rules under the Health Insurance Portability and Accountability Act of 1996 (HIPAA), as amended, and the

Health Information Technology for Economic and Clinical Health Act of 2009 (HITECH), govern the use, disclosure, and security of protected health information by "Covered Entities," (which are healthcare providers that submit electronic claims, health plans, and healthcare clearinghouses) and by their "Business Associates" (which is anyone that performs a service on behalf of a Covered Entity involving the use or disclosure of protected health information and is not a member of the Covered Entity's workforce). Rules under HIPAA and HITECH include specific security standards and breach notification requirements. The U.S. Department of Health and Human Services (HHS) (through the Office of Civil Rights) has direct enforcement authority against Covered Entities and Business Associates with respect to both the Security and Privacy Rules, including civil and criminal liability. Except for certain of its operations in its Diabetes and care management services businesses, Medtronic is generally not a

Covered Entity. Medtronic also operates as a Business Associate to Covered Entities in several instances. There are comparable state laws governing the use and protection of personal health information by healthcare providers, and Medtronic may be subject to these laws in certain of its businesses.

In addition to the regulation of personal health information, a number of states have also adopted laws and regulations that may affect our privacy and data security practices for other kinds of personally identifiable information, such as state laws that govern the use, disclosure and protection of sensitive personal information, such as social security numbers, or that are designed to protect credit card account data. State consumer protection laws may also establish privacy and security standards for use and management of personally identifiable information, including information related to consumers.

Outside the U.S., we are impacted by the privacy and data security requirements at the international, federal and regional level, and on an industry specific basis. We serve customers in more than 150 countries. Legal requirements in these countries relating to the collection, storage, handling and transfer of personal data and potentially intellectual property continue to evolve with increasingly strict enforcement regimes. More privacy and security laws and regulations are being adopted, and more are being enforced, with potential for significant financial penalties. In the E.U., stringent data protection and privacy rules which substantially impact the use of patient data across the healthcare industry became effective in May 2018. The E.U. General Data Protection Regulation (GDPR) applies uniformly across the E.U. and includes, among other things, a requirement for prompt notice of data breaches to data subjects and supervisory authorities in certain circumstances and significant fines for non-compliance. The GDPR also requires companies based outside of the E.U. but processing personal data of individuals residing in the E.U. to comply with E.U. privacy and data protection rules.

Because the laws and regulations continue to expand, differ from jurisdiction to jurisdiction, and are subject to evolving (and at times inconsistent) governmental interpretation, compliance with these laws and regulations may require significant additional cost expenditures or changes in products or business that increase competition or reduce revenue. Noncompliance could result in the imposition of fines, penalties, or orders to stop noncompliant activities.

Regulations Governing Reimbursement

The delivery of our devices is subject to regulation by HHS and comparable state and non-U.S. agencies responsible for reimbursement and regulation of healthcare items and services. U.S. laws and regulations are imposed primarily in connection with federally funded healthcare programs, such as the Medicare and Medicaid programs, as well as the government's interest in regulating the quality and cost of healthcare. Other governments also impose regulations in connection with their healthcare reimbursement programs and the delivery of healthcare items and services.

U.S. federal healthcare laws apply when we or customers submit claims for items or services that are reimbursed under federally-funded healthcare programs, including laws related to kickbacks, false claims, self-referrals and healthcare fraud. There are often similar state false claims, anti-kickback, and anti-self-referral and insurance laws that apply to state Medicaid and other healthcare programs and private third-party payers. In some circumstances, insurance companies attempt to bring a private cause of action against a manufacturer for a pattern of causing false claims. In addition, as a manufacturer of U.S. FDA-approved devices reimbursable by federal healthcare programs, we are subject to the Physician Payments Sunshine Act, which requires us to annually report certain payments and other transfers of value we make to U.S.-licensed physicians or U.S. teaching hospitals. Any failure to comply with these laws and regulations could subject us or our officers and employees to criminal and civil financial penalties.

Implementation of legislative or regulatory reforms to reimbursement systems, or adverse decisions relating to our products by administrators of these systems in coverage or reimbursement, could significantly reduce reimbursement or result in the denial of coverage, which could have an impact on the acceptance of and demand for our products and the prices that our customers are willing to pay for them.

Environmental Health and Safety Laws

We are also subject to various environmental health and safety laws and regulations both within and outside the U.S. Like other companies in our industry, our manufacturing and other operations involve the use and transportation of substances regulated under environmental health and safety laws including those related to the transportation of hazardous materials.

Available Information

We maintain a website at www.medtronic.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (Exchange Act) are made available under the "About Medtronic - Investors" caption and "Financial Information - SEC Filings" subcaption of our website as soon as reasonably practicable after we electronically file them with, or furnish them to, the Securities and Exchange Commission (SEC).

Information relating to our corporate governance, including our Principles of Corporate Governance, Code of Conduct (including our Code of Ethics for Senior Financial Officers and any related amendments or waivers), Code of Business Conduct and Ethics for Members of the Board of Directors, and information concerning our executive officers, directors and Board committees (including committee charters) is available through our website at www.medtronic.com under the "About Medtronic - Corporate Governance" caption. Information relating to transactions in Medtronic securities by directors and officers is available through our website at www.medtronic.com under the "About Medtronic - Investors" caption and the "Financial Information - SEC Filings" subcaption.

Our website and the information contained on or connected to our website are not incorporated by reference into this Form 10-K.

The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers, including the Company, that file electronically with the SEC. The public may obtain any documents that we file with the SEC at http://www.sec.gov. We file annual reports, quarterly reports, proxy statements, and other documents with the SEC under the Exchange Act.

Item 1A. Risk Factors

Investing in our securities involves a variety of risks and uncertainties, known and unknown, including, among others, those discussed below. Each of the following risks should be carefully considered, together with all the other information included in this Annual Report on Form 10-K, including our consolidated financial statements and the related notes and in our other filings with the SEC. Furthermore, additional risks and uncertainty not presently known to us or that we currently believe to be immaterial may also adversely affect our business. Our business, results of operations, financial condition, and cash flow and prospects could be materially and adversely affected by any of these risks or uncertainties.

Business and Operational Risks

We operate in a highly competitive industry and we may be unable to compete effectively.

We compete in both the therapeutic and diagnostic medical markets in more than 150 countries throughout the world. These markets are characterized by rapid change resulting from technological advances and scientific discoveries. In the product lines in which we compete, we face a range of competitors from large companies with multiple business lines to small, specialized manufacturers that offer a limited selection of niche products. Development by other companies of new or improved products, processes, technologies, or the introduction of reprocessed products or generic versions when our proprietary products lose their patent protection may make our existing or planned products less competitive. In addition, we face competition from providers of alternative medical therapies, such as pharmaceutical companies.

We believe our ability to compete depends upon many factors both within and beyond our control, including:

- product performance and reliability,
- product technology and innovation,
- product quality and safety,
- breadth of product lines,
- product support services,
- customer support,
- cost-effectiveness and price,
- reimbursement approval from healthcare insurance providers, and
- changes to the regulatory environment.

Competition may increase as additional companies enter our markets or modify their existing products to compete directly with ours. In addition, academic institutions, governmental agencies and other public and private research organizations also may conduct research, seek patent protection and establish collaborative arrangements for discovery, research, clinical development and marketing of products similar to ours. These companies and institutions compete with us in recruiting and retaining qualified scientific and management personnel, as well as in acquiring necessary product technologies. From time to time we have lost, and may in the future lose, market share in connection with product problems, physician advisories, safety alerts and publications about our products, which highlights the importance of product quality, product efficacy and quality systems to our business. In the current

environment of managed care, consolidation among healthcare providers, increased competition, declining reimbursement rates, and national tender pricing, as recently experienced in China, competitively priced product offerings are essential to our success. Further, our continued growth and success depend on our ability to develop, acquire and market new and differentiated products, technologies and intellectual property, and as a result we also face competition for marketing, distribution, and collaborative development agreements, establishing relationships with academic and research institutions and licenses to intellectual property. In order to continue to compete effectively, we must continue to create, invest

in or acquire advanced technology, incorporate this technology into our proprietary products, obtain regulatory approvals in a timely manner, and manufacture and successfully market our products. Given these factors, we cannot guarantee that we will be able to compete effectively or continue our level of success.

The ongoing global COVID-19 pandemic has had, and may continue to have, an adverse effect on certain aspects of our business, results of operations, financial condition and cash flows. The nature and extent of future impacts are highly uncertain and unpredictable.

Our global operations and interactions with healthcare systems, providers and patients around the world expose us to risks associated with public health crises, including epidemics and pandemics such as COVID-19. In particular, the continuing preventative and precautionary measures that we and other businesses, communities, and governments have taken to mitigate the spread of the disease has led to restrictions on, disruptions in, and other related impacts on business and personal activities, including reduced customer demand for certain of our products and has resulted in many of our employees working remotely. We expect medical procedure rates to continue to vary by therapy and country, and could be impacted by regional COVID-19 case volumes, hospital and clinical occupancy and staffing levels, patient's willingness to schedule deferrable procedures, travel restrictions, transportation limitations, quarantine restrictions, vaccine immunization rates, and new COVID-19 variants. While COVID-19 case volumes appear to be decreasing in the U.S and certain other countries as a result of higher vaccination rates, the global COVID-19 outlook remains uncertain as vaccination rates remain low in much of the world.

Together with the preventative and precautionary measures being taken, as well as the corresponding need to adapt to new and improved methods of conducting business, such as increased remote monitoring, COVID-19 is having, and may continue to have, an adverse impact on certain aspects of our Company and business, including the demand for and supply of certain of our products, operations, supply chains and distribution systems, impacts or delays to product development milestones, clinical trials, or regulatory clearances and approval timing, and our ability to generate cash flow, and may have an adverse impact on our ability to access capital. Some of our products are more sensitive to reductions in deferrable and emergent medical procedures, and, as hospital systems prioritize treatment of COVID-19 patients and otherwise comply with government guidelines, certain medical procedures have been and may continue to be suspended or postponed. The Company has certain product lines that are in higher demand as a result of COVID-19 such as ventilators, pulse oximetry, capnography, advanced parameter monitoring, and extracorporeal life support products. It is not possible to predict the timing of deferrable medical procedures and, to the extent individuals and hospital systems de-prioritize, delay or cancel these procedures, or if unemployment or loss of insurance coverage adversely impacts an individual's ability to pay for our products and services, our business, results of operations, financial condition, and cash flows could continue to be negatively affected. Further, the COVID-19 pandemic has strained hospital systems around the world, resulting in adverse financial impacts to those systems that could result in reduced future expenditures for certain capital equipment and other products and services we provide, as well as potential disruption of product launches of our recently approved products.

A number of our global suppliers, vendors, and distributors have been adversely affected by the COVID-19 pandemic, including employee absenteeism. These impacts could impair our ability to move our products through distribution channels to end customers, and any such delay or shortage in the supply of components or materials may result in our inability to satisfy consumer demand for certain of our products in a timely manner or at all, which could harm our reputation, future sales and profitability.

COVID-19 has impacted and may further impact the global economy and capital markets, including by negatively impacting demand for a number of our products, access to capital markets (including the commercial paper market), foreign currency exchange rates, and interest rates, each of which may adversely impact our business and liquidity. We could experience loss of sales and profits due to delayed payments or insolvency of healthcare professionals, hospitals and other customers, suppliers and vendors facing liquidity issues. As a result, we may be compelled to take additional measures to preserve our cash flow.

COVID-19 could adversely impact our ability to retain key employees and the continued service and availability of skilled personnel necessary to run our complex productions and operations, including our executive officers and other key members of our management team.

While the impact of COVID-19 has had, and may continue to have, an adverse effect on our business, results of operations, financial condition and cash flows, the nature and extent of such impact is highly uncertain and unpredictable, as we cannot predict with confidence the duration of the pandemic.

Reduction or interruption in supply or other manufacturing difficulties may adversely affect our manufacturing operations and related product sales.

The manufacture of our products requires the timely delivery of a sufficient amount of quality components and materials and is highly exacting and complex, due in part to strict regulatory requirements. We manufacture the majority of our products and procure important third-party services, such as sterilization services, at numerous facilities worldwide. We purchase many of

the components, raw materials and services needed to manufacture these products from numerous suppliers in various countries. We seek to maintain continuity of supply by use of multiple options for sourcing where possible. We have generally been able to obtain adequate supplies of such raw materials, components and services. However, for reasons of quality assurance, cost effectiveness, or availability, certain components, raw materials and services needed to manufacture our products are obtained from a sole supplier. Although we work closely with our suppliers to try to ensure continuity of supply while maintaining high quality and reliability, the supply of these components, raw materials and services may be interrupted or insufficient. In addition, due to the stringent regulations and requirements of regulatory agencies, including the U.S. FDA, regarding the manufacture of our products, we may not be able to quickly establish additional or replacement sources. Additionally, many regulatory agencies are imposing regulatory requirements on safe use of chemicals and their potential impact on health and the environment which also may impact supply constraints. Furthermore, the prices of commodities and other materials used in our products, which are often volatile and outside of our control, could adversely impact our supply. We use resins, other petroleum-based materials and pulp as raw materials in some of our products, and the prices of oil and gas also significantly affect our costs for freight and utilities. A reduction or interruption in supply, and an inability to develop alternative sources for such supply, could adversely affect our ability to manufacture our products in a timely or cost-effective manner and could result in lost sales.

Other disruptions in the manufacturing process or product sales and fulfillment systems for any reason, including equipment malfunction, failure to follow specific protocols and procedures, supplier facility shut-downs, defective raw materials, natural disasters such as hurricanes, tornadoes or wildfires, property damage or facility closures from riots or public protests, and other environmental factors and the impact of epidemics or pandemics, such as the COVID-19 pandemic, and actions by businesses, communities and governments in response, could lead to launch delays, product shortage, unanticipated costs, lost revenues and damage to our reputation. For example, in the past we have experienced a global information technology systems interruption that affected our customer ordering, distribution, and manufacturing processes, and we have been adversely impacted by, and may continue to be adversely impacted by, the global COVID-19 pandemic and the responses of governments and of our partners, including suppliers, manufacturers, distributors and other businesses. Furthermore, any failure to identify and address manufacturing problems prior to the release of products to our customers could result in quality or safety issues.

In addition, many of our products require sterilization before sale and several of our key products are manufactured or sterilized at a particular facility, with limited alternate facilities. If an event occurs that results in damage to or closure of one or more of such facilities, such as the damage caused by Hurricane Maria in Puerto Rico in September 2017 or Illinois Environmental Protection Agency's decision to close a supplier's sterilization facility in February 2019, we may be unable to manufacture or sterilize the relevant products to the required quality specifications or at all. Because of the time required to approve and license a manufacturing or sterilization facility, a third-party may not be available on a timely basis to replace production capacity in the event manufacturing or sterilization capacity is lost.

Our research and development efforts rely upon investments and investment collaborations, and we cannot guarantee that any previous or future investments or investment collaborations will be successful.

Our mission is to provide a broad range of therapies to restore patients to fuller, healthier lives, which requires a wide variety of technologies, products and capabilities. The rapid pace of technological development in the medical industry and the specialized expertise required in different areas of medicine make it difficult for one company alone to develop a broad portfolio of technological solutions. In addition to internally generated growth through our research and development efforts, historically we have relied, and expect to continue to rely, upon investments and investment collaborations to provide us access to new technologies both in areas served by our existing businesses as well as in new areas.

We expect to make future investments where we believe that we can stimulate the development or acquisition of new technologies and products to further our strategic objectives and strengthen our existing businesses. Investments and investment collaborations in and with medical technology companies are inherently risky, and we cannot guarantee that any of our previous or future investments or investment collaborations will be successful or will not materially adversely affect our business, results of operations, financial condition and cash flows.

The continuing development of many of our products depends upon us maintaining strong relationships with healthcare professionals.

If we fail to maintain our working relationships with healthcare professionals, many of our products may not be developed and marketed in line with the needs and expectations of the professionals who use and support our products, which could cause a decline in our earnings and profitability. The research, development, marketing and sales of many of our new and improved products depends on our maintaining working relationships with healthcare professionals. We rely on these professionals to provide us with considerable knowledge and experience regarding the development, marketing and sale of our products. Physicians assist us as researchers, marketing and product consultants, inventors and public speakers. In addition, as a result of the COVID-19 pandemic, our access to these professionals has been limited at times, and travel restrictions, shutdowns and

similar measures have impacted our ability to maintain these relationships, thereby affecting our ability to develop, market and sell new and improved products. If we are unable to maintain strong relationships with these professionals, the development and marketing of our products could suffer, which could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

Our substantial leverage and debt service obligations could adversely affect our business.

At April 30, 2021, we had approximately $26.4 billion of debt, of which all is noncurrent except $11.0 million. We may also incur additional indebtedness in the future. Our substantial indebtedness could have adverse consequences, including:

- making it more difficult for us to satisfy our financial obligations,
- increasing our vulnerability to adverse economic, regulatory and industry conditions, and placing us at a disadvantage compared to our competitors that are less leveraged,
- limiting our ability to compete and our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate,
- limiting our ability to borrow additional funds for working capital, capital expenditures, acquisitions and general corporate or other purposes, and
- exposing us to greater interest rate risk since the interest rate on floating rate borrowings is variable.

Our debt service obligations require us to use a portion of our operating cash flow to pay interest and principal on indebtedness instead of for other corporate purposes, including funding future expansion of our business, acquisitions, and ongoing capital expenditures, which could impede our growth. If our operating cash flow and capital resources are insufficient to service our debt obligations, we may be forced to sell assets, seek additional equity or debt financing or restructure our debt, which could harm our long-term business prospects. Our failure to comply with the terms of our revolving credit facility and other indebtedness could result in an event of default which, if not cured or waived, could result in the acceleration of all of our debt.

Failure to integrate acquired businesses into our operations successfully, as well as liabilities or claims relating to such acquired businesses, could adversely affect our business.

As part of our strategy to develop and identify new products and technologies, we have made several significant acquisitions in recent years, and may make additional acquisitions in the future. Our integration of the operations of acquired businesses requires significant efforts, including the coordination of information technologies, research and development, sales and marketing, operations, manufacturing, and finance. These efforts result in additional expenses and involve significant amounts of management's time that cannot then be dedicated to other projects. Our failure to manage and coordinate the growth of acquired companies successfully could also have an adverse impact on our business. Further, acquired businesses may have liabilities, or be subject to claims, litigation or investigations that we did not anticipate or which exceed our estimates at the time of the acquisition. In addition, we cannot be certain that the businesses we acquire will become profitable or remain so. Factors that will affect the success of our acquisitions include:

- the presence or absence of adequate internal controls and/or significant fraud in the financial systems of acquired companies,
- our ability or inability to integrate information technology systems of acquired companies in a secure and reliable manner,
- liabilities, claims, litigation, investigations, or other adverse developments relating to acquired businesses or the business practices of acquired companies, including investigations by governmental entities, potential FCPA or product liability claims or other unanticipated liabilities,
- any decrease in customer loyalty and product orders caused by dissatisfaction with the combined companies' product lines and sales and marketing practices, including price increases,
- our ability to retain key employees, and
- the ability to achieve synergies among acquired companies, such as increasing sales of the integrated company's products, achieving cost savings, and effectively combining technologies to develop new products.

We also could experience negative effects on our business, results of operations, financial condition, and cash flows from acquisition-related charges, amortization of intangible assets and asset impairment charges. These effects,

individually or in the aggregate, could cause a deterioration of our credit rating and result in increased borrowing costs and interest expense.

Legal and Regulatory Risks

Climate change, or legal, regulatory or market measures to address climate change may materially adversely affect our financial condition and business operations.

Climate change resulting from increased concentrations of carbon dioxide and other greenhouse gases in the atmosphere could present risks to our future operations from natural disasters and extreme weather conditions, such as hurricanes, tornadoes, earthquakes, wildfires or flooding. Such extreme weather conditions could pose physical risks to our facilities and disrupt operation of our supply chain and may impact operational costs. The impacts of climate change on global water resources may result in water scarcity, which could in the future impact our ability to access sufficient quantities of water in certain locations and result in increased costs. Concern over climate change could result in new legal or regulatory requirements designed to mitigate the effects of climate change on the environment. If such laws or regulations are more stringent than current legal or regulatory requirements, we may experience increased compliance burdens and costs to meet the regulatory obligations and may adversely affect raw material sourcing, manufacturing operations and the distribution of our products.

We are subject to extensive and complex laws and governmental regulations and any adverse regulatory action may materially adversely affect our financial condition and business operations.

Our medical devices and technologies, as well as our business activities, are subject to a complex set of regulations and rigorous enforcement, including by the U.S. FDA, U.S. Department of Justice, Health and Human Services-Office of the Inspector General, and numerous other federal, state, and non-U.S. governmental authorities. To varying degrees, each of these agencies requires us to comply with laws and regulations governing the development, testing, manufacturing, labeling, marketing and distribution of our products. As a part of the regulatory process of obtaining marketing clearance for new products and new indications for existing products, we conduct and participate in numerous clinical trials with a variety of study designs, patient populations, and trial endpoints. Unfavorable clinical data from existing or future clinical trials may adversely impact our ability to obtain product approvals, our position in, and share of, the markets in which we participate, and our business, results of operations, financial condition, and cash flows. We cannot guarantee that we will be able to obtain or maintain marketing clearance for our new products or enhancements or modifications to existing products, and the failure to maintain approvals or obtain approval or clearance could have a material adverse effect on our business, results of operations, financial condition and cash flows. Even if we are able to obtain approval or clearance, it may:

- take a significant amount of time,
- require the expenditure of substantial resources,
- involve stringent clinical and pre-clinical testing, as well as increased post-market surveillance,
- involve modifications, repairs or replacements of our products, and
- limit the proposed uses of our products.

Both before and after a product is commercially released, we have ongoing responsibilities under the U.S. FDA and other applicable non-U.S. government agency regulations. For instance, many of our facilities and procedures and those of our suppliers are also subject to periodic inspections by the U.S. FDA to determine compliance with applicable regulations. The results of these inspections can include inspectional observations on the U.S. FDA's Form-483, warning letters, or other forms of enforcement. If the U.S. FDA were to conclude that we are not in compliance with applicable laws or regulations, or that any of our medical products are ineffective or pose an unreasonable health risk, the U.S. FDA could ban such medical products, detain or seize adulterated or misbranded medical products, order a recall, repair, replacement, or refund of such products, refuse to grant pending pre-market approval applications or require certificates of non-U.S governments for exports, and/or require us to notify health professionals and others that the devices present unreasonable risks of substantial harm to the public health. The U.S. FDA and other non-U.S. government agencies may also assess civil or criminal penalties against us, our officers or employees and impose operating restrictions on a company-wide basis. The U.S. FDA may also recommend prosecution to the U.S. Department of Justice. Any adverse regulatory action, depending on its magnitude, may restrict us from effectively marketing and selling our products and limit our ability to obtain future pre-market clearances or approvals, and could result in a substantial modification to our business practices and operations. Furthermore, we occasionally receive subpoenas or other requests for information from state and federal governmental agencies, and while these investigations typically relate primarily to financial arrangements with healthcare providers, regulatory compliance and product promotional practices, we cannot predict the timing, outcome or impact of any such investigations. Any adverse outcome in one or more of these investigations could

include the commencement of civil and/or criminal proceedings, substantial fines, penalties, and/or administrative remedies, including exclusion from government reimbursement programs and/or entry into Corporate Integrity Agreements (CIAs) with governmental agencies. In addition, resolution of any of these matters could involve the imposition of additional, costly compliance obligations. These potential consequences, as well as any adverse outcome from government investigations, could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

In addition, the U.S. FDA has taken the position that device manufacturers are prohibited from promoting their products other than for the uses and indications set forth in the approved product labeling, and any failure to comply could subject us to significant civil or criminal exposure, administrative obligations and costs, and/or other potential penalties from, and/or agreements with, the federal government.

Governmental regulations outside the U.S. have, and may continue to, become increasingly stringent and common. In the European Union, for example, a new Medical Device Regulation which became effective in May 2021, includes significant additional premarket and post-market requirements. Penalties for regulatory non-compliance could be severe, including fines and revocation or suspension of a company's business license, mandatory price reductions and criminal sanctions. Future laws and regulations may have a material adverse effect on us.

Our failure to comply with laws and regulations relating to reimbursement of healthcare goods and services may subject us to penalties and adversely impact our reputation, business, results of operations, financial condition and cash flows.

Our devices, products and therapies are purchased principally by hospitals or physicians that typically bill various third-party payers, such as governmental healthcare programs (e.g., Medicare, Medicaid and comparable non-U.S. programs), private insurance plans and managed care plans, for the healthcare services provided to their patients. The ability of our customers to obtain appropriate reimbursement for products and services from third-party payers is critical because it affects which products customers purchase and the prices they are willing to pay. As a result, our devices, products and therapies are subject to regulation regarding quality and cost by HHS, including the Centers for Medicare & Medicaid Services (CMS), as well as comparable state and non-U.S. agencies responsible for reimbursement and regulation of health are goods and services, including laws and regulations related to kickbacks, false claims, self-referrals and healthcare fraud. Many states have similar laws that apply to reimbursement by state Medicaid and other funded programs as well as in some cases to all payers. In certain circumstances, insurance companies attempt to bring a private cause of action against a manufacturer for causing false claims. In addition, as a manufacturer of U.S. FDA-approved devices reimbursable by federal healthcare programs, we are subject to the Physician Payments Sunshine Act, which requires us to annually report certain payments and other transfers of value we make to U.S.-licensed physicians or U.S. teaching hospitals. Any failure to comply with these laws and regulations could subject us or our officers and employees to criminal and civil financial penalties.

We are also subject to risks relating to changes in government and private medical reimbursement programs and policies, and changes in legal regulatory requirements in the U.S. and around the world. Implementation of further legislative or administrative reforms to these reimbursement systems, or adverse decisions relating to coverage of or reimbursement for our products by administrators of these systems, could have an impact on the acceptance of and demand for our products and the prices that our customers are willing to pay for them.

We are substantially dependent on patent and other proprietary rights and failing to protect such rights or to be successful in litigation related to our rights or the rights of others may result in our payment of significant monetary damages and/or royalty payments, negatively impacting our ability to sell current or future products.

We are substantially dependent on patent and other proprietary rights and rely on a combination of patents, trademarks, tradenames, copyrights, trade secrets, and agreements (such as employee, non-disclosure and non-competition agreements) to protect our business and proprietary intellectual property. We also operate in an industry characterized by extensive patent litigation. Patent litigation can result in significant damage awards and injunctions that could prevent our manufacture and sale of affected products or require us to pay significant royalties in order to continue to manufacture or sell affected products. At any given time, we are generally involved as both a plaintiff and a defendant in a number of patent infringement actions, the outcomes of which may not be known for prolonged periods of time. While it is not possible to predict the outcome of patent litigation, it is possible that the results of such litigation could require us to pay significant monetary damages and/or royalty payments, negatively impact our ability to sell current or future products, or that enforcement actions to protect our patent and proprietary rights against others could be unsuccessful, any of which could have a material adverse impact on our business, results of operations, financial condition, and cash flows.

While we intend to defend against any threats to our intellectual property, our patents, trademarks, tradenames, copyrights, trade secrets or agreements (such as employee, non-disclosure and non-competition agreements) may not adequately protect our intellectual property. Further, pending patent applications may not result in patents being issued to us, patents issued to or licensed by us may be challenged or circumvented by competitors and such patents

may be found invalid, unenforceable or too limited in scope to protect our technology or provide us with any competitive advantage. Third parties could obtain patents that may require us to negotiate licenses to conduct our business, and such licenses may not be available on reasonable terms or at all. We also rely on non-disclosure and non-competition agreements with certain employees, consultants and other parties to protect, in part, trade secrets and other proprietary rights. We cannot be certain that these agreements will not be breached, that we will have adequate remedies for any breach, that others will not independently develop substantially equivalent proprietary information, or that third parties will not otherwise gain access to our trade secrets or proprietary knowledge.

In addition, the laws of certain countries in which we market or manufacture some of our products do not protect our intellectual property rights to the same extent as the laws of the U.S., which could make it easier for competitors to capture market position. Competitors also may harm our sales by designing products that substantially mirror the capabilities of our products or technology without infringing our intellectual property rights. If we are unable to protect our intellectual property in these countries, it could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

Quality problems and product liability claims could lead to recalls or safety alerts, reputational harm, adverse verdicts or costly settlements, and could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Quality is extremely important to us and our customers due to the impact on patients, and the serious and potentially costly consequences of product failure. Our business exposes us to potential product liability risks that are inherent in the design, manufacture, and marketing of medical devices. In addition, many of our products are often used in intensive care settings with seriously ill patients and some of the medical devices we manufacture and sell are designed to be implanted in the human body for long periods of time or indefinitely. Component failures, manufacturing nonconformances, design defects, off-label use, or inadequate disclosure of product-related risks or product-related information with respect to our products, if they were to occur, could result in an unsafe condition or injury to, or death of, a patient. These problems could lead to recall of, or issuance of a safety alert relating to, our products, and could result in product liability claims and lawsuits, including class actions, which could ultimately result, in certain cases, in the removal from the body of such products and claims regarding costs associated therewith. Due to the strong name recognition of the Medtronic and Covidien brands, a material adverse event involving one of our products could result in reduced market acceptance and demand for all products within that brand, and could harm our reputation and ability to market products in the future. Further, we may be exposed to additional potential product liability risks related to products designed, manufactured and/or marketed in response to the COVID-19 pandemic, and unpredictable or accelerated changes in demand for certain of our products in connection with COVID-19 and its related impacts could impact development and production of products and services and could increase the risk of regulatory enforcement actions, product defects or related claims, as well as adversely impact our customer relationships and reputation.

Strong product quality is critical to the success of our goods and services. If we fall short of these standards and our products are the subject of recalls or safety alerts, our reputation could be damaged, we could lose customers and our revenue and results of operations could decline. Our success also can depend on our ability to manufacture to exact specification precision-engineered components, subassemblies and finished devices from multiple materials. If our components fail to meet these standards or fail to adapt to evolving standards, our reputation, competitive advantage and market share could be harmed. In certain situations, we may undertake a voluntary recall of products or temporarily shut down production lines based on performance relative to our own internal safety and quality monitoring and testing data.

Any of the foregoing problems, including future product liability claims or recalls, regardless of their ultimate outcome, could harm our reputation and have a material adverse effect on our business, results of operations, financial condition and cash flows.

Healthcare policy changes may have a material adverse effect on us.

In response to perceived increases in healthcare costs in recent years, there have been and continue to be proposals by several governments, regulators and third-party payers globally, including the U.S. federal and state governments, to control these costs and, more generally, to reform healthcare systems. Certain of these proposals could, among other things, limit the prices we are able to charge for our products or the amounts of reimbursement available for our products and could limit the acceptance and availability of our products. The adoption of some or all of these proposals could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Our insurance program may not be adequate to cover future losses.

We have elected to self-insure most of our insurable risks across the Company, and we made this decision based on cost and availability factors in the insurance marketplace. We manage and maintain a portion of our self-insured program through a wholly-owned captive insurance company. We continue to maintain a directors and officers liability insurance policy with third-party insurers that provides coverage for the directors and officers of the

Company. We continue to monitor the insurance marketplace to evaluate the value of obtaining insurance coverage for other categories of losses in the future. Although we believe, based on historical loss trends, that our self-insurance program accruals and our existing insurance coverage will be adequate to cover future losses, historical trends may not be indicative of future losses. The absence of third-party insurance coverage for other categories of losses increases our exposure to unanticipated claims and these losses could have a material adverse impact on our business, results of operations, financial condition and cash flows.

The failure to comply with anti-corruption laws could materially adversely affect our business and result in civil and/or criminal sanctions.

The U.S. Foreign Corrupt Practices Act (FCPA), the Irish Criminal Justice (Corruption Offences) Act 2018, and similar anti-corruption laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to government officials for the purpose of obtaining or retaining business. Because of the predominance of government-administered healthcare systems in many jurisdictions around the world, many of our customer relationships outside of the U.S. are with governmental entities and are therefore potentially subject to such laws. We also participate in public-private partnerships and other commercial and policy arrangements with governments around the globe.

Global enforcement of anti-corruption laws has increased in recent years, including investigations and enforcement proceedings leading to assessment of significant fines and penalties against companies and individuals. Our international operations create a risk of unauthorized payments or offers of payments by one of our employees, consultants, sales agents, or distributors. We maintain policies and programs to implement safeguards to educate our employees and agents on these legal requirements, and to prevent and prohibit improper practices. However, existing safeguards and any future improvements may not always be effective, and our employees, consultants, sales agents or distributors may engage in conduct for which we could be held responsible. In addition, regulators could seek to hold us liable for conduct committed by companies in which we invest or that we acquire. Any alleged or actual violations of these regulations may subject us to government scrutiny, criminal or civil sanctions and other liabilities, including exclusion from government contracting, and could disrupt our business, adversely affect our reputation and result in a material adverse effect on our business, results of operations, financial condition and cash flows.

Laws and regulations governing international business operations could adversely impact our business.

The U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC), and the Bureau of Industry and Security at the U.S. Department of Commerce (BIS), administer certain laws and regulations that restrict U.S. persons and, in some instances, non-U.S. persons, in conducting activities, transacting business with or making investments in certain countries, governments, entities and individuals subject to U.S. economic sanctions. Our international operations subject us to these laws and regulations, which are complex, restrict our business dealings with certain countries, governments, entities, and individuals, and are constantly changing. Further restrictions may be enacted, amended, enforced or interpreted in a manner that materially impacts our operations.

From time to time, certain of our subsidiaries have limited business dealings in countries subject to comprehensive sanctions, including Iran, Sudan, Syria, Cuba and the region of Crimea. Certain of our subsidiaries sell medical devices, and may provide related services, to distributors and other purchasing bodies in such countries. These business dealings represent an insignificant amount of our consolidated revenues and income, but expose us to a heightened risk of violating applicable sanctions regulations. Violations of these regulations are punishable by civil penalties, including fines, denial of export privileges, injunctions, asset seizures, debarment from government contracts and revocations or restrictions of licenses, as well as criminal fines and imprisonment. We have established policies and procedures designed to assist with our compliance with such laws and regulations. However, there can be no assurance that our policies and procedures will prevent us from violating these regulations in every transaction in which we may engage, and such a violation could adversely affect our reputation, business, results of operations, financial condition, and cash flows.

We are subject to environmental laws and regulations and the risk of environmental liabilities, violations and litigation.

We are subject to numerous U.S. federal, state, local and non-U.S. environmental, health and safety laws and regulations concerning, among other things, the health and safety of our employees, the generation, storage, use and transportation of hazardous materials, emissions or discharges of substances into the environment, investigation and remediation of hazardous substances or materials at various sites, chemical constituents in medical products and end-of-life disposal and take-back programs for medical devices. Our operations and those of certain third-party suppliers involve the use of substances subject to these laws and regulations, primarily those used in manufacturing and sterilization processes. If we or our suppliers violate these environmental laws and regulations, facilities could be shut down and violators could be fined, criminally charged or otherwise sanctioned. Furthermore, environmental laws outside of the U.S. are becoming more stringent, resulting in increased costs and compliance burdens.

In addition, certain environmental laws assess liability on current or previous owners or operators of real property for the costs of investigation, removal or remediation of hazardous substances or materials at their properties or at properties which they have disposed of hazardous substances. In addition to cleanup actions brought by governmental authorities, private parties could bring personal injury or other claims due to the presence of, or exposure to, hazardous substances. The ultimate cost of site cleanup and timing of future cash outflows is difficult to predict, given the uncertainties regarding the extent of the required cleanup, the interpretation of applicable laws and regulations, and alternative cleanup methods.

The costs of complying with current or future environmental protection and health and safety laws and regulations, or liabilities arising from past or future releases of, or exposures to, hazardous substances, may exceed our estimates, or have a material adverse effect on our business, results of operations, financial condition, and cash flows.

We rely on the proper function, security and availability of our information technology systems and data, as well as those of third parties throughout our global supply chain, to operate our business, and a breach, cyber-attack or other disruption to these systems or data could materially and adversely affect our business, results of operations, financial condition, cash flows, reputation or competitive position.

We are increasingly dependent on sophisticated information technology systems to operate our business. That technology includes systems that could be used to process, transmit and store sensitive data. Additionally, many of our products and services include integrated software and information technology that collects data regarding patients or connects to other internal systems. Like all organizations, we routinely experience attempted interference with the integrity of, and interruptions in, our technology systems via events such as cyber-attacks, malicious intrusions, or other breakdowns. The consequences could mean data breaches, interference with the integrity of our products and data, or other significant disruptions. Furthermore, we rely on third-party vendors to supply and/or support certain aspects of our information technology systems and resulting products. As we have seen with recent "Supply Chain Attacks," these third-party systems could also become vulnerable to cyber-attack, malicious intrusions, breakdowns, interference or other significant disruptions, and may contain defects in design or manufacture or other problems that could result in system disruption or compromise the information security of our own systems. Lastly, we continue to grow in part through new business acquisitions and, as a result, may face risks associated with defects and vulnerabilities in their systems, or difficulties or other breakdowns or disruptions in connection with the integration of the acquisitions into our information technology systems.

Our worldwide operations mean that we are subject to laws and regulations, including data protection and cybersecurity laws and regulations, in many jurisdictions. The variety of U.S. and international privacy and cybersecurity laws and regulations impacting our operations are described in "Item 1. Business" – *Other Factors Impacting Our Operations – Data Privacy and Security Laws and Regulations*. For example, GDPR prefers that we manage personal data in the E.U. and may impose fines of up to four percent of our global revenue in the event of certain violations. Furthermore, there has been a developing trend of civil lawsuits and class actions relating to breaches of consumer data held by large companies or incidents arising from other cyber-attacks. Any data security breaches, cyber-attacks, malicious intrusions or significant disruptions could result in actions by regulatory bodies and/or civil litigation, any of which could materially and adversely affect our business, results of operations, financial condition, cash flows, reputation or competitive position.

In addition, our information technology systems require an ongoing commitment of significant resources to maintain, protect, and enhance existing systems and develop new systems. This enables us to keep pace with continuing changes in information processing technology, evolving legal and regulatory standards, the increasing need to protect patient and customer information, changes in the techniques used to obtain unauthorized access to data and information systems, and the information technology needs associated with our changing products and services. There can be no assurance that our extensive efforts (including, but not limited to, consolidating, protecting, upgrading and expanding our systems and capabilities, continuing to build security into the design of our products, and developing new systems to keep pace with continuing changes in information processing technology) will be successful or that additional systems issues will not arise in the future. Further, the COVID-19 pandemic and related government actions continues to mandate that our employees work remotely, which could expose us to greater risks related to cybersecurity and our information technologies systems.

If our information technology systems, products or services or sensitive data are compromised, there are many consequences that could result. Consequences include, but are not limited to patients or employees could be exposed to financial or medical identity theft or suffer a loss of product functionality, losing existing customers or have difficulty attracting new customers, experiencing difficulty preventing, detecting, and controlling fraud, be exposed to the loss or misuse of confidential information, have disputes with customers, physicians, and other healthcare professionals, suffer regulatory sanctions or penalties under federal laws, state laws, or the laws of other jurisdictions, experience increases in operating expenses or an impairment in our ability to conduct our operations, incur expenses or lose revenues as a result of a data privacy breach, product failure, information technology outages or disruptions, or suffer other adverse consequences including lawsuits or other legal action and damage to our reputation.

Changes in tax laws or exposure to additional income tax liabilities could have a material impact on our business, results of operations, financial condition and cash flows.

We are subject to income taxes, as well as non-income based taxes, in the U.S., Ireland, and various other jurisdictions in which we operate. The tax laws in the U.S., Ireland and other countries in which we and our affiliates do business could change on a prospective or retroactive basis, and any such changes could materially adversely affect our business and our effective tax rate. For example, on December 22, 2017, the U.S. enacted comprehensive tax legislation, commonly referred to as the Tax Cuts and

Jobs Act (the "Tax Act"), which resulted in a significant charge to tax expense during our fiscal year 2018 associated with U.S. taxation of accumulated foreign earnings as well as the requirement to revalue U.S. deferred tax assets and liabilities resulting from the reduction in the U.S. corporate tax rate. While the U.S. Treasury has issued a significant amount of guidance to date on the interpretation of the Tax Act, there remains regulations that have not yet been issued in final form. In addition, the Biden Administration has provided a framework for proposed U.S. tax law changes, which if enacted could have a material impact on our business, results of operations, financial condition, and cash flows.

In 2015, the Organization for Economic Cooperation and Development (OECD) published an action plan called Base Erosion and Profit Shifting (BEPS) with the purpose of tackling perceived tax abuses, inconsistency between taxing authorities, and their respective approach to international tax matters. Thereafter, many taxing authorities have adopted the BEPS guidelines into their local laws. In addition, the European Union (EU) expanded upon these guidelines with their Anti-Tax Avoidance Directive (ATAD 1 & 2) to be applied by all member states by 2020. In 2018, the OECD announced its intention to expand the scope of BEPS (BEPS 2.0) to provide a long-term solution to taxing right challenges arising from the global digital economy. The OECD expects to release the final agreed BEPS 2.0 guidelines in the summer of 2021. Jurisdictions would then need to enact legislation to adopt the guidelines into law. The proposals, as currently drafted, are categorized into two groups (commonly referred to as Pillars). Pillar One is focused on providing a mechanism for taxing rights more closely with market engagement; generally where people or consumers are located. Pillar Two is focused on establishing a global minimum tax and would apply when a country's income tax rate is below a still-to-be determined, minimum tax rate. These proposals are wide ranging and could affect all multinational enterprises across all industries without regard to their level of engagement with the digital economy. The aggressive nature of the timeline set by the OECD may mean that all implications for business may not have been fully worked through or fully understood by the OECD before final guidelines are issued. We continue to monitor the implications potentially resulting from this guidance. This action together with other legislative changes in many countries on the mandatory sharing of company information (financial and operational) with taxing authorities on a local and global basis under various information sharing initiatives, could lead to disagreements between jurisdictions associated with the proper allocation of profits between such jurisdictions.

We are subject to ongoing tax audits in the various jurisdictions in which we operate. Tax authorities may disagree with certain positions we have taken and assess additional taxes. We regularly assess the likely outcomes of these audits in order to determine the appropriateness of our tax provision. However, there can be no assurance that we will accurately predict the outcomes of these audits, and the actual outcomes of these audits could have a material impact on our business, results of operations, financial condition, and cash flows.

We have recorded reserves for potential payments of tax to various tax authorities related to uncertain tax positions. However, the calculation of such tax liabilities involves the application of complex tax laws, regulations and treaties (where applicable) in many jurisdictions. Therefore, any dispute with a tax authority may result in a payment that is significantly different from current estimates. If payment of these amounts ultimately proves to be less than the recorded amounts, the reversal of the liabilities generally would result in tax benefits being recognized in the period when we determine the liabilities are no longer necessary. If our estimate of tax liabilities proves to be less than the amount for which it is ultimately liable, we would incur additional charges, and such charges could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

The Medtronic, Inc. tax court proceeding outcome could have a material adverse impact on our financial condition.

In March 2009, the IRS issued its audit report for Medtronic Inc. for fiscal years 2005 and 2006. Medtronic, Inc. reached agreements 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 our key manufacturing sites. An adverse outcome in this matter could materially and adversely affect our business, results of operations, financial condition, and cash flows. See Note 18 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Future potential changes to the U.S. tax laws could result in us being treated as a U.S. corporation for U.S. federal tax purposes, and the IRS may not agree with the conclusion that we should be treated as a foreign corporation for U.S federal income tax purposes.

Because Medtronic plc is organized under the laws of Ireland, we would generally be classified as a foreign corporation under the general rule that a corporation is considered tax resident in the jurisdiction of its organization or incorporation for U.S. federal income tax purposes. Even so, the IRS may assert that we should be treated as a U.S. corporation (and, therefore, a U.S. tax resident) for U.S. federal income tax purposes pursuant to Section 7874 of the U.S. Internal Revenue Code of 1986, as amended (the Code). In addition, a retroactive change to U.S. tax laws in this area could change this classification. If we were to be treated as a U.S. corporation for federal tax purposes, we could be subject to substantially greater U.S. tax liability than currently contemplated as a non-U.S. corporation.

Legislative or other governmental action relating to the denial of U.S. federal or state governmental contracts to U.S. companies that redomicile abroad could adversely affect our business.

Various U.S. federal and state legislative proposals that would deny governmental contracts to U.S. companies that move their corporate location abroad may affect us. We are unable to predict the likelihood that, or final form in which, any such proposed legislation might become law, the nature of the regulations that may be promulgated under any future legislative enactments, or the effect such enactments and increased regulatory scrutiny may have on our business.

Risks Relating to Our Jurisdiction of Incorporation

We are incorporated in Ireland, and Irish law differs from the laws in effect in the U.S. and may afford less protection to holders of our securities.

Our shareholders may have more difficulty protecting their interests than would shareholders of a corporation incorporated in a jurisdiction of the United States. It may not be possible to enforce court judgments obtained in the U.S. against us in Ireland based on the civil liability provisions of the U.S. federal or state securities laws. In addition, there is some uncertainty as to whether the courts of Ireland would recognize or enforce judgments of U.S. courts obtained against us or our directors or officers based on the civil liabilities provisions of the U.S. federal or state securities laws or hear actions against us or those persons based on those laws. We have been advised that the U.S. currently does not have a treaty with Ireland providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters. Therefore, a final judgment for the payment of money rendered by any U.S. federal or state court based on civil liability, whether or not based solely on U.S. federal or state securities laws, would not automatically be enforceable in Ireland.

As an Irish company, we are governed by the Irish Companies Act 2014, which differs in some material respects from laws generally applicable to U.S. corporations and shareholders, including, among others, differences relating to interested director and officer transactions and shareholder lawsuits. Likewise, the duties of directors and officers of an Irish company generally are owed to the company only. Shareholders of Irish companies generally do not have a personal right of action against directors or officers of the company and may exercise such rights of action on behalf of the company only in limited circumstances. Accordingly, holders of our securities may have more difficulty protecting their interests than would holders of securities of a corporation incorporated in the U.S.

As an Irish public limited company, certain capital structure decisions require shareholder approval, which may limit Medtronic's flexibility to manage its capital structure.

Under Irish law, our authorized share capital can be increased by an ordinary resolution of our shareholders and the directors may issue new ordinary or preferred shares, without shareholder approval, once authorized to do so by our articles of association or by an ordinary resolution of our shareholders. Additionally, subject to specified exceptions, Irish law grants statutory preemption rights to existing shareholders where shares are being issued for cash consideration but allows shareholders to disapply such statutory preemption rights either in our articles of association or by way of special resolution. Such disapplication can either be generally applicable or be in respect of a particular allotment of shares. Accordingly, at our 2020 Annual General Meeting, our Shareholders authorized our Board of Directors to issue up to 33% of our issued ordinary shares and further authorized our Board of Directors to issue up to 10% of such shares for cash without first offering them to our existing shareholders (provided that with respect to 5% of such shares, such allotment is to be used for the purposes of a specified capital investment). Both of these authorizations will expire on June 11, 2022, unless renewed by shareholders for a further period. We anticipate seeking new authorizations at our 2021 Annual General Meeting and in subsequent years. We cannot provide any assurance that these authorizations will always be approved, which could limit our ability to issue equity and thereby adversely affect the holders of our securities.

A transfer of our shares, other than ones effected by means of the transfer of book-entry interests in the Depository Trust Company, may be subject to Irish stamp duty.

Transfers of our shares effected by means of the transfer of book entry interests in the Depository Trust Company (DTC) will not be subject to Irish stamp duty. However, if a shareholder holds our shares directly rather than beneficially through DTC, any transfer of shares could be subject to Irish stamp duty (currently at the rate of 1% of the higher of the price paid or the market value of the shares acquired). Payment of Irish stamp duty is generally a legal obligation of the transferee. The potential for stamp duty could adversely affect the price of shares.

In certain limited circumstances, dividends we pay may be subject to Irish dividend withholding tax and dividends received by Irish residents and certain other shareholders may be subject to Irish income tax.

In certain limited circumstances, dividend withholding tax (currently at a rate of 25%) may arise in respect of dividends paid on our shares. A number of exemptions from dividend withholding tax exist such that shareholders resident in the U.S. and other specified countries that have a tax treaty with Ireland may be entitled to exemptions from dividend withholding tax.

Shareholders resident in the U.S. that hold their shares through DTC will not be subject to dividend withholding tax, provided the addresses of the beneficial owners of such shares in the records of the brokers holding such shares are recorded as being in the U.S. (and such brokers have further transmitted the relevant information to a qualifying intermediary appointed by us). However, other shareholders may be subject to dividend withholding tax, which could adversely affect the price of their shares.

Shareholders entitled to an exemption from Irish dividend withholding tax on dividends received from us will not be subject to Irish income tax in respect of those dividends unless they have some connection with Ireland other than their shareholding in our Company (for example, they are resident in Ireland). Shareholders who receive dividends subject to Irish dividend withholding tax generally have no further liability to Irish income tax on those dividends.

Our shares received by means of a gift or inheritance could be subject to Irish capital acquisitions tax.

Irish capital acquisitions tax (CAT) could apply to a gift or inheritance of our shares irrespective of the place of residence, ordinary residence or domicile of the parties. This is because our shares will be regarded as property situated in Ireland. The person who receives the gift or inheritance has primary liability for CAT. Gifts and inheritances passing between spouses are exempt from CAT. Children have a tax-free threshold of €335,000 in respect of taxable gifts or inheritances received from their parents. Irish Revenue typically updates the amount of this tax-free threshold on an annual basis.

Economic and Industry Risks

If we experience decreasing prices for our goods and services and we are unable to reduce our expenses, there may be a material adverse effect on our business, results of operations, financial condition and cash flows.

We have experienced, and may continue to experience, decreasing prices for certain of our goods and services due to pricing pressure from managed care organizations and other third-party payers on our customers, increased market power of our customers as the medical device industry consolidates and increased competition among medical engineering and manufacturing services providers. If the prices for our goods and services decrease and we are unable to reduce our expenses, our business, results of operations, financial condition and cash flows will be adversely affected.

We are subject to a variety of risks associated with global operations that could adversely affect our profitability and operating results.

We develop, manufacture, distribute and sell our products globally. We intend to continue to expand our operations and to pursue growth opportunities outside the U.S., especially in emerging markets. Operations in different countries including emerging markets could expose us to additional and greater risks and potential costs, including:

- fluctuations in currency exchange rates,
- healthcare reform legislation,
- the need to comply with different regulatory regimes worldwide that are subject to change and that could restrict our ability to manufacture and sell our products,
- local product preferences and product requirements,
- longer-term receivables than are typical in the U.S.,
- trade protection measures, tariffs and other border taxes, and import or export licensing requirements,
- less intellectual property protection in some countries outside the U.S. than exists in the U.S.,
- different labor regulations and workforce instability,
- political and economic instability,
- the expiration and non-renewal of foreign tax rulings and/or grants,
- potentially negative consequences from changes in or interpretations of tax laws, and
- economic instability and inflation, recession or interest rate fluctuations.

The ongoing global economic competition and trade tensions between the U.S. and China present risk to Medtronic. Although we have been able to mitigate some of the impact on Medtronic from increased duties imposed by both sides (through petitioning both governments for tariff exclusions and other mitigations), the risk remains of additional tariffs and other kinds of restrictions. Tariff exclusions awarded to Medtronic by the U.S. Government require annual renewal, and policies for granting exclusions could shift. The U.S. and China could impose other types of restrictions such as limitations on government

procurement or technology export restrictions, which could affect Medtronic's access to the markets. China comprises approximately eight percent of our total revenues.

More generally, several governments including the U.S. have raised the possibility of policies to induce "re-shoring" of supply chains, less reliance on imported supplies, and greater national production. Examples include potential "Buy America" requirements in the U.S. or U.S. withdrawal from the World Trade Organization Agreement on Government Procurement (GPA). If such steps triggered retaliation in other markets restricting access to foreign products in purchases by their government-owned healthcare systems, the result could be a significant impact on Medtronic.

Other significant changes or disruptions to international trade arrangements, such as termination or modifications of other existing trade agreements or the final implementation of the "Brexit" agreement between the United Kingdom and European Union, may adversely affect our business, results of operations, financial condition and cash flows.

In addition, a significant amount of our trade receivables are with national healthcare systems in many countries. Repayment of these receivables is dependent upon the political and financial stability of those countries. In light of these global economic fluctuations, we continue to monitor the creditworthiness of customers. Failure to receive payment of all or a significant portion of these receivables could adversely affect our business, results of operations, financial condition and cash flows.

In addition, COVID-19, and the responses of business and governments to the pandemic, have at times resulted in reduced availability of air transport, port closures, increased border controls or closures, increased transportation costs and increased security threats to our supply chain, and countries may continue to close borders, impose prolonged quarantines, and further restrict travel and other activities. Our business could be adversely impacted if we are unable to successfully manage these and other risks of global operations.

Finally, changes in currency exchange rates may impact the reported value of our revenues, expenses, and cash flows. We cannot predict changes in currency exchange rates, the impact of exchange rate changes, nor the degree to which we will be able to manage the impact of currency exchange rate changes.

Consolidation in the healthcare industry could have an adverse effect on our revenues and results of operations.

Many healthcare industry companies, including healthcare systems, distributors, manufacturers, providers, and insurers, are consolidating or have formed strategic alliances. As the healthcare industry consolidates, competition to provide goods and services to industry participants will become more intense. Further, this consolidation creates larger enterprises with greater negotiating power, which they can use to negotiate price concessions. If we must reduce our prices because of industry consolidation, or if we lose customers as a result of consolidation, our business, results of operations, financial condition, and cash flows could be adversely affected.

Healthcare industry cost-containment measures could result in reduced sales of our medical devices and medical device components.

Most of our customers, and the healthcare providers to whom our customers supply medical devices, rely on third-party payers, including government programs and private health insurance plans, to reimburse some or all of the cost of the procedures in which medical devices that incorporate components we manufacture or assemble are used. The continuing efforts of governmental authorities, insurance companies and other payers of healthcare costs to contain or reduce these costs could lead to patients being unable to obtain approval for payment from these third-party payers. If third-party payer payment approval cannot be obtained by patients, sales of finished medical devices that include our components may decline significantly and our customers may reduce or eliminate purchases of our components. The cost-containment measures that healthcare providers are instituting, both in the U.S. and outside of the U.S., could harm our ability to operate profitably. For example, managed care organizations have successfully negotiated volume discounts for pharmaceuticals, and GPOs and IDNs have also concentrated purchasing decisions for some customers, which has led to downward pricing pressure for medical device companies, including us.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Medtronic's principal executive office is located in Ireland and is leased by the Company, while its main operational offices are located in the Minneapolis, Minnesota metropolitan area and are owned by the Company.

The Company's total manufacturing and research space is approximately 9.6 million square feet. Approximately 35 percent of the manufacturing or research facilities are owned by Medtronic and the balance is leased. The following is a summary of the Company's largest manufacturing and research facilities by location:

Location Country or State	Square Feet (in thousands)
Connecticut	1,138
Puerto Rico	811
Mexico	762
China	735
Minnesota	623
Italy	454
Ireland	446
Dominican Republic	304
Arizona	294
Switzerland	283
France	270
Colorado	259
California	204

Medtronic also maintains sales and administrative offices in the U.S. at six locations in six states and outside the U.S. at 138 locations in 63 countries. Most of these locations are leased. The Company is using substantially all of its currently available productive space to develop, manufacture, and market its products. The Company's facilities are well-maintained, suitable for their respective uses, and adequate for current needs.

Item 3. Legal Proceedings

A discussion of the Company’s legal proceedings is contained in Note 18 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Medtronic's Common Equity, Related Shareholder Matters, and Issuer Purchases of Equity Securities

The Company's ordinary shares are listed on the New York Stock Exchange under the symbol "MDT."

The following table provides information about the shares repurchased by the Company during the fourth quarter of fiscal year 2021:

Fiscal Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as a Part of Publicly Announced Program	Maximum Approximate Dollar Value of Shares that may yet be Purchased Under the Program
1/30/2021-2/26/2021	—	$ —	—	$ 5,950,169,124
2/27/2021-4/2/2021	—	—	—	5,950,169,124
4/3/2021-4/30/2021	4,404,719	126.80	4,404,719	5,391,654,170
Total	4,404,719	$ 126.80	4,404,719	5,391,654,170

In March 2019, the Company's Board of Directors authorized the repurchase of $6.0 billion of the Company's ordinary shares. There is no specific time-period associated with these repurchase authorizations.

On June 23, 2021, there were approximately 23,394 shareholders of record of the Company's ordinary shares. Ordinary cash dividends declared and paid totaled 58.0 cents per share for each quarter of fiscal year 2021 and 54.0 cents per share for each quarter of fiscal year 2020. On May 27, 2021, the Company announced an increase in Medtronic's cash dividends for the first quarter of fiscal year 2022, raising the amount to $0.63.

Stock Performance Graph

The following graph compares the cumulative total shareholder return on Medtronic's ordinary shares with the cumulative total shareholder return on the Standard & Poor's (S&P) 500 Index and the S&P 500 Health Care Equipment Index for the last five fiscal years. The graph assumes that $100 was invested at market close on April 29, 2016 in Medtronic's ordinary shares, the S&P 500 Index, and the S&P 500 Health Care Equipment Index and that all dividends were reinvested.

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Company/Index	April 2016	April 2017	April 2018	April 2019	April 2020	April 2021
Medtronic plc	$ 100.00	$ 107.23	$ 107.29	$ 117.86	$ 136.89	$ 184.54
S&P 500 Index	100.00	117.92	134.66	151.27	148.91	223.20
S&P 500 Health Care Equipment Index	100.00	117.16	141.00	165.48	188.33	249.74

For information on the Company's equity compensation plans, see "Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters" in this Annual Report on Form 10-K.

Irish Restrictions on Import and Export of Capital

Except as indicated below, there are no restrictions on non-residents of Ireland dealing in Irish domestic securities, which includes ordinary shares of Irish companies. Except as indicated below, dividends and redemption proceeds also continue to be freely transferable to non-resident holders of such securities. The Financial Transfers Act, 1992 provides that the Irish Minister for Finance can make provision for the restriction of financial transfers between Ireland and other countries. For the purposes of this Act, "financial transfers" include all transfers which would be movements of capital or payments within the meaning of the treaties governing the E.U. if they had been made between Member States of the E.U. This Act has been used by the Minister for Finance to implement European Council Directives, which provide for the restriction of financial transfers to certain countries, organizations, and people including the Al-Qaeda network and the Taliban, Afghanistan, Belarus, Burma (Myanmar), Democratic People's Republic of Korea, Democratic Republic of Congo, Iran, Iraq, Ivory Coast, Lebanon, Liberia, Libya, Republic of Guinea, Somalia, Sudan, Syria, Tunisia, Ukraine and Zimbabwe.

Any transfer of, or payment in respect of, a share or interest in a share involving the government of any country that is currently the subject of United Nations sanctions, any person or body controlled by any of the foregoing, or by any person acting on behalf of the foregoing, may be subject to restrictions pursuant to such sanctions as implemented into Irish law.

Irish Taxes Applicable to U.S. Holders

Dividends paid by Medtronic will generally be subject to Irish dividend withholding tax (currently at a rate of 25 percent) unless an exemption applies.

Dividends paid to U.S. residents will not be subject to Irish dividend withholding tax provided that:

- in the case of a beneficial owner of Medtronic shares held in the Depository Trust Company (DTC), the address of the beneficial owner in the records of his or her broker is in the United States and this information is provided by the broker to the Company's qualifying intermediary; or
- in the case of a record owner, the record owner has provided to the Company's transfer agent a valid U.S. Certification of Residence (Form 6166) or valid Irish Non-Resident Form V2.

Irish income tax may also arise with respect to dividends paid on Medtronic's ordinary shares. A U.S. resident who meets one of the exemptions from dividend withholding tax described above and who does not hold Medtronic shares through a branch or agency in Ireland through which a trade is carried on generally will not have any Irish income tax liability on a dividend paid by Medtronic. In addition, if a U.S. shareholder is subject to the dividend withholding tax, the withholding payment discharges any Irish income tax liability, provided the shareholder furnishes to the Irish Revenue authorities a statement of the dividend withholding tax imposed.

While the U.S./Ireland Double Tax Treaty contains provisions regarding withholding, due to the wide scope of the exemptions from dividend withholding tax available under Irish domestic law, it would generally be unnecessary for a U.S. resident shareholder to rely on the treaty provisions.

Item 6. Reserved

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis provides information management believes to be relevant to understanding the financial condition and results of operations of the Company. The discussion focuses on our financial results for the fiscal year ended April 30, 2021 (fiscal year 2021) and the fiscal year ended April 24, 2020 (fiscal year 2020). A discussion on our results of operations for fiscal year 2020 as compared the year ended April 26, 2019 (fiscal year 2019) is included in Part II, Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" of our Annual Report on Form 10-K for the year ended April 24, 2020, filed with the SEC on June 19, 2020, and is incorporated by reference into this Form 10-K. You should read this discussion and analysis along with our consolidated financial statements and related notes thereto at April 30, 2021 and April 24, 2020 and for fiscal years 2021, 2020, and 2019, which are presented within "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K. Amounts reported in millions within this annual report are computed based on the amounts in thousands, and therefore, the sum of the components may not equal the total amount reported in millions due to rounding. Additionally, certain columns and rows within tables may not sum due to rounding.

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 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 benefits 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

The global healthcare system faces an unprecedented challenge as a result of the Covid-19 pandemic. COVID-19 had an adverse impact on certain aspects of our Company and business, including the demand for and supply of certain of our products, operations, supply chains and distribution systems, impacts or delays to product development milestones, clinical trials, or regulatory clearances and approval timing. Most of our businesses were affected by a decline in procedural volumes as a result of COVID-19 largely during the fourth quarter of fiscal year 2020 and the first two quarters of fiscal year 2021. However, we have seen a recovery in most of our businesses during the third and fourth quarters of fiscal year 2021 from the depths of the pandemic that we experienced in the fourth quarter of fiscal year 2020.

We expect medical procedure recovery rates to continue to vary by therapy and country and could be impacted by regional COVID-19 case volumes, vaccine immunization rates, and new COVID-19 variants. As a result, we cannot predict with confidence the duration of the pandemic or the impact it may have on our Company.

The following is a summary of revenue, diluted earnings per share, and cash flow for fiscal years 2021 and 2020:mdt-20210430_g22.jpg

Non-GAAP Reconciliations The tables below present reconciliations of our Non-GAAP financial measures to the most directly comparable financial measures prepared in accordance with U.S. GAAP for fiscal years 2021 and 2020:

	Fiscal year ended April 30, 2021				
(in millions, except per share data)	Income Before Income Taxes	Income Tax Provision (Benefit)	Net Income Attributable to Medtronic	Diluted EPS	Effective Tax Rate
GAAP	$ 3,895	$ 265	$ 3,606	$ 2.66	6.8 %
Non-GAAP Adjustments:					
Restructuring and associated costs [1]	617	128	489	0.36	20.7
Acquisition-related items [2]	(15)	(20)	4	—	126.7
Certain litigation charges	118	23	95	0.07	19.5
(Gain)/loss on minority investments [3]	(61)	—	(57)	(0.04)	—
IPR&D charges [4]	31	7	25	0.02	19.4
Impairment charges [5]	76	7	68	0.05	10.5
Medical device regulations [6]	83	15	68	0.05	18.1
Debt tender premium and other charges [7]	308	60	248	0.18	19.5
Amortization of intangible assets	1,783	283	1,500	1.11	15.9
Certain tax adjustments, net [8]	—	41	(41)	(0.03)	—
Non-GAAP	$ 6,835	$ 809	$ 6,005	$ 4.44	11.8 %

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(in millions, except per share data)	Fiscal year ended April 24, 2020				
	Income Before Income Taxes	Income Tax (Benefit) Provision	Net Income Attributable to Medtronic	Diluted EPS	Effective Tax Rate
GAAP	$ 4,055	$ (751)	$ 4,789	$ 3.54	(18.5)%
Non-GAAP Adjustments:					
Restructuring and associated costs [1]	441	69	372	0.28	15.6
Acquisition-related items [9]	66	13	53	0.04	19.7
Certain litigation charges	313	59	254	0.19	18.8
(Gain)/loss on minority investments [3]	19	(3)	22	0.02	(15.8)
Debt tender premium and other charges [10]	406	86	320	0.24	21.2
Medical device regulations [6]	48	6	42	0.03	12.5
Exit of businesses [11]	52	12	40	0.03	23.1
IPR&D charges [4]	25	3	22	0.02	12.0
Contribution to Medtronic Foundation	80	18	62	0.05	22.5
Amortization of intangible assets	1,756	284	1,472	1.09	16.2
Certain tax adjustments, net [12]	—	1,242	(1,242)	(0.92)	—
Non-GAAP	$ 7,261	$ 1,038	$ 6,206	$ 4.59	14.3 %

(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) The charges primarily include business combination transaction-related costs, changes in fair value of contingent consideration, and a change in amounts accrued for certain contingent liabilities for recent acquisitions.
(3) We exclude unrealized and realized gains and losses on our minority investments as we do not believe these components of income or expense have a direct correlation to our ongoing or future business operations.
(4) The charges represent acquired IPR&D in connection with asset acquisitions and certain license payments for unapproved technology.
(5) The charges relate to the abandonment of certain intangible assets in our Neuroscience segment.
(6) The charges represent estimated 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 charges relate to the early redemption of approximately $6.0 billion of debt.
(8) The net benefit primarily relates to the finalization of an audit at the IRS Appellate level for fiscal years 2012 through 2014 and the capitalization of certain research and development costs for U.S. income tax purposes, which are partially offset by the impact of an intercompany sale of assets, and a tax basis adjustment and amortization of previously established deferred tax assets from intercompany intellectual property transactions.
(9) The charges primarily include costs incurred in connection with legacy-Covidien enterprise resource planning deployment activities, business combination related costs, and changes in fair value of contingent consideration.
(10) The charges, which include $413 million recognized in *interest expense* and ($7 million) recognized in *other operating expense, net*, primarily relates to the early redemption of approximately $5.2 billion of debt.
(11) The net charges relate to the exit of businesses and are primarily comprised of intangible asset impairments.
(12) The net benefit primarily relates to the release of a valuation allowance on certain net operating losses, the impact of an intercompany sale of intellectual property, and the impact of tax reform in Switzerland and the United States.

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:

(in millions)	Fiscal Year 2021	Fiscal Year 2020
Net cash provided by operating activities	$ 6,240	$ 7,234
Additions to property, plant, and equipment	(1,355)	(1,213)
Free cash flow	$ 4,885	$ 6,021

NET SALES

Segment and Division

The charts below illustrate the percent of net sales by segment for fiscal years 2021 and 2020:

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The table below includes net sales by segment and division for fiscal years 2021 and 2020:

(in millions)	Net Sales by Fiscal Year 2021	2020	Percent Change
Cardiac Rhythm & Heart Failure	$ 5,584	$ 5,141	9 %
Structural Heart & Aortic	2,834	2,842	—
Coronary & Peripheral Vascular	2,354	2,486	(5)
Cardiovascular	10,772	10,468	3
Surgical Innovations	5,438	5,513	(1)
Respiratory, Gastrointestinal, & Renal	3,298	2,839	16
Medical Surgical	8,737	8,352	5
Cranial & Spinal Technologies	4,288	4,082	5
Specialty Therapies	2,307	2,147	7
Neuromodulation	1,601	1,497	7
Neuroscience	8,195	7,725	6
Diabetes	2,413	2,368	2
Total	$ 30,117	$ 28,913	4 %

Segment and Market Geography

The charts below illustrate the percent of net sales by market geography for fiscal years 2021 and 2020:

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The table below includes net sales by market geography for each of our segments for fiscal years 2021 and 2020:

	U.S.[1]			Non-U.S. Developed Markets[2]			Emerging Markets[3]		
(in millions)	Fiscal Year 2021	Fiscal Year 2020	% Change	Fiscal Year 2021	Fiscal Year 2020	% Change	Fiscal Year 2021	Fiscal Year 2020	% Change
Cardiovascular	$ 5,248	$ 5,062	4 %	$ 3,752	$ 3,519	7 %	$ 1,773	$ 1,887	(6)%
Medical Surgical	3,650	3,532	3	3,320	3,169	5	1,766	1,651	7
Neuroscience	5,456	5,122	7	1,724	1,659	4	1,015	945	7
Diabetes	1,171	1,204	(3)	1,019	940	8	222	224	(1)
Total	$ 15,526	$ 14,919	4 %	$ 9,815	$ 9,287	6 %	$ 4,777	$ 4,707	1 %

(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.

The increase in net sales for fiscal year 2021 as compared to fiscal year 2020 was primarily related to the recovery of procedure volumes as compared to the drastic decline experienced in the fourth quarter of fiscal year 2020 as a result of the pandemic. While the recovery of procedural volumes has been uneven across geographies and our different product lines, as of the end of fiscal year 2021, procedural volumes in the majority of our end markets are returning to pre-pandemic levels. Net sales for fiscal year 2021 were also impacted by an additional selling week during the first fiscal month of fiscal year 2021 due to our 52/53 week fiscal year calendar. Although we cannot precisely calculate the impact of the extra selling week, we estimate that it benefited net sales for fiscal year 2021 by approximately $360 million to $390 million. Additionally, currency had a favorable impact on net sales in non-U.S. developed markets of $427 million and an unfavorable impact on net sales in emerging markets of $98 million for fiscal year 2021 as compared to fiscal year 2020.

During the first and fourth quarters of fiscal year 2021, we realigned our divisions with Neuroscience and Cardiovascular, respectively. As a result, fiscal year 2020 results have been recast to adjust for these realignments. Additionally, we implemented our new operating model in fiscal year 2021, which was fully operational beginning in the fourth quarter. Our new operating model simplifies our organization in order to accelerate decision making, improve commercial execution, and more effectively leverage the scale of our company. The "Restructuring Charges, Net" section of this Management's Discussion and Analysis has further information regarding our new operating model.

Looking ahead, the uncertain and uneven global recovery from COVID-19 and the resulting impact on future procedural volumes and demand for our products and therapies could negatively impact our business. Additionally, 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, changes in timing of product registration approvals, replacement cycle challenges, and fluctuations in currency exchange rates.

Cardiovascular

Cardiovascular products include pacemakers, insertable cardiac monitors, cardiac resynchronization therapy devices (CRT-D & CRT-P), 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. Cardiovascular also includes Care Management Services and Cath Lab Managed Services (CLMS) within the Cardiac Rhythm & Heart Failure division. Cardiovascular net sales for fiscal year 2021 were $10.8 billion, an increase of 3 percent as compared to fiscal year 2020. Currency had a favorable impact on net sales for fiscal year 2021 of $131 million. Cardiovascular net sales increase for fiscal year 2021, as compared to fiscal year 2020, was primarily due to the recovery of global procedural volumes from the downturn experienced in the fourth quarter of fiscal year 2020 resulting from the pandemic.

The charts below illustrate the percent of Cardiovascular net sales by division for fiscal years 2021 and 2020:

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Cardiac Rhythm & Heart Failure (CRHF) net sales increased 9 percent in fiscal year 2021 as compared to fiscal year 2020. The increase was led by Cardiac Rhythm Management and Cardiac Ablation Solutions products, which included strong growth from the Micra leadless pacing system, Cobalt and Crome ICDs and CRT-Ds, TYRX antibacterial envelope, and Artic Front Advance Cryoballons. Partially offsetting this growth were declines in Mechanical Circulatory Support products driven by slower recovery of procedure volumes and competitive dynamics.

Structural Heart & Aortic (SHA) net sales were flat in fiscal year 2021 as compared to fiscal year 2020 as growth in transcatheter aortic valve replacement (TAVR) nets sales were offset by net sales declines within our Aortic and Cardiac Surgery businesses. The growth experienced in TAVR was driven by continued adoption of the Evolut Pro + valve. The declines experienced in Aortic and Cardiac Surgery were a result of slower recovery of procedure volumes as well our voluntary recall of the Valiant Navion Thoracic Stent Graft System in the fourth quarter of fiscal year 2021.

Coronary & Peripheral Vascular (CPV) net sales decreased 5 percent in fiscal year 2021 as compared to fiscal year 2020. The decline was a result of the generally more deferrable nature of peripheral and endovenous procedure categories as well as the negative impact of the Chinese national tender on our drug-eluting stent sales. The Chinese national tender went into effect in January 2021 and resulted in significant price declines for drug-eluting stents in China, which negatively impacted our Coronary business. Partially offsetting these negative impacts was growth in drug-coated balloons and peripheral embolization

coils. Drug-coated balloon growth was the result of strong adoption of the IN.PACT AV drug-coated balloon driven by its pivotal data published during the second quarter of fiscal year 2021.

In addition to the general impacts of COVID-19 on our Company as described in the Executive Level Overview, looking ahead, we expect Cardiovascular could be affected by the following:

- Continued growth of our Micra transcatheter pacing system. Micra AV received U.S. FDA approval and CE Mark approval in January and April 2020, respectfully. Micra AV expands the Micra target population from 15 percent to 45 percent of pacemaker patients.
- 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.
- Acceptance and growth of the Cobalt and Crome portfolio of ICDs and CRT-Ds. These devices received CE Mark approval during the fourth quarter of fiscal year 2020 and U.S. FDA approval during the first quarter of fiscal year 2021.
- Continued acceptance and growth of the Claria MRI CRT-D system with EffectivCRT Diagnostic and Effective CRT during AF algorithm.
- Acceptance and growth of the LINQ II cardiac monitor, which received CE Mark in November 2019 and gained U.S. FDA approval during the first quarter of fiscal year 2021. As of the end of the fiscal year 2021, we are experiencing supply constrains for the LINQ II cardiac monitor as we ramp our wafer scale manufacturing.
- Continued acceptance and growth of the CRT-P quadripolar pacing system.
- Continued growth, adoption, and utilization of the TYRX Envelope for implantable devices driven by the favorable results of the WRAP-IT clinical study. In the fourth quarter of fiscal year 2020, we received 12-month shelf life extension for our TYRX Envelope product.
- Continued acceptance and market expansion of the Arctic Front Advance Cryoballoon for treatment of atrial fibrillation. We are pursuing a first line therapy designation from the U.S. FDA for the Arctic Front Advance Cryoballoon's treatment of atrial fibrillation using the data of the STOP AF First clinical trial.
- Continued acceptance and growth of the self-expanding CoreValve Evolut transcatheter aortic valve replacement platform into intermediate risk indication globally and for the treatment of patients determined to be at low risk with surgery. The Platform received both CE Mark for low risk and bicuspid labeling indication in Europe during the first quarter of fiscal year 2021. In August 2020, the U.S. FDA approved revised commercial labeling for the platform that modified a precaution for the treatment of patients at low risk.
- Continued expansion and training of field support to increase coverage in the U.S. centers performing transcatheter aortic valve replacement procedures.
- 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 Evolut Pro Plus TAVR valve.
- The negative impact of the Chinese national tender on drug-eluting stent prices in China, that went into effect in January 2021, as well as provincial tenders in China on other Coronary product categories.
- Continued acceptance and growth from the VenaSeal Closure System in the U.S. The VenaSeal Closure 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.

- Our voluntary recall of the Valiant Navion Thoracic Stent Graft System and our ability to ramp production of our previous generation product, the Valiant Captivia Thoracic Stent Graft System and resume selling this product in markets globally. We currently have limited Valiant Captivia inventory available and plan to reach full production capacity in October 2021.

- Our recent decision to stop the distribution and sale of the Medtronic HVAD System in June 2021 in light of a growing body of observational clinical comparisons indicating a lower frequency of neurological adverse events and mortality with another circulatory support device available to patients compared to the HVAD system. The HVAD system and associated accessory revenue was $141 million in fiscal year 2021. Medtronic is committed to serving the needs of the approximately 4,000 patients currently implanted with our HVAD system. We expect to record a non-cash, pre-tax impairment of long-lived assets of $400 million to $500 million in the quarter ending July 30, 2021 primarily related to intangible assets. Management also expects to record a charge related to customer support obligations, restructuring, and other associated costs in the quarter ending July 30, 2021.
- Our ability to successfully develop and obtain regulatory approval of products within our pipeline, which include the Symplicity Spyral Multi-Electrode Renal Denervation Catheter for the treatment of hypertension through a one-time, minimally invasive, catheter procedure, Pulse Field Ablation, a novel energy source that is non-thermal, for the treatment of atrial fibrillation, and transcatheter mitral and tricuspid therapy products lead by our Intrepid system.

Medical Surgical

Medical Surgical'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, surgical stapling devices, vessel sealing instruments, wound closure, electrosurgery products, hernia mechanical devices, mesh implants, advanced ablation, interventional lung, ventilators, airway products, renal care products, and sensors and monitors for pulse oximetry, capnography, level of consciousness and cerebral oximetry. Medical Surgical's net sales for fiscal year 2021 were $8.7 billion, an increase of 5 percent as compared to fiscal year 2020. Currency had a favorable impact on net sales of $87 million for fiscal year 2021. Net sales growth was primarily driven by the recovery in procedure volumes experienced from the downturn experienced in the fourth quarter of fiscal year 2020 from the pandemic and increased demand for COVID-19 related diagnostics and therapies, particularly ventilator and airway products, as compared to fiscal year 2020.

The charts below illustrate the percent of Medical Surgical net sales by division for fiscal years 2021 and 2020:

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Surgical Innovations (SI) net sales for fiscal year 2021 decreased 1 percent as compared to fiscal year 2020, with declines experienced across many product lines due to the deceleration of surgical procedure recovery. The decline in surgical volumes, particularly Bariatric, Colorectal, Hernia, and Thoracic procedures, resulted in lower demand for Advanced Stapling products and General Surgery products. This decline in demand was partially offset by new product launches driving growth in Advanced Energy.

Respiratory, Gastrointestinal, & Renal (RGR) net sales for fiscal year 2021 increased 16 percent as compared to fiscal year 2020. Net sales growth was primarily attributable to increased demand for Respiratory Interventions products due to COVID-19, driven by the Puritan Bennett high acuity ventilator portfolio.

In addition to the general impacts of COVID-19 on our Company as described in the Executive Level Overview, looking ahead we expect Medical Surgical 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 (minimally invasive surgery). 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.
- Our ability to execute ongoing strategies in order to address the competitive pressure of reprocessing of our vessel sealing disposables and growth of surgical soft tissue robotics procedures in the U.S.
- Our ability to create markets and drive products 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.
- 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 our Illumisite navigation platform, combined with our portfolio of biopsy tools including the Arcpoint pulmonary needle, and to access lesions outside the airway, the CrossCountry transbronchial access tool. This comprehensive portfolio gives the power to display position and access lung nodules in the periphery of the lungs, in 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.
- Our ability to successfully develop and obtain regulatory approval of products within our pipeline, which include our PillCam Genius endoscopy module, a noninvasive process to localize pre-cancerous lesions and our Hugo robotic assisted surgery system, designed to help reduce unwanted variability, improve patient outcomes, and, by extension, lower per-procedure cost.

Neuroscience

Neuroscience's products include various spinal implants, bone graft substitutes, biologic products, image-guided surgery and intra-operative imaging systems, robotic guidance systems used in the robot-assisted spine procedures, and systems that incorporate advanced energy surgical instruments. Neuroscience's products also focus on the treatment of overactive bladder, urinary retention, fecal incontinence, gastroparesis, as well as products to treat ear, nose, and throat (ENT), and therapies to treat the diseases of the vasculature in and around the brain, including coils, neurovascular stents and flow diversion products. Neuroscience also manufactures products related to implantable neurostimulation therapies and drug delivery systems for the treatment of chronic pain, movement disorders, and epilepsy. Neuroscience's net sales for fiscal year 2021 were $8.2 billion, an increase of 6 percent as compared to fiscal year 2020. Currency had a favorable impact on net sales for fiscal year 2021 of $75 million. Neuroscience's net sales growth was observed across all divisions and reflected the recovery of global procedural volumes, particularly on deferrable procedures, from the downturn experienced in the fourth quarter of fiscal year 2020 as a result of the pandemic.

The graphs below illustrate the percent of Neuroscience net sales by division for fiscal years 2021 and 2020:

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Cranial & Spinal Technologies (CST) net sales for fiscal year 2021 increased 5 percent as compared to fiscal year 2020. Growth was experienced by both Enabling Technologies and Spine. Enabling Technologies results, though still impacted by the challenging environment for capital equipment due to COVID-19, were driven by recovery on sales of the Midas Rex MR8 high-speed drill system and the StealthStation S8 Navigation System. Spine net sales growth was driven by recovery in procedural volumes in fiscal year 2021.

Specialty Therapies (Specialty) net sales for fiscal year 2021 increased 7 percent as compared to fiscal year 2020. Net sales growth was primarily driven by strength in Pelvic Health and Neurovascular. Pelvic Health saw continued recovery and growth throughout the fiscal year, driven by the launch of the InterStim Micro neurostimulator and SureScan MRI lead in the U.S. Neurovascular's growth continued to be driven by strength in coils and aspiration catheters, as well as general strength in emerging markets. This growth was partially offset by declines in flow diversion products due to recent competitive entrants. ENT experienced modest net sales growth due to the recovery of deferrable procedure volumes.

Neuromodulation (NM) net sales for fiscal year 2021 increased 7 percent as compared to fiscal year 2020. Sales growth occurred in both Pain Therapies and Brain Modulation and reflected a recovery in procedural volumes. Net sales growth was driven by strong adoption of the DTM (differential target multiplexed) proprietary waveform in Pain Therapies, and the Percept PC deep brain stimulation (DBS) device with BrainSense technology in Brain Modulation.

In addition to the general impacts of COVID-19 on our Company as described in the Executive Level Overview, looking ahead we expect Neuroscience could be affected by the following:

- Continued growth from Enabling Technologies StealthStation and O-Arm Imaging Systems, Midas, and ENT Navigation and Power Systems, as well as acceptance of the Stealth Autoguide cranial robotic guidance platform.
- 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.
- 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 within our CST business 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 acceptance and growth of our ENT and Pelvic Health therapies within our Specialty Therapies division, including our InterStim therapy with InterStim II and InterStim Micro neurostimulators, which received CE mark approval in January 2020 and U.S. FDA approval in August 2020, 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.
- Continued acceptance and growth of the Solitaire 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.
- Market acceptance and continued global adoption of our Intellis spinal cord stimulator, DTM proprietary waveform, Evolve workflow algorithm, and Snapshot reporting to treat chronic pain in major markets around the world.
- Continued acceptance and growth of our Percept PC DBS device with BrainSense technology, which received CE Mark approval in January 2020 and U.S. FDA approval in June 2020, including its treatment of Parkinson's Disease, epilepsy, and other movement disorders.
- 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.
- Our ability to successfully develop and obtain regulatory approval of the products within our pipeline, which include our closed-loop Percept PC and RC devices with adaptive DBS (aDBS) within Neuromodulation, as well as our hemorrhagic stroke intrasaccular device within Specialty Therapies, and our next-generation spine enabling technologies within CST.

Diabetes

Diabetes' products include insulin pumps, continuous glucose monitoring (CGM) systems, insulin pump consumables, and smart insulin pen systems. Diabetes' sales for fiscal year 2021 were $2.4 billion, an increase of 2 percent as compared to fiscal year 2020. Currency had a favorable impact on net sales for fiscal year 2021 of $37 million. Diabetes' net sales increases for fiscal year 2021 were primarily attributable to growth in the MiniMed 780G insulin pump system and integrated CGM in the international markets. This growth was partially offset by declines in the U.S. due to new patient start delays and continued competitive pressures.

In addition to the general impacts of COVID-19 on our Company as described in the Executive Level Overview, looking ahead we expect Diabetes could be affected by the following:

- Patient demand for the MiniMed 770G insulin pump system, which received U.S. FDA approval in August 2020 and launched in November 2020. The system is powered by SmartGuard technology, as featured in the MiniMed 670G system, with the added benefits of smartphone connectivity and an expanded age indication to children as young as age two.
- Continued future growth internationally for the MiniMed 780G system. The MiniMed 780G system was approved in the E.U. in June 2020 and launched in over 30 countries on four continents outside the U.S., primarily in Europe, starting in October 2020. The global adoption of sensor-augmented insulin pump systems has resulted in strong sensor attachment rates.
- Continued acceptance and growth of the Guardian Connect CGM system, which displays glucose information directly to a smartphone. During the first quarter of fiscal year 2021, we introduced the Guardian Connect system for Android devices to ensure patients have access to their glucose levels seamlessly and discretely. The Guardian Connect CGM system is available on Apple iOS and Android devices.
- Strengthening our position in the diabetes market as a result of the September 10, 2020 acquisition of Companion Medical. Companion Medical offers a U.S. FDA cleared InPen smart pen system that combines the freedom of a reusable Bluetooth pen with the intelligence of an intuitive mobile application that helps users administer the appropriate insulin dose. During the third quarter of fiscal year 2021, we integrated our CGM data into the Companion Medical InPen Application, which allows users to have their CGM readings in real-time alongside insulin dose information, all in one view.
- Continued pump and CGM competition in an expanding global market.
- Changes in medical reimbursement policies and programs, along with additional payor coverage on insulin pumps.
- Our ability to successfully develop and obtain regulatory approval of the products within our pipeline, which include our adult and pediatric MiniMed 780G and the Guardian 4 sensor, which have been submitted to the U.S. FDA. These technologies feature our next-generation algorithms by further automating insulin delivery.

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:

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Cost of Products Sold Cost of products sold for fiscal years 2021 and 2020 was $10.5 billion and $9.4 billion, respectively. The increase in cost of products sold as a percentage of net sales in fiscal year 2021, as compared to fiscal year 2020, was largely due to increased expenses as a result of a full fiscal year impact of COVID-19, primarily due to period expensing of some of our fixed overhead costs due to idle capacity at certain manufacturing facilities and increases in reserves for excess and obsolete inventory, as well as charges associated with recent field corrective actions. Going forward, we will continue to focus on reducing our costs of production through supplier management, manufacturing improvements, and optimizing our manufacturing network.

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.

In fiscal year 2021, we entered into arrangements with third parties to fund the development of certain technologies in our Diabetes segment. As there is a substantive and genuine transfer of risk to the third parties, the development funding provided is recognized as an obligation to perform contractual services, and therefore is recorded as income in *other operating expense, net* in the consolidated statements of income in the period the corresponding research and development expenses are incurred. If the technologies receive regulatory approval and are successfully commercialized, we will pay royalties to the third parties. During fiscal year 2021, no projects were significant, either individually or in aggregate, to our consolidated results.

Selling, General, and Administrative Expense Our goal is to continue to leverage selling, general, and administrative expense initiatives. 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 fiscal years 2021 and 2020 was $10.1 billion. The decrease in selling, general, and administrative expense as a percentage of net sales in fiscal year 2021, as compared to 2020, was primarily due to net sales growth, coupled with reduced travel and discretionary spending due to the pandemic, offset by higher annual incentive accruals and increased restructuring and associated costs. Selling, general, and administrative expense in fiscal year 2021 includes $196 million of restructuring and associated costs, as compared to $168 million in fiscal year 2020. Additionally, for fiscal year 2020, selling, general, and administrative expense includes $103 million of acquisition-related costs, as compared to $3 million for fiscal year 2021.

The following is a summary of other costs and expenses:

(in millions)	Fiscal Year 2021	Fiscal Year 2020
Amortization of intangible assets	$ 1,783	$ 1,756
Restructuring charges, net	293	118
Certain litigation charges	118	313
Other operating expense, net	315	71
Other non-operating income, net	(336)	(356)
Interest expense	925	1,092

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.

Restructuring Charges, Net

Enterprise Excellence

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 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 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 40 percent of estimated charges are related to employee termination benefits. The remaining charges are costs associated with the restructuring program, such as salaries and benefits for employees supporting the program, including program management and transition teams, and strategic and operational consulting services related to the three objectives of the program discussed above. 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.

During fiscal year 2021, we recognized net charges of $349 million, including $52 million recognized within *restructuring charges, net* in the consolidated statements of income which were primarily comprised of employee termination benefits. For fiscal year 2021, 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 $128 million recognized within *cost of products sold* and $169 million recognized within *selling, general and administrative expense* in the consolidated statements of income.

During fiscal year 2020, we recognized net charges of $441 million, including $118 million recognized within *restructuring charges, net* in the consolidated statements of income primarily comprised of employee termination

benefits. For fiscal year 2020, 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 $149 million recognized within *cost of products sold* and $165 million recognized within *selling, general and administrative expense* in the consolidated statements of income.

Simplification

In the first quarter of fiscal year 2021, we initiated our Simplification restructuring program, designed to make the Company a more nimble and competitive organization focused on accelerating innovation, enhancing the customer experience, driving revenue growth, and winning market share, while also more efficiently and effectively leveraging our enterprise scale. Under the oversight of the portfolio leaders, this new operating model, which became fully operational the beginning of the fourth quarter of fiscal year 2021, will simplify our organizational structure and accelerate decision-making and execution. Primary activities of the restructuring program will include reorganizing our business into a portfolio-level structure, including the creation of highly focused, accountable and empowered Operating Units (OUs), consolidating operations at the enterprise level, establishing Technology Development Centers in areas where we have deep core technology competencies to be leveraged by multiple OUs, and forming dedicated sales organizations that leverage our scale but move with the same agility as our smaller, local competitors.

The Simplification program designed to streamline our operating model, improve competitiveness, and enhance the customer and employee experience will result in substantial reduction in selling, general, and administrative expenses, the majority of which are expected to be achieved through the end of fiscal year 2022. Annual savings of approximately $450 million to $475 million are expected to be realized by the various components of the Simplification program.

We estimate that, in connection with the Simplification restructuring program, we will recognize pre-tax exit and disposal costs and other costs across all segments of approximately $400 million to $450 million, the majority of which are expected to be incurred by the end of fiscal year 2022. Approximately three quarters 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 to execute the reorganization of our business into a portfolio-like structure as discussed above. These charges are recognized within *restructuring charges, net* and *selling, general, and administrative expense* in the consolidated statements of income.

During fiscal year 2021, we recognized net charges of $268 million, including $241 million within *restructuring charges, net* in the consolidated statements of income. For fiscal year 2021, charges included $97 million of incremental defined benefit pension and post-retirement related expenses for employees that accepted voluntary early retirement packages within *restructuring charges, net* in the consolidated statements of income. For fiscal year 2021, 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 $27 million recognized within *selling, general, and administrative expense* in the consolidated statements of income.

For additional information, see Note 4 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Certain Litigation Charges We classify litigation charges and gains related to significant legal matters as certain litigation charges. For additional information, refer to Note 18 of the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

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 fair value of contingent consideration, changes in amounts accrued for certain contingent liabilities for a recent acquisition, a commitment to the Medtronic Foundation, charges associated with business exits, impairment charges, in-process research and development (IPR&D) charges, and income from funded research and development arrangements.

The increase in other operating expense, net from fiscal year 2020 to 2021 was primarily driven by our remeasurement and hedging programs, which, combined, resulted in a loss of $47 million for fiscal year 2021 as compared to a gain of $295 million for fiscal year 2020. Additionally, for fiscal year 2021, other operating expense, net includes a $132 million gain related to amounts accrued for certain contingent liabilities for a recent acquisition and impairment charges of $76 million related to the abandonment of certain intangible assets. Also contributing to the increase were changes in fair value of contingent consideration resulting in a loss of $36 million for fiscal year 2021 as compared to a gain of $33 million for fiscal year 2020. For fiscal year 2020, other operating expense, net includes an $80 million charge associated with a commitment to the Medtronic Foundation and charges of $52 million associated with the exit of businesses.

Other Non-Operating Income, Net Other non-operating income, net includes the non-service components of net periodic pension and postretirement benefit cost, investment gains and losses, and interest income.

The decrease in other non-operating income, net from fiscal year 2020 to 2021 was primarily attributable to the decrease in interest income as a result of the lower interest rate environment. Interest income was $192 million and $300 million for fiscal years 2021 and 2020, respectively. This decrease was partially offset by an increase in gains recognized on minority investments. Gains on minority investments were $61 million for fiscal year 2021 as compared to losses of $19 million for fiscal year 2020.

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. The decrease in interest expense from fiscal year 2020 to 2021 was primarily due to a decrease in charges related to debt tender and redemption transactions, which were $308 million for fiscal year 2021, as compared to $413 million for fiscal year 2020. Also contributing to the decrease was a decrease in the weighted-average interest rate of outstanding debt obligations due to the aforementioned debt issuance and tender transactions. Refer to the "Debt and Capital" section of this Management's Discussion and Analysis for additional information on the debt issuances, tenders, and early redemptions.

INCOME TAXES

	Fiscal Year	
(in millions)	**2021**	**2020**
Income tax provision (benefit)	$ 265	$ (751)
Income before income taxes	3,895	4,055
Effective tax rate	6.8 %	(18.5)%
Non-GAAP income tax provision	$ 809	$ 1,038
Non-GAAP income before income taxes	6,835	7,261
Non-GAAP Nominal Tax Rate	11.8 %	14.3 %
Difference between the effective tax rate and Non-GAAP Nominal Tax Rate	5.0 %	32.8 %

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 21.0 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 43.75 percent. Our earnings in Puerto Rico are subject to certain tax incentive grants which provide for tax rates lower than the country's statutory tax rates. Unless our tax incentive grants are extended, they will expire between fiscal years 2022 and 2030. The tax incentive grants, which expired during fiscal year 2021, did not have a material impact on our financial results. See Note 13 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K for additional information.

Our effective tax rate for fiscal year 2021 was 6.8 percent, as compared to (18.5) percent in fiscal year 2020. The increase in the effective tax rate was primarily due to the impacts from certain tax adjustments and year-over-year changes in operational results by jurisdiction.

Our Non-GAAP Nominal Tax Rate for fiscal year 2021 was 11.8 percent, as compared to 14.3 percent in fiscal year 2020. The decrease in our Non-GAAP Nominal Tax Rate for fiscal year 2021 as compared to fiscal year 2020 was primarily due to the year-over-year changes in operational results by jurisdiction.

During fiscal year 2021, we recognized $51 million of operational tax benefits. The operational tax benefits included a $46 million benefit from excess tax benefits associated with stock-based compensation and a $5 million net benefit associated with the resolution of certain income tax audits, finalization of certain tax returns, changes to uncertain tax position reserves, legal entity reorganizations, and changes to certain deferred income tax balances.

During fiscal year 2020, we recognized $138 million of operational tax benefits. The operational tax benefits included a $63 million benefit from excess tax benefits associated with stock-based compensation and a $75 million net benefit associated with the resolution of certain income tax audits, finalization of certain tax returns, changes to uncertain tax position reserves, and changes to certain deferred income tax balances.

An increase in our Non-GAAP Nominal Tax Rate of one percent would result in an additional income tax provision for fiscal years 2021 and 2020 of approximately $68 million and $73 million, respectively.

Certain Tax Adjustments

During fiscal year 2021, the net benefit from certain tax adjustments of $41 million, recognized in *income tax provision (benefit)* in the consolidated statement of income, included the following:

- A net benefit of $106 million associated with the resolution of an audit at the IRS Appellate level for fiscal years 2012, 2013, and 2014. The issues resolved relate to the utilization of certain net operating losses and the allocation of income between Medtronic, Inc. and its wholly owned subsidiary operating in Puerto Rico for businesses that are not the subject of the U.S. Tax Court Case for fiscal years 2005 and 2006.
- A net cost of $73 million related to a tax basis adjustment of previously established deferred tax assets from intercompany intellectual property transactions. The cumulative amount of deferred tax benefit previously recognized from intercompany intellectual property transactions and recorded as Certain Tax Adjustments is $1.5 billion. The corresponding deferred tax assets will be amortized over a period of approximately 20 years.
- A cost of $50 million associated with the amortization of the previously established deferred tax assets from intercompany intellectual property transactions.
- A net cost of $25 million associated with an internal restructuring and intercompany sale of assets.
- A benefit of $83 million related to the capitalization of certain research and development costs for U.S. income tax purposes and the establishment of a deferred tax asset at the U.S. federal statutory tax rate.

During fiscal year 2020, the net benefit from certain tax adjustments of $1.2 billion, recognized in *income tax provision (benefit)* in the consolidated statement of income, included the following:

- A net benefit of $63 million related to the finalization of certain state tax impacts from U.S. Tax Reform, and the issuance of certain final U.S. Treasury 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 $252 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 that will be amortized and deducted over a 10-year period.
- A benefit of $658 million related to the release of a valuation allowance previously recorded against certain net operating losses. Luxembourg enacted tax legislation during the year requiring the company to reassess the realizability of certain net operating losses. The Company evaluated both the positive and negative evidence and released valuation allowance equal to the expected benefit from the utilization of certain net operating losses in connection with a planned intercompany sale of intellectual property.
- A net benefit of $269 million associated with the intercompany sale of intellectual property and the establishment of a deferred tax asset.

Certain tax adjustments will affect the comparability of our operating results between periods. Therefore, we consider these Non-GAAP Adjustments. Refer to the "Executive Level Overview" section of this Management's Discussion and Analysis for further discussion of these adjustments.

LIQUIDITY AND CAPITAL RESOURCES

We are currently in a strong financial position, despite the impact COVID-19 had on our business and financial results during fiscal years 2021 and 2020. We believe our balance sheet and liquidity provide us with flexibility, and our cash, cash equivalents, and current investments, along with our credit facility and related commercial paper programs will satisfy our foreseeable operating needs.

Our liquidity and capital structure are evaluated regularly within the context of our annual operating and strategic planning processes. 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:

	Fiscal Year	
(in millions)	2021	2020
Cash provided by (used in):		
Operating activities	$ 6,240	$ 7,234
Investing activities	(2,866)	(3,203)
Financing activities	(4,136)	(4,198)
Effect of exchange rate changes on cash and cash equivalents	215	(86)
Net change in cash and cash equivalents	$ (547)	$ (253)

Operating Activities The $994 million decrease in net cash provided was primarily driven by a decrease in cash collected from customers and an increase in cash paid for income taxes, partially offset by a decrease in cash paid to employees, a decrease in payments made for employer taxes, and a decrease in retirement benefit plan contributions. The decrease in cash collected from customers was primarily related to COVID-19 driving decreased sales in the fourth quarter of fiscal year 2020 and first quarter of fiscal year 2021, when compared to the prior fiscal year. The increase in cash paid for income taxes was primarily due to increased estimated federal tax payments and tax payments associated with IRS audit settlements in fiscal year 2021. Cash paid to employees decreased due to lower annual incentive plan payouts compared the prior fiscal year. Payments made for employer taxes decreased due to the deferral of payment on the Company's share of Social Security taxes allowed by the CARES Act in the current fiscal year. For information on retirement benefit plan contributions, refer to Note 15 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Investing Activities The $337 million decrease in net cash used was primarily attributable to a decrease in net purchases of investments of $1.0 billion, partially offset by a decrease in cash paid for acquisitions of $506 million as compared to fiscal year 2020.

Financing Activities The $62 million decrease in net cash used included a number of largely offsetting items. Contributing to the decrease in cash used was a decrease in share repurchases of $674 million. Partially offsetting this decrease was a net decrease in short-term borrowings of $294 million and an increase in dividends paid to shareholders of $226 million. For fiscal year 2021, financing cash flows were impacted by the Mizuho Bank term loan under which we borrowed ¥300 billion in the first quarter of fiscal year 2021, which was subsequently repaid in the fourth quarter of fiscal year 2021. Fiscal year 2021 financing cash flows were also impacted by the issuance of $7.2 billion of Euro-denominated senior notes offset by the early redemption of $6.0 billion of senior notes for $6.3 billion of total consideration, and repayment of an additional $911 million of Euro-denominated senior notes. For comparison, financing cash flows for fiscal year 2020 reflect 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. We also repaid $500 million of senior notes at maturity during the fourth quarter of fiscal year 2020. For more information on the aforementioned Mizuho Bank term loan, and issuances and redemptions of senior notes, refer to the Debt and Capital section.

Debt and Capital

Our capital structure consists of equity and interest-bearing debt. We primarily utilize unsecured senior debt obligations to meet our financing needs and, to a lesser extent, bank borrowings. From time to time, we may repurchase our outstanding debt obligations in the open market or through privately negotiated transactions.

Total debt at April 30, 2021 was $26.4 billion, as compared to $24.8 billion at April 24, 2020. The increase in total debt was primarily driven by fluctuations in exchange rates as it pertains to our Euro-denominated senior notes and, to a lesser extent, the net impact of the issuance and redemption of senior notes, both of which are described below.

In September 2020, we issued six tranches of Euro-denominated senior notes with an aggregate principal of €6.3 billion, with maturities ranging from fiscal year 2023 to fiscal year 2051, resulting in cash proceeds of approximately $7.2 billion, net of discounts and issuance costs. The Euro-denominated debt is designated as a net investment hedge of certain of our European operations. We used the net proceeds of the offering to fund the early redemption of $6.0 billion of senior notes for $6.3 billion of total consideration in October 2020. Additionally, we used the proceeds to repay our €750 million floating rate senior notes at maturity in March 2021. We recognized a loss on debt extinguishment of $308 million in fiscal year 2021, which primarily included cash premiums and accelerated amortization of deferred financing costs and debt discounts and premiums. The loss on debt extinguishment was recognized in *interest expense* in the consolidated statements of income.

In May 2020, we entered into an unsecured term loan agreement with Mizuho Bank, Ltd. for an aggregate principal amount of up to ¥300 billion, or approximately $2.8 billion, with a term of six months and the option to extend for an additional six months. On May 13, 2020, Medtronic Luxco borrowed the entire amount of the term loan under the Loan Agreement. The proceeds of the loan were used for general corporate purposes. The Japanese Yen denominated debt was designated as a net investment hedge of certain of our Japanese operations. On November 12, 2020, we exercised our option to extend the term of the loan for an additional six months. During the fourth quarter of fiscal year 2021, we de-designated the Yen denominated debt as a net investment hedge and repaid the term loan in full, including interest.

We repurchase our ordinary shares from time to time as part of our focus on returning value to our shareholders. In March 2019, the Company's Board of Directors authorized the repurchase of $6.0 billion of the Company's ordinary shares. There is no specific time period associated with these repurchase authorizations. During fiscal years 2021 and 2020, we repurchased a total of 4 million and 12 million shares, respectively, under these programs at an average price of $126.80 and $106.22, respectively. At April 30, 2021, we had approximately $5.4 billion remaining under the share repurchase programs authorized by our Board of Directors.

For more information on credit arrangements, see Note 6 of the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Liquidity

Our liquidity sources at April 30, 2021 include $3.6 billion of cash and cash equivalents and $7.2 billion of current investments.
Additionally, we maintain commercial paper programs (no commercial paper outstanding at April 30, 2021) and a Credit Facility.

Our investments primarily include available-for-sale debt securities, including U.S. and non-U.S. government and agency securities, corporate debt securities, mortgage-backed securities, and other asset-backed securities. See Note 5 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K for additional information on our investments.

We maintain multicurrency commercial paper programs 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 April 30, 2021 and April 24, 2020, 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 2025. The Credit Facility provides backup funding for the commercial paper programs 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 April 30, 2021 and April 24, 2020, 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 Rating Services (S&P) and Moody's Investor Service (Moody’s). Facility fees

are payable on the Credit Facility and are determined in the same manner as the interest rates. We are in compliance with all covenants related to the Credit Facility.

The following table is a summary of our S&P and Moody's long-term debt ratings and short-term debt ratings:

	Agency Rating [1]	
	April 30, 2021	April 24, 2020
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 is 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 April 30, 2021 were unchanged as compared to the ratings at April 24, 2020. 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, Credit Facility, and related commercial paper programs.

Contractual Obligations and Cash Requirements

We have future contractual obligations and other minimum commercial commitments that are entered into in the normal course of business, some of which are recorded in our consolidated balance sheet. 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.

Presented below is a summary of our off-balance sheet contractual obligations and other minimum commercial commitments at April 30, 2021, as well as long-term contractual obligations reflected in the balance sheet at April 30, 2021.

	Maturity by Fiscal Year						
(in millions)	Total	2022	2023	2024	2025	2026	Thereafter
Contractual obligations related to off-balance sheet arrangements:							
Commitments to fund minority investments, milestone payments, and royalty obligations[1]	$ 354	$ 157	$ 72	$ 47	$ 22	$ 19	$ 36
Interest payments[2]	7,729	489	487	480	481	414	5,377
Other[3]	1,038	550	232	103	42	29	82
Contractual obligations reflected in the balance sheet[4]:							
Debt obligations[5]	$ 26,588	$ 11	$ 4,237	$ 6	$ 1,895	$ 2,423	$ 18,016
Operating leases	1,090	223	166	147	119	97	338
Contingent consideration[6]	270	78	120	33	34	4	—
Tax obligations[7]	1,672	176	176	330	440	550	—

(1) Includes commitments related to the funding of minority investments, estimated milestone payments, and royalty obligations. While it is not certain if and/or when payments will be made, the maturity dates included in the table reflect our best estimates.

(2) Includes the contractual interest payments on our outstanding debt and excludes the impacts of debt premium and discount amortization. See Note 6 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for additional information on our debt agreements.

(3) Includes inventory purchase commitments, research and development, and other arrangements that are legally binding and specify minimum purchase quantities or spending amounts. These purchase commitments do not exceed our projected requirements and are in the normal course of business. Excludes open purchase orders with a remaining term of less than one year.

(4) Excludes defined benefit plan obligations, guarantee obligations, uncertain tax positions, non-current tax liabilities, and litigation settlements for which we cannot make a reliable estimate of the period of cash settlement. For further information, see Notes 13, 15, and 18 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for further information.

(5) Includes the current and non-current portion of our Senior Notes and bank borrowings. Excludes debt premium and discount, unamortized gains from terminated interest rate swap agreements, and commercial paper. See Notes 6 and 7 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for additional information on our debt agreements and interest rate swap agreements, respectively.

(6) Includes the fair value of our current and non-current portions of contingent consideration. While it is not certain if and/or when payments will be made, the maturity dates included in this table reflect our best estimates.

(7) Represents the tax obligations associated with the transition tax that resulted from U.S. Tax Reform. The transition tax will be paid over an eight-year period and will not accrue interest. See Note 13 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for further information.

In the normal course of business, we periodically enter into agreements that require us to indemnify customers or suppliers for specific risks, such as claims for injury or property damage arising as a result of our products or the negligence of our personnel or claims alleging that our products infringe third-party patents or other intellectual property. Our maximum exposure under these indemnification provisions is unable to be estimated, and we have not accrued any liabilities within our consolidated financial statements or included any indemnification provisions in the table above. Historically, we have not experienced significant losses on these types of indemnification agreements.

Note 18 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K 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 we consider to be permanently reinvested. 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.

Beyond the contractual obligations and other minimum commercial commitments outlined above, we have recurring cash requirements arising from the normal operation of our business that include capital expenditures, research and developments costs, and other operational costs.

We believe our balance sheet and liquidity provide us with flexibility, and our cash, cash equivalents, current investments, Credit Facility and related commercial paper programs as well as our ability to generate operating cash flows will satisfy our current and future contractual obligations and cash requirements. We regularly review our capital needs and consider various investing and financing alternatives to support our requirements.

ACQUISITIONS

Information regarding acquisitions is included in Notes 3 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

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 in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

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, 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 18 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

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 as of the first day of 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 the highest and best use of the assets based on 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 1 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

SUPPLEMENTAL 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. Medtronic plc and Medtronic, Inc. each have provided a full and unconditional guarantee of the obligations of Medtronic Luxco under the Senior Notes (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 tables present summarized financial information for the fiscal year ended April 30, 2021 for the obligor groups of Medtronic and Medtronic Luxco Senior Notes, and CIFSA Senior Notes. The obligor group consists of the parent company guarantor, subsidiary issuer, and subsidiary guarantors for the applicable senior notes. The summarized financial information is presented after elimination of (i) intercompany transactions and balances among the guarantors and issuers and (ii) equity in earnings from and investments in any subsidiary that is a non-guarantor or issuer.

The summarized results of operations information for the fiscal year ended April 30, 2021 was as follows:

(in millions)	Medtronic & Medtronic Luxco Senior Notes [1]	CIFSA Senior Notes [2]
Net sales	$ 1,925	$ —
Operating profit	11	80
Loss before income taxes	(1,201)	(741)
Net loss attributable to Medtronic	(784)	(725)

The summarized balance sheet information for the fiscal year ended April 30, 2021 was as follows:

(in millions)	Medtronic & Medtronic Luxco Senior Notes [1]	CIFSA Senior Notes [2]
Total current assets[3]	$ 21,901	$ 9,038
Total noncurrent assets[4]	11,597	8,041
Total current liabilities[5]	28,484	17,413
Total noncurrent liabilities[6]	56,772	63,328
Noncontrolling interests	174	174

(1) The Medtronic Senior Notes and Medtronic Luxco Senior Notes obligor group consists of the following entities: Medtronic plc, Medtronic Luxco, and Medtronic, Inc. Refer to the guarantee summary above for further details.

(2) The CIFSA Senior Notes obligor group consists of the following entities: Medtronic plc, Medtronic Luxco, CIFSA, and CIFSA Subsidiary Guarantors. Please refer to the guarantee summary above for further details.

(3) Includes receivables due from non-guarantor subsidiaries of $21.4 billion and $9.0 billion for Medtronic & Medtronic Luxco Senior Notes, and CIFSA Senior Notes, respectively.
(4) Includes loans receivable due from non-guarantor subsidiaries of $6.5 billion and $8.0 billion for Medtronic & Medtronic Luxco Senior Notes, and CIFSA Senior Notes, respectively.
(5) Includes payables due to non-guarantor subsidiaries of $26.4 billion and $17.3 billion for Medtronic & Medtronic Luxco Senior Notes, and CIFSA Senior Notes, respectively.
(6) Includes loans payable due to non-guarantor subsidiaries of $29.0 billion and $43.5 billion for Medtronic & Medtronic Luxco Senior Notes, and CIFSA Senior Notes, respectively.

Item 7A. 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, as well as 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. Currencies of our derivative instruments include the Euro, Japanese Yen, Chinese Yuan, and others. Fluctuations in the 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 April 30, 2021 and April 24, 2020 was $14.7 billion and $11.9 billion, respectively. At April 30, 2021, these contracts were in a net unrealized loss position of $211 million. A sensitivity analysis of changes in the fair value of all currency exchange rate derivative contracts at April 30, 2021 and April 24, 2020 indicates that, if the U.S. dollar uniformly strengthened/ weakened by 10 percent against all currencies, it would have the following impact on the fair value of these contracts:

	Increase (decrease)	
(in millions)	2021	2020
10% appreciation in the U.S. dollar	$ 995	$ 750
10% depreciation in the U.S. dollar	(995)	(750)

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 fiscal year ended 2021.

INTEREST RATE RISK

We are subject to interest rate risk on our 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 April 30, 2021 was comprised of debt predominately denominated in U.S. dollars and the Euro, 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. We enter into marketable debt security positions for cash management purposes.

A sensitivity analysis of the impact on our interest rate-sensitive financial instruments of a hypothetical 10 basis point change in interest rates, as compared to interest rates at April 30, 2021 and April 24, 2020, would have the following impact on the fair value of these instruments:

	Increase (decrease)	
(in millions)	2021	2020
10 basis point increase in interest rates	$ 21	$ 34
10 basis point decrease in interest rates	(21)	(34)

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 Management's Discussion and Analysis in "Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations" in this Annual Report on Form 10-K. For

additional discussion of market risk, see Notes 5 and 7 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Medtronic plc

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Medtronic plc and its subsidiaries (the "Company") as of April 30, 2021 and April 24, 2020, and the related consolidated statements of income, of comprehensive income, of equity and of cash flows for each of the three years in the period ended April 30, 2021, including the related notes and financial statement schedule listed in the index appearing under Item 15(a)(1) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of April 30, 2021, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of April 30, 2021 and April 24, 2020, and the results of its operations and its cash flows for each of the three years in the period ended April 30, 2021 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of April 30, 2021, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in fiscal year 2020.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Annual Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable

assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Income Tax Reserve for the Uncertain Tax Position Related to Puerto Rico Manufacturing

As described in Notes 13 and 18 to the consolidated financial statements, management records reserves for uncertain tax positions related to unresolved matters with the Internal Revenue Service (IRS) and other taxing authorities. A remaining unresolved issue with the IRS, 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 manufacturing sites. These reserves are subject to a high degree of estimation and management judgment. Total reserves relating to uncertain tax positions as of April 30, 2021 were $1.668 billion, of which the Puerto Rico manufacturing reserve makes up a significant portion.

The principal considerations for our determination that performing procedures relating to the income tax reserve for the uncertain tax position related to Puerto Rico manufacturing is a critical audit matter are the significant judgment by management when determining the reserves, including a high degree of estimation uncertainty relative to the unresolved issue with the IRS involving one of the Company's manufacturing sites. This in turn led to a high degree of auditor judgment, effort and subjectivity in performing procedures and evaluating audit evidence to support management's accurate measurement of the income tax reserve for the uncertain tax position related to Puerto Rico manufacturing, as the nature of the evidence is often highly subjective.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the recognition of the income tax reserves for uncertain tax positions, as well as controls over measurement of the reserves. These procedures also included, among others, (i) testing management's process for determining the reserve for the uncertain tax position, (ii) evaluating the status and results of the U. S. Tax Court case, and (iii) evaluating the consistency of the reserve calculation with the relevant documents related to the tax court case.

/s/ PricewaterhouseCoopers LLP
Minneapolis, Minnesota
June 25, 2021

We have served as the Company's auditor since 1963.

Medtronic plc
Consolidated Statements of Income

(in millions, except per share data)	Fiscal Year 2021	2020	2019
Net sales	$ 30,117	$ 28,913	$ 30,557
Costs and expenses:			
Cost of products sold	10,483	9,424	9,155
Research and development expense	2,493	2,331	2,330
Selling, general, and administrative expense	10,148	10,109	10,418
Amortization of intangible assets	1,783	1,756	1,764
Restructuring charges, net	293	118	198
Certain litigation charges	118	313	166
Other operating expense, net	315	71	258
Operating profit	4,484	4,791	6,268
Other non-operating income, net	(336)	(356)	(373)
Interest expense	925	1,092	1,444
Income before income taxes	3,895	4,055	5,197
Income tax provision (benefit)	265	(751)	547
Net income	3,630	4,806	4,650
Net income attributable to noncontrolling interests	(24)	(17)	(19)
Net income attributable to Medtronic	$ 3,606	$ 4,789	$ 4,631
Basic earnings per share	$ 2.68	$ 3.57	$ 3.44
Diluted earnings per share	$ 2.66	$ 3.54	$ 3.41
Basic weighted average shares outstanding	1,344.9	1,340.7	1,346.4
Diluted weighted average shares outstanding	1,354.0	1,351.1	1,357.5

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

Medtronic plc
Consolidated Statements of Comprehensive Income

(in millions)	Fiscal Year 2021	2020	2019
Net income	$ 3,630	$ 4,806	$ 4,650
Other comprehensive income (loss), net of tax:			
Unrealized gain on investment securities	92	45	102
Translation adjustment	1,699	(829)	(1,375)
Net investment hedge	(1,694)	405	88
Net change in retirement obligations	505	(544)	(191)
Unrealized (loss) gain on cash flow hedges	(519)	72	401
Other comprehensive income (loss)	83	(851)	(975)
Comprehensive income including noncontrolling interests	3,713	3,955	3,675
Comprehensive income attributable to noncontrolling interests	(32)	(15)	(16)
Comprehensive income attributable to Medtronic	$ 3,681	$ 3,940	$ 3,659

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

Medtronic plc
Consolidated Balance Sheets

(in millions)	April 30, 2021	April 24, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 3,593	$ 4,140
Investments	7,224	6,808
Accounts receivable, less allowances and credit losses of $241 and $208, respectively	5,462	4,645
Inventories, net	4,313	4,229
Other current assets	1,955	2,209
Total current assets	22,548	22,031
Property, plant, and equipment, net	5,221	4,828
Goodwill	41,961	39,841
Other intangible assets, net	17,740	19,063
Tax assets	3,169	2,832
Other assets	2,443	2,094
Total assets	$ 93,083	$ 90,689
LIABILITIES AND EQUITY		
Current liabilities:		
Current debt obligations	$ 11	$ 2,776
Accounts payable	2,106	1,996
Accrued compensation	2,482	2,099
Accrued income taxes	435	502
Other accrued expenses	3,475	2,993
Total current liabilities	8,509	10,366
Long-term debt	26,378	22,021
Accrued compensation and retirement benefits	1,557	1,910
Accrued income taxes	2,251	2,682
Deferred tax liabilities	1,028	1,174
Other liabilities	1,756	1,664
Total liabilities	41,481	39,817
Commitments and contingencies (Notes 3, 16, and 18)		
Shareholders' equity:		
Ordinary shares— par value $0.0001, 2.6 billion shares authorized, 1,345,400,671 and 1,341,074,724 shares issued and outstanding, respectively	—	—
Additional paid-in capital	26,319	26,165
Retained earnings	28,594	28,132
Accumulated other comprehensive loss	(3,485)	(3,560)
Total shareholders' equity	51,428	50,737
Noncontrolling interests	174	135
Total equity	51,602	50,872
Total liabilities and equity	$ 93,083	$ 90,689

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

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Medtronic plc
Consolidated Statements of Equity

(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	—	—	—	4,631	—	4,631	19	4,650
Other comprehensive loss	—	—	—	—	(972)	(972)	(3)	(975)
Dividends to shareholders ($2.00 per ordinary share)	—	—	—	(2,693)	—	(2,693)	—	(2,693)
Issuance of shares under stock purchase and award plans	18	—	923	—	—	923	—	923
Repurchase of ordinary shares	(31)	—	(2,808)	—	—	(2,808)	—	(2,808)
Stock-based compensation	—	—	290	—	—	290	—	290
Changes to noncontrolling ownership interests	—	—	—	—	—	—	3	3
Cumulative effect of change in accounting principle[1]	—	—		(47)	47	—	—	—
April 26, 2019	1,341	$ —	$ 26,532	$ 26,270	$ (2,711)	$ 50,091	$ 121	$ 50,212
Net income	—	—	—	4,789	—	4,789	17	4,806
Other comprehensive loss	—	—	—	—	(849)	(849)	(2)	(851)
Dividends to shareholders ($2.16 per ordinary share)	—	—	—	(2,894)	—	(2,894)	—	(2,894)
Issuance of shares under stock purchase and award plans	12	—	564	—	—	564	—	564
Repurchase of ordinary shares	(12)	—	(1,228)	—	—	(1,228)	—	(1,228)
Stock-based compensation	—	—	297	—	—	297	—	297
Changes to noncontrolling ownership interests	—	—	—	—	—	—	(1)	(1)
Cumulative effect of change in accounting principle[2]	—	—	—	(33)	—	(33)	—	(33)
April 24, 2020	1,341	$ —	$ 26,165	$ 28,132	$ (3,560)	$ 50,737	$ 135	$ 50,872
Net income	—	—	—	3,606	—	3,606	24	3,630
Other comprehensive income	—	—	—	—	75	75	8	83
Dividends to shareholders ($2.32 per ordinary share)	—	—	—	(3,120)	—	(3,120)	—	(3,120)
Issuance of shares under stock purchase and award plans	8	—	382	—	—	382	—	382
Repurchase of ordinary shares	(4)	—	(559)	—	—	(559)	—	(559)
Stock-based compensation	—	—	344	—	—	344	—	344
Changes to noncontrolling ownership interests	—	—	(13)	—	—	(13)	7	(6)

(1) The cumulative effect of change in accounting principle in 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.

(2) The cumulative effect of change in accounting principle in fiscal year 2020 resulted from the adoption of accounting guidance that requires lessees to recognize right-of-use assets and lease liabilities on the balance sheet. As a result of the adoption, the Company adjusted the opening balance of retained earnings for $33 million as of April 27, 2019.

(3) See Note 1 to the consolidated financial statements for discussion regarding the adoption of accounting standards during fiscal year 2021.

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

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Medtronic plc
Consolidated Statements of Cash Flows

(in millions)	Fiscal Year 2021	2020	2019
Operating Activities:			
Net income	$ 3,630	$ 4,806	$ 4,650
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	2,702	2,663	2,659
Provision for doubtful accounts	128	99	78
Deferred income taxes	(422)	(1,315)	(304)
Stock-based compensation	344	297	290
Loss on debt extinguishment	308	406	457
Other, net	251	217	257
Change in operating assets and liabilities, net of acquisitions and divestitures:			
Accounts receivable, net	(761)	1,291	(581)
Inventories, net	78	(577)	(274)
Accounts payable and accrued liabilities	531	(44)	399
Other operating assets and liabilities	(549)	(609)	(624)
Net cash provided by operating activities	6,240	7,234	7,007
Investing Activities:			
Acquisitions, net of cash acquired	(994)	(488)	(1,827)
Additions to property, plant, and equipment	(1,355)	(1,213)	(1,134)
Purchases of investments	(11,808)	(11,039)	(2,532)
Sales and maturities of investments	11,345	9,574	4,683
Other investing activities, net	(54)	(37)	36
Net cash used in investing activities	(2,866)	(3,203)	(774)
Financing Activities:			
Change in current debt obligations, net	(311)	(17)	(713)
Proceeds from short-term borrowings (maturities greater than 90 days)	2,789	—	—
Repayments from short-term borrowings (maturities greater than 90 days)	(2,853)	—	—
Issuance of long-term debt	7,172	5,568	7,794
Payments on long-term debt	(7,367)	(6,110)	(7,948)
Dividends to shareholders	(3,120)	(2,894)	(2,693)
Issuance of ordinary shares	474	662	992
Repurchase of ordinary shares	(652)	(1,326)	(2,877)
Other financing activities	(268)	(81)	14
Net cash used in financing activities	(4,136)	(4,198)	(5,431)
Effect of exchange rate changes on cash and cash equivalents	215	(86)	(78)
Net change in cash and cash equivalents	(547)	(253)	724
Cash and cash equivalents at beginning of period	4,140	4,393	3,669
Cash and cash equivalents at end of period	$ 3,593	$ 4,140	$ 4,393
Supplemental Cash Flow Information			
Cash paid for:			
Income taxes	$ 1,250	$ 878	$ 1,558
Interest	582	643	973

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

Medtronic plc
Notes to Consolidated Financial Statements

1. Summary of Significant Accounting Policies

Nature of Operations Medtronic plc (Medtronic or the Company) 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. The Company provides innovative products and therapies to serve healthcare systems, physicians, clinicians, and patients. Medtronic was founded in 1949 and is headquartered in Dublin, Ireland.

Principles of Consolidation The 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 fully eliminated in consolidation. Certain reclassifications have been made to prior year financial statements to conform to classifications used in the current year. Amounts reported in millions within this annual report are computed based on the amounts in thousands, and therefore, the sum of the components may not equal the total amount reported in millions due to rounding. Additionally, certain columns and rows within tables may not sum due to rounding.

Use of Estimates The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States (U.S.) (U.S. GAAP) requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Estimates are used when accounting for items such as income taxes, contingencies, intangible asset, and liability valuations. Actual results may or may not differ from those estimates.

COVID-19 has had, and may continue to have, an adverse effect on our business, results of operations, financial condition, and cash flows, and its future impacts remain highly uncertain and unpredictable. The Company has considered the disruptions caused by COVID-19, including lower sales and customer demand than the prior year in many businesses as well as macroeconomic factors. As a result, the Company has also assessed the potential impact on certain accounting estimates including, but not limited to, the allowance for doubtful accounts, inventory reserves, return reserves, the valuation of goodwill, intangible assets, other long-lived assets, investments and contingent consideration, as of April 30, 2021 and through the date of this report. There was not a material impact to accounting estimates associated with the Company’s consolidated financial statements as of and for the fiscal years ended April 30, 2021 and April 24, 2020.

Fiscal Year-End The Company utilizes a 52/53-week fiscal year, ending the last Friday in April, for the presentation of its consolidated financial statements and related notes thereto at April 30, 2021 and April 24, 2020 and for each of the three fiscal years ended April 30, 2021 (fiscal year 2021), April 24, 2020 (fiscal year 2020), and April 26, 2019 (fiscal year 2019). Fiscal year 2021 was a 53-week year, with the extra week having occurred in the first fiscal month of the first quarter. Fiscal years 2020 and 2019 were 52-week years.

Cash Equivalents The Company considers highly liquid investments with maturities of three months or less from the date of purchase to be cash equivalents. These investments are carried at cost, which approximates fair value.

Investments The Company invests in marketable debt and equity securities, investments that do not have readily determinable fair values, and investments accounted for under the equity method.

Marketable debt securities are classified and accounted for as available-for-sale. These investments are recorded at fair value in the consolidated balance sheets. The change in fair value for available-for-sale securities is recorded, net of taxes, as a component of *accumulated other comprehensive loss* on the consolidated balance sheets. The Company determines the appropriate classification of its investments in marketable debt securities at the time of purchase and reevaluates such determinations at each balance sheet date. The classification of marketable debt securities as current or long-term is based on the nature of the securities and the availability for use in current operations consistent with the Company's management of its capital structure and liquidity.

Certain of the Company's investments in marketable equity securities and other securities are long-term, strategic investments in companies that are in various stages of development and are included in *other assets* on the consolidated balance sheets. Marketable equity securities are recorded at fair value in the consolidated balance sheets. The change in fair value of marketable equity securities is recognized within *other non-operating income, net* in the consolidated statements of income. At each reporting period, the Company makes a qualitative assessment considering impairment indicators to evaluate whether the investment is impaired. Equity securities accounted for under the equity method are initially recorded at the amount of the Company's investment and are adjusted each period for the Company's share of the investee's income or loss and dividends paid. Securities accounted for under the equity method are reviewed quarterly for changes in circumstance or the occurrence of events that suggest other than temporary impairment has occurred.

Accounts Receivable and Allowance for Doubtful Accounts and Credit Losses The Company grants credit to customers in the normal course of business and maintains an allowance for doubtful accounts for potential credit losses. When evaluating allowances for doubtful accounts, the Company considers various factors, including historical experience and customer-specific information. Uncollectible accounts are written-off against the allowance when it is deemed that a customer account is uncollectible.

Inventories Inventories are stated at the lower of cost or net realizable value, with cost determined on a first-in, first-out basis. The Company reduces the carrying value of inventories for items that are potentially excess, obsolete, or slow-moving based on changes in customer demand, technology developments, or other economic factors.

Property, Plant, and Equipment Property, plant, and equipment is stated at cost and depreciated over the useful lives of the assets using the straight-line method. Additions and improvements that extend the lives of the assets are capitalized, while expenditures for repairs and maintenance are expensed as incurred. The Company assesses property, plant, and equipment for impairment whenever events or changes in circumstances indicate that the carrying amount of property, plant, and equipment asset groupings may not be recoverable. The cost of interest that is incurred in connection with significant ongoing construction projects is capitalized using a weighted average interest rate. These costs are included in property, plant, and equipment and amortized over the useful life of the related asset. Upon retirement or disposal of property, plant, and equipment, the costs and related amounts of accumulated depreciation or amortization are eliminated from the asset and accumulated depreciation accounts. The difference, if any, between the net asset value and the proceeds, is recognized in earnings.

Goodwill and Intangible Assets Goodwill is the excess of the purchase price over the estimated fair value of net assets of acquired businesses. In accordance with U.S. GAAP, goodwill is not amortized. 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 the carrying amount may be impaired. Impairment testing for goodwill is performed at a 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. Internal operational budgets and long-range strategic plans are used as a basis for the cash flow analysis. The Company also utilizes assumptions for working capital, capital expenditures, and terminal growth rates. The discount rate applied to the cash flow analysis is based on the weighted average cost of capital ("WACC") for each reporting unit. An impairment loss is recognized when the carrying amount of the reporting unit's net assets exceeds the estimated fair value of the reporting unit.

Intangible assets include patents, trademarks, tradenames, customer relationships, purchased technology, and in-process research and development (IPR&D). Intangible assets with a definite life are amortized on a straight-line basis with estimated useful lives typically ranging from three to 20 years. Amortization is recognized within *amortization of intangible assets* in the consolidated statements of income. Intangible assets with a definite life are tested for impairment whenever events or changes in circumstances indicate that the carrying amount of an intangible asset (asset group) may not be recoverable. When events or changes in circumstances indicate that the carrying amount 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.

Acquired IPR&D represents the fair value assigned to those research and development projects that were acquired in a business combination for which the related products have not received regulatory approval and have no alternative future use. IPR&D is capitalized at its fair value as an indefinite-lived intangible asset, and any development costs incurred after the acquisition are expensed as incurred. The fair value of IPR&D is determined by estimating the future cash flows of each project and discounting the net cash flows back to their present values. Upon achieving regulatory approval or commercial viability for the related product, the indefinite-lived intangible asset is accounted for as a definite-lived asset and is amortized on a straight-line basis over the estimated useful life. If the project is not completed or is terminated or abandoned, the Company may have an impairment related to the IPR&D, which is charged to expense. Indefinite-lived intangible assets are tested for impairment annually in the third quarter of the fiscal year and whenever events or changes in circumstances indicate that the carrying amount may be impaired. Impairment is calculated as the excess of the asset's carrying value over its fair value. Fair value is generally

determined using a discounted future cash flow analysis. IPR&D acquired outside of a business combination is expensed immediately.

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. The Company records contingent consideration at fair value at the date of acquisition based on the consideration expected to be transferred, estimated as the probability-weighted future cash flows, discounted back to present value. The fair value of contingent consideration is measured using projected payment dates,

discount rates, probabilities of payment, and projected revenues (for revenue-based considerations). Projected revenues are based on the Company's most recent internal operational budgets and long-range strategic plans. The discount rate used is determined at the time of measurement in accordance with accepted valuation methodologies. Changes in projected revenues, probabilities of payment, discount rates, and projected payment dates may result in adjustments to the fair value measurements. Contingent consideration is remeasured each reporting period using Level 3 inputs, and the change in fair value, including accretion for the passage of time, is recognized as income or expense 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.

Self-Insurance The Company self-insures the majority of its insurable risks, including medical and dental costs, disability coverage, physical loss to property, business interruptions, workers' compensation, comprehensive general, and product liability. Insurance coverage is obtained for risks required to be insured by law or contract. The Company uses claims data and historical experience, as applicable, to estimate liabilities associated with the exposures that the Company has self-insured.

Retirement Benefit Plan Assumptions 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. See Note 15 for assumptions used in determining pension and post-retirement benefit costs and liabilities.

Derivatives The Company recognizes all derivative financial instruments in its consolidated financial statements at fair value in accordance with authoritative guidance on derivatives and hedging, and presents assets and liabilities associated with derivative financial instruments on a gross basis in the consolidated financial statements. For derivative instruments that are designated and qualify as hedging instruments, the hedging instrument must be designated as a fair value hedge or a cash flow hedge, based upon the exposure being hedged. See Note 7 for more information on the Company's derivative instruments and hedging programs.

Fair Value Measurements The Company follows the authoritative guidance on fair value measurements and disclosures with respect to assets and liabilities that are measured at fair value on both a recurring and nonrecurring basis. Fair value is defined as the exit price, or the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. The authoritative guidance also establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs market participants would use in valuing the asset or liability, based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the factors market participants would use in valuing the asset or liability developed based upon the best information available in the circumstances. The categorization of financial assets and financial liabilities within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The hierarchy is broken down into three levels defined as follows:

- Level 1 - Inputs are quoted prices in active markets for identical assets or liabilities.
- Level 2 - Inputs include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, and inputs (other than quoted prices) that are observable for the asset or liability, either directly or indirectly.
- Level 3 - Inputs are unobservable for the asset or liability.

Financial assets that are classified as Level 1 securities include highly liquid government bonds within U.S. government and agency securities and marketable equity securities for which quoted market prices are available. In

addition, the Company classifies currency forward contracts as Level 1 since they are valued using quoted market prices in active markets which have identical assets or liabilities.

The valuation for most fixed maturity securities are classified as Level 2. Financial assets that are classified as Level 2 include corporate debt securities, government and agency securities, other asset-backed securities, debt funds, and mortgage-backed securities whose value is determined using inputs that are observable in the market or may be derived principally from, or corroborated by, observable market data such as pricing for similar securities, recently executed transactions, cash flow models with yield curves, and benchmark securities. In addition, interest rate swaps and total return swaps are included in Level 2 as

the Company uses inputs other than quoted prices that are observable for the asset. The Level 2 derivative instruments are primarily valued using standard calculations and models that use readily observable market data as their basis.

Financial assets are considered Level 3 when their fair values are determined using pricing models, discounted cash flow methodologies, or similar techniques, and at least one significant model assumption or input is unobservable. Financial assets that are classified as Level 3 include certain investment securities for which there is limited market activity such that the determination of fair value requires significant judgment or estimation, certain corporate debt securities and auction rate securities. With the exception of auction rate securities, these securities are valued using third-party pricing sources that incorporate transaction details such as contractual terms, maturity, timing, and amount of expected future cash flows, as well as assumptions about liquidity and credit valuation adjustments by market participants. The fair value of auction rate securities is estimated by the Company using a discounted cash flow model, which incorporates significant unobservable inputs. The significant unobservable inputs used in the fair value measurement of the Company's auction rate securities are years to principal recovery and the illiquidity premium that is incorporated into the discount rate. For goodwill, other intangible assets, and IPR&D, 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.

Certain investments for which the fair value is measured using the net asset value per share (or its equivalent) practical expedient are excluded from the fair value hierarchy. Financial assets for which the fair value is measured using the net asset value per share practical expedient include certain debt funds, equity and fixed income commingled trusts, and registered investment companies.

Revenue Recognition The Company sells its products through direct sales representatives and independent distributors. Additionally, a portion of the Company's revenue is generated from consignment inventory maintained at hospitals. The Company recognizes revenue when control is transferred to the customer. For products sold through direct sales representatives and independent distributors, control is transferred upon shipment or upon delivery, based on the contract terms and legal requirements. For consignment inventory, control is transferred when the product is used or implanted. Payment terms vary depending on the country of sale, type of customer, and type of product.

If a contract contains more than one performance obligation, the transaction price is allocated to each performance obligation based on relative standalone selling price. Shipping and handling is treated as a fulfillment activity rather than a promised service, and therefore, is not considered a performance obligation. Taxes assessed by a governmental authority that are both imposed on, and concurrent with, a specific revenue producing transaction and collected by the Company from customers (for example, sales, use, value added, and some excise taxes) are not included in revenue. For contracts that have an original duration of one year or less, the Company uses the practical expedient applicable to such contracts and does not adjust the transaction price for the time value of money.

The amount of revenue recognized reflects sales rebates and returns, which are estimated based on sales terms, historical experience, and trend analysis. In estimating rebates, the Company considers the lag time between the point of sale and the payment of the rebate claim, the stated rebate rates, and other relevant information. The Company records adjustments to rebates and returns reserves as increases or decreases of revenue.

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 primarily represents remote monitoring services and equipment maintenance, for which consideration is received at the same time as consideration for the device or equipment. Revenue related to remote monitoring services and equipment maintenance is recognized over the service period as time elapses.

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, primarily related to consumables for previously sold equipment as well as remote monitoring services and equipment maintenance. For contracts that have an original duration of one year or less, the Company has elected the practical expedient applicable to such contracts and does not disclose the transaction price for remaining performance obligations at the end of each reporting period and when the Company expects to recognize this revenue.

Shipping and Handling Shipping and handling costs incurred to physically move product from the Company's premises to the customer's premises are recognized in *selling, general, and administrative expense* in the consolidated statements of income and were $308 million, $347 million, and $350 million in fiscal years 2021, 2020, and 2019, respectively. Other shipping and handling costs incurred to store, move, and prepare products for shipment are recognized in *cost of products sold* in the consolidated statements of income.

Research and Development Research and development costs are expensed when incurred. Research and development costs include costs of research, engineering, and technical activities to develop a new product or service or make significant improvement to an existing product or manufacturing process. Research and development costs also include pre-approval regulatory and clinical trial expenses.

Contingencies The Company records a liability in the consolidated financial statements for loss contingencies 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.

Income Taxes The Company has deferred taxes that arise as a result of the different treatment of transactions for U.S. GAAP and income tax accounting, known as temporary differences. The Company records the tax effect of these temporary differences as deferred tax assets and deferred tax liabilities. Deferred tax assets generally represent items that may be used as a tax deduction or credit in a tax return in future years for which the Company has already recognized the tax benefit in the consolidated statements of income. The Company establishes valuation allowances for deferred tax assets when the amount of expected future taxable income is not likely to support the use of the deduction or credit. Deferred tax liabilities generally represent tax expense for which payment has been deferred or expense has already been taken as a deduction on the Company's tax return but has not yet been recognized as an expense in the consolidated statements of income.

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 fair value of contingent consideration, changes in amounts accrued for certain contingent liabilities for a recent acquisition, a commitment to the Medtronic Foundation, charges associated with business exits, impairment charges, IPR&D charges, and income from funded research and development arrangements.

Other Non-Operating Income, Net Other non-operating income, net includes the non-service component of net periodic pension and post-retirement benefit cost, investment gains and losses, and interest income.

Currency Translation Assets and liabilities of non-U.S. dollar functional currency entities are translated to U.S. dollars at period-end exchange rates, and the currency impacts arising from the translation of the assets and liabilities are recorded as a cumulative translation adjustment, a component of *accumulated other comprehensive loss,* on the consolidated balance sheets. Elements of the consolidated statements of income are translated at the average monthly currency exchange rates in effect during the period. Currency transaction gains and losses are included in *other operating expense, net* in the consolidated statements of income.

Stock-Based Compensation The Company measures stock-based compensation expense at the grant date based on the fair value of the award and recognizes the compensation expense over the requisite service period, which is generally the vesting period. The amount of stock-based compensation expense recognized during a period is based on the portion of the awards that are expected to vest. The Company estimates pre-vesting forfeitures at the time of grant and revises the estimates in subsequent periods.

Recently Adopted Accounting Standards

Current Expected Credit Losses

In June 2016, the Financial Accounting Standards Board (FASB) issued guidance changing the methodology to be used to measure credit losses for certain financial instruments and financial assets, including trade receivables. The new methodology requires the recognition of an allowance that reflects the current estimate of credit losses expected to be incurred over the life of the financial asset. The Company adopted this guidance using the modified

retrospective method in the first quarter of fiscal year 2021. The adoption of this guidance did not have a material impact to the Company's consolidated financial statements.

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, 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.

2. 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 healthcare systems, clinics, third-party healthcare providers, distributors, and other institutions, including governmental healthcare programs and group purchasing organizations.

During the first and fourth quarters of fiscal year 2021, the Company realigned its divisions within Neuroscience and Cardiovascular, respectively. As a result, fiscal year 2020 and 2019 revenue has been recast to adjust for these realignments Additionally, the Company implemented a new operating model in fiscal year 2021, which was fully operational beginning in the fourth quarter.

The table below illustrates net sales by segment and division for fiscal years 2021, 2020, and 2019:

	Net Sales by Fiscal Year		
(in millions)	**2021**	**2020**	**2019**
Cardiac Rhythm & Heart Failure	$ 5,584	$ 5,141	$ 5,849
Structural Heart & Aortic	2,834	2,842	2,882
Coronary & Peripheral Vascular	2,354	2,486	2,774
Cardiovascular	10,772	10,468	11,505
Surgical Innovations	5,438	5,513	5,753
Respiratory, Gastrointestinal, & Renal	3,298	2,839	2,725
Medical Surgical	8,737	8,352	8,478
Cranial & Spinal Technologies	4,288	4,082	4,252
Specialty Therapies	2,307	2,147	2,195
Neuromodulation	1,601	1,497	1,736
Neuroscience	8,195	7,725	8,183
Diabetes	2,413	2,368	2,391
Total	$ 30,117	$ 28,913	$ 30,557

The table below includes net sales by market geography and segment for fiscal years 2021, 2020, and 2019:

	U.S.[1]			Non-U.S. Developed Markets[2]			Emerging Markets[3]		
(in millions)	Fiscal Year 2021	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2021	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2021	Fiscal Year 2020	Fiscal Year 2019
Cardiovascular	$ 5,248	$ 5,062	$ 5,750	$ 3,752	$ 3,519	$ 3,767	$ 1,773	$ 1,887	$ 1,988
Medical Surgical	3,650	3,532	3,630	3,320	3,169	3,250	1,766	1,651	1,598
Neuroscience	5,456	5,122	5,478	1,724	1,659	1,759	1,015	945	946
Diabetes	1,171	1,204	1,336	1,019	940	855	222	224	200
Total	$ 15,526	$ 14,919	$ 16,194	$ 9,815	$ 9,287	$ 9,631	$ 4,777	$ 4,707	$ 4,732

(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.

At April 30, 2021, $906 million of rebates were classified as *other accrued expenses,* and $485 million of rebates were classified as a reduction of *accounts receivable* in the consolidated balance sheet. At April 24, 2020, $706 million of rebates were classified as *other accrued expenses,* and $321 million of rebates were classified as a reduction of *accounts receivable* in the consolidated balance sheet. During fiscal year 2021, 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

Deferred revenue at April 30, 2021 and April 24, 2020 was $368 million and $303 million, respectively. At April 30, 2021 and April 24, 2020, $276 million and $213 million was included in *other accrued expenses*, respectively, and $93 million and $90 million was included in *other liabilities*, respectively. During the fiscal year ended April 30, 2021, the Company recognized $236 million of revenue that was included in deferred revenue as of April 24, 2020.

At April 30, 2021, 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 $1.3 billion. The Company expects to recognize revenue on the majority of these remaining performance obligations over the next four years.

3. Acquisitions

The Company had acquisitions during fiscal years 2021 and 2020 that were accounted for as business combinations. The assets and liabilities of 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 acquisitions during fiscal years 2021 and 2020 was not significant, either individually or in the aggregate, to the consolidated results of the Company. 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 2021

The acquisition date fair value of net assets acquired during fiscal year 2021 was $1.2 billion, consisting of $1.4 billion of assets acquired and $161 million of liabilities assumed. Based upon preliminary valuations, assets

acquired were primarily comprised of $417 million of technology-based intangible assets and $13 million of customer-related intangible assets with estimated useful lives ranging from 8 to 15 years, and $816 million of goodwill. The goodwill is not deductible for tax purposes. The Company recognized $253 million of contingent consideration liabilities in connection with business combinations during fiscal year 2021, which are comprised of revenue and regulatory milestone-based payments. Additionally, the Company recognized a gain of $132 million related to a change in amounts accrued for certain contingent liabilities from a recent acquisition. The benefit was recognized in *other operating expense, net* in the consolidated statements of income as the purchase accounting was finalized in fiscal year 2020. Purchase price allocation adjustments for fiscal year 2021 business combinations were not significant.

Fiscal Year 2020

The acquisition date fair value of net assets acquired during fiscal year 2020 was $612 million, consisting of $679 million of assets acquired and $67 million of liabilities assumed. Assets acquired were primarily comprised of $236 million of technology-based intangible assets and $26 million of customer-related intangible assets with estimated useful lives ranging from 8 to 16 years, $333 million of goodwill, and $40 million of inventory. The goodwill is not deductible for tax purposes. The Company recognized $80 million of contingent consideration liabilities in connection with business combinations during fiscal year 2020, which are comprised of revenue and regulatory milestone-based payments. Purchase price allocation adjustments for fiscal year 2020 business combinations were not significant.

Contingent Consideration

The fair value of contingent consideration at April 30, 2021 and April 24, 2020 was $270 million and $280 million, respectively. At April 30, 2021, $78 million was recorded in *other accrued expenses*, and $192 million was recorded in *other liabilities* on the consolidated balance sheets. At April 24, 2020, $112 million was reflected in *other accrued expenses*, and $168 million was reflected in *other liabilities* on the consolidated balance sheets.

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

	Fiscal Year	
(in millions)	**2021**	**2020**
Beginning Balance	$ 280	$ 222
Purchase price contingent consideration	253	125
Payments	(299)	(34)
Change in fair value	36	(33)
Ending Balance	$ 270	$ 280

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 April 30, 2021**	**Unobservable Input**	**Range**	**Weighted Average** [1]
		Discount rate	11.2% - 31.6%	17.0%
Revenue and other performance-based payments	$ 250	Probability of payment	30% - 100%	99.1%
		Projected fiscal year of payment	2022 - 2027	2025
		Discount rate	5.5%	5.5%
Product development and other milestone-based payments	$ 20	Probability of payment	100%	100%
		Projected fiscal year of payment	2022 - 2027	2025

(1) Unobservable inputs were weighted by the relative fair value of the contingent consideration liability. For projected fiscal year of payment, the amount represents the median of the inputs and is not a weighted average.

4. Restructuring Charges

Enterprise Excellence

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 40 percent of the estimated charges are related to employee termination benefits. The remaining charges are costs associated with the restructuring program, such as salaries and benefits for employees supporting the program, including program management and transition teams, and strategic and operational consulting services related to the three objectives of the program discussed above. 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 fiscal years 2021, 2020 and 2019, the Company recognized net charges of $349 million, $441 million, and $424 million, respectively. For fiscal years 2021, 2020 and 2019, charges included $128 million, $155 million, and $91 million, respectively, recognized within *cost of products sold,* and $169 million, $168 million, and $118 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 fiscal years 2021, 2020, and 2019:

(in millions)	Employee Termination Benefits	Associated Costs[1]	Asset Write-downs	Other Costs	Total
April 27, 2018	$ 27	$ 2	$ —	$ —	$ 29
Charges	192	193	17	22	424
Cash payments	(118)	(186)	—	(10)	(314)
Settled non-cash	—	—	(17)	—	(17)
April 26, 2019	101	9	—	12	122
Charges	129	300	24	9	462
Cash payments	(128)	(290)	—	(9)	(427)
Settled non-cash	—	—	(24)	—	(24)
Accrual adjustments[2]	(13)	—	—	(8)	(21)
April 24, 2020	89	19	—	4	112
Charges	66	295	—	4	365
Cash payments	(77)	(296)	—	(5)	(378)
Accrual adjustments[2]	(14)	—	—	(2)	(16)
April 30, 2021	$ 64	$ 18	$ —	$ 1	$ 83

(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) Accrual adjustments relate to certain employees identified for termination finding other positions within Medtronic and contract terminations being settled for less than originally estimated.

Simplification

In the first quarter of fiscal year 2021, the Company initiated the Simplification restructuring program, designed to make the Company a more nimble and competitive organization focused on accelerating innovation, enhancing the customer experience, driving revenue growth, and winning market share, while also more efficiently and effectively leveraging the enterprise scale. Under the oversight of the portfolio leaders, this new operating model, which became fully operational the beginning of the fourth quarter of fiscal year 2021, will simplify the Company's organizational structure and accelerate decision-making and execution. Primary activities of the restructuring program will include reorganizing the Company into a portfolio-level structure, including the creation of highly focused, accountable, and empowered Operating Units (OUs), consolidating Operations at the enterprise level, establishing Technology Development Centers in areas where the Company has deep core technology competencies to be leveraged by multiple OUs, and forming dedicated sales organizations that leverage the Company's scale but move with the same agility as smaller, local competitors.

The Company estimates that, in connection with its Simplification restructuring program, it will recognize pre-tax exit and disposal costs and other costs across all segments of approximately $400 million to $450 million, the

majority of which are expected to be incurred by the end of fiscal year 2022. Approximately three quarters 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 to execute the reorganization of our business into a portfolio-like structure as discussed above. These charges are recognized within *restructuring charges, net* and *selling, general, and administrative expense* in the consolidated statements of income.

For fiscal year 2021, the Company recognized net charges of $268 million, which included $97 million of incremental defined benefit pension and post-retirement related expenses for employees that accepted voluntary early retirement packages. These costs are not included in the table summarizing restructuring charges below, as they are associated with costs that are accounted for under the pension and post-retirement rules. See Note 15 for further discussion on the incremental defined benefit pension and post-retirement expenses. The charges recognized for fiscal year 2021 included $27 million recognized within *selling, general, and administrative expense* in the consolidated statements of income.

The following table summarizes the activity related to the Simplification restructuring program for fiscal year 2021:

(in millions)	Employee Termination Benefits	Associated Costs[1]	Total
April 24, 2020	$ —	$ —	$ —
Charges	147	27	174
Cash payments	(85)	(23)	(108)
Accrual adjustments[2]	(3)	—	(3)
April 30, 2021	$ 59	$ 4	$ 63

(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) Accrual adjustments relate to certain employees identified for termination finding other positions within the Company.

5. 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. 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 April 30, 2021 and April 24, 2020:

	April 30, 2021					
	Valuation				Balance Sheet Classification	
(in millions)	Cost	Unrealized Gains	Unrealized Losses	Fair Value	Investments	Other Assets
Level 1:						
U.S. government and agency securities	$ 505	$ 26	$ (3)	$ 528	$ 528	$ —
Level 2:						
Corporate debt securities	4,557	103	(13)	4,647	4,647	—
U.S. government and agency securities	810	—	(7)	804	804	—
Mortgage-backed securities	645	21	(16)	650	650	—
Non-U.S. government and agency securities	31	1	—	33	33	—
Certificates of deposit	19	—	—	19	19	
Other asset-backed securities	534	4	(1)	537	537	—
Debt funds	7	—	—	7	7	—
Total Level 2	6,603	129	(36)	6,696	6,696	—
Level 3:						
Auction rate securities	36	—	(3)	33	—	33
Total available-for-sale debt securities	$ 7,144	$ 155	$ (42)	$ 7,257	$ 7,224	$ 33

	April 24, 2020					
	Valuation				Balance Sheet Classification	
(in millions)	Cost	Unrealized Gains	Unrealized Losses	Fair Value	Investments	Other Assets
Level 1:						
U.S. government and agency securities	$ 542	$ 47	$ —	$ 589	$ 589	$ —
Level 2:						
Corporate debt securities	4,285	66	(90)	4,261	4,261	—
U.S. government and agency securities	746	1	—	747	747	—
Mortgage-backed securities	705	20	(28)	697	697	—
Non-U.S. government and agency securities	34	—	—	34	34	—
Other asset-backed securities	499	1	(20)	480	480	—
Total Level 2	6,269	88	(138)	6,219	6,219	—
Level 3:						
Auction rate securities	36	—	(3)	33	—	33
Total available-for-sale debt securities	$ 6,847	$ 135	$ (141)	$ 6,841	$ 6,808	$ 33

The amortized cost of debt securities excludes accrued interest, which is reported in *other current assets* in the consolidated balance sheets.

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 April 30, 2021 and April 24, 2020:

	April 30, 2021			
	Less than 12 months		More than 12 months	
(in millions)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. government and agency securities	$ 946	$ (10)	$ —	$ —
Corporate debt securities	1,437	—	3,209	(13)
Mortgage-backed securities	1	—	650	(16)
Other asset-backed securities	6	—	531	(1)
Auction rate securities	—	—	33	(3)
Total	$ 2,389	$ (10)	$ 4,423	$ (32)

	April 24, 2020			
	Less than 12 months		More than 12 months	
(in millions)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Corporate debt securities	$ 1,368	$ (2)	$ 2,893	$ (88)
Mortgage-backed securities	35	(1)	663	(27)
Other asset-backed securities	17	—	463	(20)
Auction rate securities	33	(3)	—	—
Total	$ 1,453	$ (6)	$ 4,019	$ (135)

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. There were no transfers into or out of Level 3 during the fiscal years ended April 30, 2021 and April 24, 2020. 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.

Activity related to the Company's available for sale securities portfolio is as follows:

(in millions)	April 30, 2021	April 24, 2020	April 26, 2019
Proceeds from sales and maturities	$ 10,420	$ 9,559	$ 3,718
Gross realized gains	15	25	18
Gross realized losses	(14)	(22)	(62)

During the fiscal year ended April 30, 2021, the Company had proceeds from maturities of investments classified as held to maturity of $911 million.

The April 30, 2021 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)	April 30, 2021
Due in one year or less	$ 1,891
Due after one year through five years	2,862
Due after five years through ten years	1,838
Due after ten years	666
Total debt securities	$ 7,257

Equity Securities, Equity Method Investments, and Other Investments

The Company commonly holds investments in equity securities with readily determinable fair values, equity investments without readily determinable fair values, investments accounted for under the equity method, and other investments. Equity securities with readily determinable fair values are included within Level 1 of the fair value hierarchy, as they are measured using quoted market prices. 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 April 30, 2021 and April 24, 2020, which are classified as *other assets* in the consolidated balance sheets:

(in millions)	April 30, 2021	April 24, 2020
Investments with readily determinable fair values (marketable equity securities)	$ 74	$ 18
Investments without readily determinable fair values	537	391
Equity method and other investments	76	71
Total equity and other investments	$ 687	$ 480

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.

(in millions)	April 30, 2021	April 24, 2020	April 26, 2019
Proceeds from sales	$ 13	$ 15	$ 964
Gross gains	68	17	134
Gross losses	(3)	(30)	(30)
Recognized impairment losses	(4)	(4)	(45)

During the fiscal year ended April 30, 2021, there were $63 million of net unrealized gains on equity securities and other investments still held at April 30, 2021. During the fiscal year ended April 24, 2020, there were $15 million of net unrealized losses on equity securities and other investments still held at April 24, 2020.

6. Financing Arrangements

Current debt obligations consisted of the following:

(in millions)	April 30, 2021	April 24, 2020
Bank borrowings	$ 2	$ 325
0.000 percent two-year 2019 senior notes	—	1,631
Floating rate two-year 2019 senior notes	—	815
Finance lease obligations	9	5
Current debt obligations	$ 11	$ 2,776

Bank Borrowings Outstanding bank borrowings at April 30, 2021 were not significant. Outstanding bank borrowings at April 24, 2020 were short-term advances primarily to non-U.S. subsidiaries under credit agreements with various banks. These bank borrowings consisted primarily of borrowings in Japanese Yen at an interest rate of 0.21%, and were a natural hedge of currency and exchange rate risk.

Commercial Paper On January 26, 2015, Medtronic Global Holdings S.C.A. (Medtronic Luxco), an entity organized under the laws of Luxembourg, entered into various agreements pursuant to which Medtronic Luxco may issue United States Dollar-denominated unsecured commercial paper notes (the 2015 CP Program) on a private placement basis, and on January 31, 2020 Medtronic Luxco entered into various agreements pursuant to which Medtronic Luxco may issue Euro-denominated unsecured commercial paper notes (the 2020 CP Program) on a private placement basis. The Maximum aggregate amount outstanding at any time under the 2015 CP Program and the 2020 CP Program together may not exceed the equivalent of $3.5 billion. The Company and Medtronic, Inc. have guaranteed the obligations of Medtronic Luxco under the 2015 CP Program and the 2020 CP Program.

There was no commercial paper outstanding at April 30, 2021 and April 24, 2020 or during fiscal year 2021. During fiscal year 2020, the weighted average original maturity of the commercial paper outstanding was approximately 7 days and the weighted average interest rate was 2.31 percent. The issuance of commercial paper reduces the amount of credit available under the Company's existing credit facility, defined below.

Line of Credit On December 12, 2020, Medtronic Luxco, as borrower, entered into an amendment to its amended and restated credit agreement (Credit Facility), by and among Medtronic, Medtronic, Inc., Medtronic Luxco, the lenders from time to time party thereto, and Bank of America, N.A., as administrative agent and issuing bank, extending the maturity date of the Credit Facility to December 2025.

The Credit Facility provides for a $3.5 billion five-year unsecured revolving credit facility (Credit Facility). At each anniversary date of the Credit Facility, but not more than twice prior to the maturity date, the Company could also request a one-year extension of the maturity date. The Credit Facility provides the Company with the ability to increase its borrowing capacity by an additional $1.0 billion at any time during the term of the agreement. The Company and Medtronic, Inc. have guaranteed the obligations of the borrowers under the Credit Facility, and Medtronic Luxco will also guarantee the obligations of any designated borrower. The Credit Facility includes a multi-currency borrowing feature for certain specified foreign currencies. At April 30, 2021 and April 24, 2020, 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 Company is in compliance with all covenants related to the Credit Facility.

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Notes to Consolidated Financial Statements (Continued)

Long-term debt consisted of the following:

(in millions, except interest rates)	Maturity by Fiscal Year	April 30, 2021 Amount	April 30, 2021 Effective Interest Rate	April 24, 2020 Amount	April 24, 2020 Effective Interest Rate
3.150 percent seven-year 2015 senior notes	2022	$ —	— %	$ 1,534	3.29 %
3.200 percent ten-year 2012 CIFSA senior notes	2023	—	—	650	2.72
2.750 percent ten-year 2013 senior notes	2023	—	—	530	3.25
0.000 percent three-year 2019 senior notes	2023	907	0.08	815	0.09
0.375 percent four-year 2019 senior notes	2023	1,813	0.55	1,631	0.56
0.000 percent two-year 2020 senior notes	2023	1,511	0.12	—	—
2.950 percent ten-year 2013 CIFSA senior notes	2024	—	—	310	2.71
3.625 percent ten-year 2014 senior notes	2024	—	—	432	3.61
3.500 percent ten-year 2015 senior notes	2025	1,890	3.74	2,700	3.74
0.250 percent six-year 2019 senior notes	2026	1,209	0.43	1,087	0.44
0.000 percent five-year 2020 senior notes	2026	1,209	0.22	—	—
1.125 percent eight-year 2019 senior notes	2027	1,813	1.24	1,631	1.25
3.350 percent ten-year 2017 senior notes	2027	368	3.53	368	3.53
0.375 percent eight-year 2020 senior notes	2029	1,209	0.51	—	—
1.625 percent twelve-year 2019 senior notes	2031	1,209	1.74	1,087	1.75
1.000 percent twelve-year 2019 senior notes	2032	1,209	1.05	1,087	1.06
0.750 percent twelve-year 2020 senior notes	2033	1,209	0.81	—	—
4.375 percent twenty-year 2015 senior notes	2035	1,932	4.47	1,932	4.47
6.550 percent thirty-year 2007 CIFSA senior notes	2038	253	4.67	253	4.68
2.250 percent twenty-year 2019 senior notes	2039	1,209	2.34	1,087	2.34
6.500 percent thirty-year 2009 senior notes	2039	158	6.56	158	6.56
1.500 percent twenty-year 2019 senior notes	2040	1,209	1.58	1,087	1.58
5.550 percent thirty-year 2010 senior notes	2040	224	5.58	224	5.58
1.375 percent twenty-year 2020 senior notes	2041	1,209	1.46	—	—
4.500 percent thirty-year 2012 senior notes	2042	105	4.54	105	4.54
4.000 percent thirty-year 2013 senior notes	2043	305	4.09	305	4.10
4.625 percent thirty-year 2014 senior notes	2044	127	4.67	127	4.67
4.625 percent thirty-year 2015 senior notes	2045	1,813	4.69	1,813	4.67
1.750 percent thirty-year 2019 senior notes	2050	1,209	1.87	1,087	1.87
1.625 percent thirty-year 2020 senior notes	2051	1,209	1.75	—	—
Bank borrowings	N/A	—	—	55	2.11
Finance lease obligations	2022-2059	62	9.29	45	8.93
Debt discount, net	2022-2051	(75)	—	(15)	—
Deferred financing costs	2022-2051	(125)	—	(104)	—
Long-term debt		$ 26,378		$ 22,021	

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 Company is in compliance with all covenants related to the Seniors notes.

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 Company used the net proceeds of the offering to fund the cash tender offer and early redemption of $5.2 billion of Medtronic Inc., CIFSA, and Medtronic Luxco Senior Notes for $5.6 billion of total consideration. The Company recognized a loss on debt extinguishment of $413 million in fiscal year 2020, which primarily included cash premiums and accelerated amortization of deferred financing costs and debt discounts and premiums. The loss was recognized in *interest expense* in the consolidated statement of income.

In September 2020, Medtronic Luxco issued an additional six tranches of Euro-denominated Senior Notes with an aggregate principal of €6.3 billion, with maturities ranging from fiscal year 2023 to fiscal year 2051, resulting in cash proceeds of approximately $7.2 billion, net of discounts and issuance costs. The Company used the net proceeds of the offering to fund the early redemption of $4.3 billion of Medtronic Inc. and CIFSA Senior Notes and €1.5 billion of Medtronic Luxco Senior Notes for $6.3 billion of total consideration in October 2020. Additionally, the Company used the proceeds to repay its €750 million floating rate senior notes at maturity in March 2021. The Company recognized a loss on debt extinguishment of $308 million in fiscal year 2021, which primarily included cash premiums and accelerated amortization of deferred financing costs and debt discounts and premiums. The loss was recognized in *interest expense* in the consolidated statement of income.

The Euro-denominated debt issued in June 2019 and September 2020 is designated as a net investment hedge of certain of the Company's European operations. Refer to Note 7 for additional information regarding the net investment hedge.

Term Loan Agreements On May 12, 2020, Medtronic Luxco entered into a term loan agreement (Loan Agreement) by and among Medtronic Luxco, Medtronic plc, Medtronic, Inc., and Mizuho Bank, Ltd. as administrative agent and as lender. The Loan Agreement provided an unsecured term loan in an aggregate principal amount of up to ¥300 billion, with a term of six months and the option to extend for an additional six months at Medtronic Luxco's option. On May 13, 2020, Medtronic Luxco borrowed the entire amount of the term loan under the Loan Agreement. The Japanese Yen-denominated debt was designated as a net investment hedge of certain of our Japanese operations. Borrowings under the Loan Agreement carried interest at the TIBOR Rate (as defined in the Loan Agreement) plus a margin of 0.50% per annum. Medtronic plc and Medtronic, Inc. guaranteed the obligations of Medtronic Luxco under the Loan Agreement. On November 12, 2020, the Company exercised its option to extend the term loan for an additional six months. During the fourth quarter of fiscal year 2021, the Company de-designated the Yen-denominated debt as a net investment hedge and repaid the term loan in full, including interest.

Contractual maturities of debt for the next five fiscal years and thereafter, excluding deferred financing costs and debt discount, net, are as follows:

(in millions)	
2022	$ 11
2023	4,237
2024	6
2025	1,895
2026	2,423
Thereafter	18,016
Total	$ 26,588

Financial Instruments Not Measured at Fair Value

At April 30, 2021, the estimated fair value of the Company's Senior Notes was $28.6 billion compared to a principal value of $26.5 billion. At April 24, 2020 the estimated fair value was $27.1 billion compared to a principal value of $24.5 billion. There was no commercial paper outstanding during fiscal year 2021. 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.

7. 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. Currencies of our derivative instruments include the Euro, Japanese Yen, Chinese Yuan, and others. 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 $14.7 billion and $11.9 billion at April 30, 2021 and April 24, 2020, 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 freestanding currency exchange rate contracts outstanding at April 30, 2021 and April 24, 2020 was $5.7 billion and $4.9 billion, respectively. 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 April 30, 2021 and April 24, 2020 was $243 million and $181 million, respectively. 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 or financing activities, depending on the nature of the underlying hedged item, 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 fiscal years 2021, 2020, and 2019 were as follows:

		Fiscal Year		
(in millions)	Classification	2021	2020	2019
Currency exchange rate contracts	Other operating expense, net	$ 247	$ (133)	$ (218)
Total return swaps	Other operating expense, net	(81)	7	(18)
Total		$ 166	$ (126)	$ (236)

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 April 30, 2021 and April 24, 2020 was $9.0 billion and $7.0 billion, respectively, and will mature within the subsequent three-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* or *cost of products sold* 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 fiscal years 2021, 2020, or 2019.

The amount of the (gains) losses recognized in accumulated other comprehensive loss (AOCI) related to currency exchange rate contract derivative instruments designated as cash flow hedges for fiscal years 2021, 2020, and 2019 were as follows:

	Fiscal Year		
(in millions)	2021	2020	2019
Currency exchange rate contracts	$ 627	$ (397)	$ (615)

The amount of the (gains) losses recognized in the consolidated statements of income related to derivative instruments designated as cash flow hedges for fiscal years 2021, 2020, and 2019 were as follows:

	Fiscal Year					
	2021		2020		2019	
(in millions)	Other operating expense, net	Cost of products sold	Other operating expense, net	Cost of products sold	Other operating expense, net	Cost of products sold
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	$ 315	$ 10,483	$ 71	$ 9,424	$ 258	$ 9,155
Currency exchange rate contracts designated as cash flow hedges:						
Amount of (gain) loss reclassified from AOCI into income	(17)	15	(335)	—	(108)	—

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 fiscal years 2021, 2020, and 2019, 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 April 30, 2021 and April 24, 2020, the Company had $253 million in after-tax unrealized losses and $266 million in after-tax net unrealized gains, respectively, associated with cash flow hedging instruments recorded in *accumulated other comprehensive loss*. The Company expects that $146 million of after-tax net unrealized losses at April 30, 2021 will be recognized in the consolidated statements of income over the next 12 months.

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 April 30, 2021, the Company had €16.0 billion, or $19.3 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 2023 through fiscal year 2051.

In February 2021, the Company de-designated ¥300 billion of outstanding Yen-denominated debt previously designated as a net investment hedge and concurrently entered into freestanding forward derivative contracts with a total notional value of ¥300 billion, or approximately $2.9 billion. These forward contracts were not designated as hedges. The Company used the proceeds from these forward derivative contracts to repay the ¥300 billion of Yen-denominated debt in conjunction with the maturity of these forward contracts in March and April of 2021.

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 the 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 April 30, 2021 and April 24, 2020, the Company had $1.5 billion in after-tax unrealized losses, and $236 million in after-tax unrealized gains associated with net investment hedges recorded in *accumulated other comprehensive loss,* respectively. The Company does not expect any of the after-tax unrealized losses at April 30, 2021 to be recognized in the consolidated statements of income over the next 12 months.

The Company did not recognize any gains or losses during fiscal years 2021, 2020, or 2019 on instruments that no longer qualify as net investment hedges.

The amount and classifications of the (gains) losses 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:

		Fiscal Year		
(in millions)	**Classification**	**2021**	**2020**	**2019**
Net investment hedges	Other operating expense, net	$ —	$ (9)	$ (12)

The amount of the (gains) losses recognized in AOCI related to instruments designated as net investment hedges for fiscal year 2021, 2020, or 2019 were as follows:

	Fiscal Year		
(in millions)	**2021**	**2020**	**2019**
Net investment hedges	$ (1,694)	$ (405)	$ (88)

Balance Sheet Presentation

The following tables summarize the balance sheet classification and fair value of derivative instruments included in the consolidated balance sheets at April 30, 2021 and April 24, 2020. 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.

	April 30, 2021			
	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	$ 49	Other accrued expenses	$ 190
Currency exchange rate contracts	Other assets	22	Other liabilities	94
Total derivatives designated as hedging instruments		70		285
Derivatives not designated as hedging instruments				
Currency exchange rate contracts	Other current assets	14	Other accrued expenses	11
Total return swaps	Other current assets	18	Other accrued expenses	—
Total derivatives not designated as hedging instruments		32		11
Total derivatives		$ 102		$ 296

	April 24, 2020			
	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	$ 271	Other accrued expenses	$ 2
Currency exchange rate contracts	Other assets	103	Other liabilities	2
Total derivatives designated as hedging instruments		374		4
Derivatives not designated as hedging instruments				
Currency exchange rate contracts	Other current assets	25	Other accrued expenses	13
Total return swaps	Other current assets	—	Other accrued expenses	25
Cross-currency interest rate contracts	Other current assets	3	Other accrued expenses	—
Total derivatives not designated as hedging instruments		28		38
Total derivatives		$ 402		$ 42

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

(in millions)	April 30, 2021		April 24, 2020	
	Level 1	Level 2	Level 1	Level 2
Derivative assets	$ 85	$ 18	$ 399	$ 3
Derivative liabilities	296	—	17	25

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.

	April 30, 2021			
		Gross Amount Not Offset on the Balance Sheet		
(in millions)	Gross Amount of Recognized Assets (Liabilities)	Financial Instruments	Cash Collateral (Received) Posted	Net Amount
Derivative assets:				
Currency exchange rate contracts	$ 85	$ (83)	$ —	$ 1
Total return swaps	18	—	—	18
	102	(83)	—	19
Derivative liabilities:				
Currency exchange rate contracts	(296)	83	46	(167)
Total	$ 193	$ —	$ 46	$ (148)

	April 24, 2020			
		Gross Amount Not Offset on the Balance Sheet		
(in millions)	Gross Amount of Recognized Assets (Liabilities)	Financial Instruments	Cash Collateral (Received) Posted	Net Amount
Derivative assets:				
Currency exchange rate contracts	$ 399	$ (17)	$ (48)	$ 334
Cross-currency interest rate contracts	3	—	—	3
	402	(17)	(48)	337
Derivative liabilities:				
Currency exchange rate contracts	(17)	17	—	—
Total return swaps	(25)	—	—	(25)
	(42)	17	—	(25)
Total	$ 360	$ —	$ (48)	$ 312

Concentrations of Credit Risk

Financial instruments, which potentially subject the Company to significant concentrations of credit risk, consist principally of interest-bearing investments, forward exchange derivative contracts, and trade accounts receivable. Global concentrations of credit risk with respect to trade accounts receivable are limited due to the large number of customers and their dispersion across many geographic areas. The Company monitors the creditworthiness of its customers to which it grants credit terms in the normal course of business.

The Company maintains cash and cash equivalents, investments, and certain other financial instruments (including currency exchange rate and interest rate derivative contracts) with various major financial institutions. The Company performs periodic evaluations of the relative credit standings of these financial institutions and limits the amount of credit exposure with any one institution. In addition, the Company has collateral credit agreements with its primary derivatives counterparties. Under these agreements, either party is required to post eligible collateral when the market value of transactions covered by the agreement exceeds specific thresholds, thus limiting credit exposure for both parties. As of April 30, 2021, the Company posted net cash collateral of $46 million to its counterparties. As of April 24, 2020, the Company received net cash collateral of $48 million from its counterparties. Cash collateral posted is recorded as a reduction in *cash and cash equivalents*, with the offset recorded

as an increase in *other current assets* in the consolidated balance sheets. Cash collateral received is recorded as an increase in *cash and cash equivalents* with the offset recorded in *other accrued expenses* in the consolidated balance sheets.

8. Inventories

Inventory balances, net of reserves, were as follows:

(in millions)	April 30, 2021	April 24, 2020
Finished goods	$ 2,906	$ 2,874
Work-in-process	611	608
Raw materials	796	747
Total	$ 4,313	$ 4,229

9. Goodwill and Other Intangible Assets

Goodwill

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

(in millions)	Cardiovascular	Medical Surgical	Neuroscience	Diabetes	Total
April 26, 2019	$ 6,854	$ 20,381	$ 10,821	$ 1,903	$ 39,959
Goodwill as a result of acquisitions	19	227	71	16	333
Purchase accounting adjustments	7	2	120	(5)	124
Currency translation and other	(49)	(434)	(92)	—	(575)
April 24, 2020	6,831	20,176	10,920	1,914	39,841
Goodwill as a result of acquisitions	248	12	210	346	816
Purchase accounting adjustments	(2)	(5)	3	(4)	(8)
Currency translation and other	132	1,012	167	1	1,312
April 30, 2021	$ 7,209	$ 21,195	$ 11,300	$ 2,257	$ 41,961

The Company did not recognize any goodwill impairments during fiscal years 2021, 2020, or 2019.

Intangible Assets

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

(in millions)	April 30, 2021 Gross Carrying Amount	April 30, 2021 Accumulated Amortization	April 24, 2020 Gross Carrying Amount	April 24, 2020 Accumulated Amortization
Definite-lived:				
Customer-related	$ 17,036	$ (6,058)	$ 16,963	$ (5,065)
Purchased technology and patents	11,286	(5,156)	10,742	(4,354)
Trademarks and tradenames	475	(251)	464	(232)
Other	82	(68)	75	(53)
Total	$ 28,879	$ (11,533)	$ 28,244	$ (9,704)
Indefinite-lived:				
IPR&D	$ 394	$ —	$ 523	$ —

During fiscal year 2021, the Company recognized $30 million of definite-lived intangible asset charges in connection with the abandonment of certain intangible assets within the Neuroscience segment. During fiscal year 2020, the Company recognized $37 million of definite-lived intangible asset charges, including $33 million and $4 million recognized in connection with

business exits in the Neuroscience and Cardiovascular segments, respectively. During fiscal year 2019, the Company recognized $87 million of definite-lived intangible asset charges, including $61 million and $26 million recognized in connection with business exits in the Cardiovascular and Neuroscience segments, respectively. Definite-lived intangible asset charges are recognized in *other operating expense, net* in the consolidated statements of income.

During fiscal year 2021, the Company recognized $45 million of indefinite-lived intangible asset charges related to the abandonment of certain IPR&D projects in the Neuroscience segment. During fiscal year 2020, the Company recognized $35 million of indefinite-lived intangible asset charges, including $25 million relating to a partial impairment of an IPR&D project within the Neuroscience segment and $10 million in connection with the discontinuation of an IPR&D project within the Cardiovascular segment. During fiscal year 2019, the Company recognized $30 million of indefinite-lived intangible asset charges, including $11 million in connection with a business exit in the Neuroscience segment, and $10 million and $9 million in connection with the discontinuation of certain IPR&D projects within the Medical Surgical and Cardiovascular segments, respectively. Indefinite-lived intangible asset charges are recognized in *other operating expense, net* in the consolidated statements of income. 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 such clinical trials, delays or failures to obtain required market clearances, other failures to achieve a commercially viable product, or the discontinuation of certain projects, and as a result, may recognize impairment losses in the future.

Amortization

Intangible asset amortization expense was $1.8 billion for fiscal years 2021, 2020 and 2019. Estimated aggregate amortization expense by fiscal year based on the current carrying value and remaining estimated useful lives of definite-lived intangible assets at April 30, 2021, excluding any possible future amortization associated with acquired IPR&D which has not met technological feasibility, is as follows:

(in millions)	Amortization Expense
2022	$ 1,758
2023	1,693
2024	1,662
2025	1,635
2026	1,623

10. Property, Plant, and Equipment

Property, plant, and equipment balances and corresponding estimated useful lives were as follows:

(in millions)	April 30, 2021	April 24, 2020	Estimated Useful Lives (in years)
Equipment	$ 6,308	$ 5,859	Generally 2-7, up to 15
Computer software	2,346	2,131	Up to 5
Land and land improvements	178	175	Up to 20
Buildings and leasehold improvements	2,370	2,277	Up to 40
Construction in progress	1,498	1,202	—
Property, plant, and equipment	12,700	11,644	
Less: Accumulated depreciation	(7,479)	(6,816)	
Property, plant, and equipment, net	$ 5,221	$ 4,828	

Depreciation expense of $919 million, $907 million, and $895 million was recognized in fiscal years 2021, 2020, and 2019, respectively.

11. Shareholders' Equity

Share Capital Medtronic plc is authorized to issue 2.6 billion Ordinary Shares, $0.0001 par value; 40 thousand Euro Deferred Shares, €1.00 par value; 127.5 million Preferred Shares, $0.20 par value; and 500 thousand A Preferred Shares, $1.00 par value.

Euro Deferred Shares The authorized share capital of the Company includes 40 thousand Euro Deferred Shares, with a par value of €1.00 per share. At April 30, 2021, no Euro Deferred Shares were issued or outstanding.

Preferred Shares The authorized share capital of the Company includes 127.5 million of Preferred Shares, with a par value of $0.20 per share. At April 30, 2021, no Preferred Shares were issued or outstanding.

A Preferred Shares The authorized share capital of the Company includes 500 thousand A Preferred Shares, with a par value of $1.00 per share. At April 30, 2021, 1,872 A Preferred Shares were outstanding. The holders of A Preferred Shares are entitled to payment of dividends prior to any other class of shares in the Company equal to twice the dividend to be paid per Company ordinary share. On a return of assets, whether on liquidation or otherwise, the A Preferred Shares are entitled to repayment of the capital paid up thereon in priority to any repayment of capital to the holders of any other shares and the holders of the A Preferred Shares shall not be entitled to any further participation in the assets or profits of the Company. The holders of the A Preferred Shares are not entitled to receive notice of, nor to attend, speak, or vote at any general meeting of the Company.

Dividends The timing, declaration, and payment of future dividends to holders of the Company's ordinary and A Preferred shares falls within the discretion of the Company's Board of Directors and depends upon many factors, including the statutory requirements of Irish law, the Company's earnings and financial condition, the capital requirements of the Company's businesses, industry practice and any other factors the Board of Directors deems relevant.

Ordinary Share Repurchase Program Shares are repurchased from time to time to support the Company’s stock-based compensation programs and to return capital to shareholders. During fiscal years 2021 and 2020, the Company repurchased approximately 4 million and 12 million shares, respectively, at an average price of $126.80 and $106.22, respectively.

In March 2019, the Company's Board of Directors authorized $6.0 billion for repurchase of the Company's ordinary shares. There is no specific time-period associated with these repurchase authorizations. At April 30, 2021, the Company had used $608 million of the $6.0 billion authorized under the repurchase program, leaving approximately $5.4 billion available for future repurchases. The Company accounts for repurchases of ordinary shares using the par value method and shares repurchased are cancelled.

12. Stock Purchase and Award Plans

In fiscal year 2021, the Company granted stock awards under the Medtronic plc 2013 Plan (2013 Plan). The 2013 Plan provides for the grant of non-qualified and incentive stock options, stock appreciation rights, restricted stock, restricted stock units, performance awards, and other stock and cash-based awards. At April 30, 2021, there were approximately 26 million shares available for future grants under the 2013 Plan.

Stock-Based Compensation Expense The following table presents the components and classification of stock-based compensation expense recognized for stock options, restricted stock, performance share units, and employee stock purchase plan (ESPP) in fiscal years 2021, 2020, and 2019:

(in millions)	Fiscal Year 2021	2020	2019
Stock options	$ 72	$ 61	$ 72
Restricted stock	185	205	189
Performance share units	49	—	—
Employee stock purchase plan	38	31	29
Total stock-based compensation expense	$ 344	$ 297	$ 290
Cost of products sold	$ 35	$ 28	$ 30
Research and development expense	38	36	36
Selling, general, and administrative expense	272	233	224
Total stock-based compensation expense	344	297	290
Income tax benefits	(59)	(51)	(54)
Total stock-based compensation expense, net of tax	$ 285	$ 246	$ 236

Stock Options Options are granted at the exercise price, which is equal to the closing price of the Company's ordinary shares on the grant date. The majority of the Company's options are non-qualified options with a 10-year life and a 4-year ratable vesting term. The Company uses the Black-Scholes option pricing model (Black-Scholes model) to determine the fair value of stock options at the grant date. The fair value of stock options under the Black-Scholes model requires management to make assumptions regarding projected employee stock option exercise behaviors, risk-free interest rates, volatility of the Company's stock price, and expected dividends.

The following table provides the weighted average fair value of options granted to employees and the related assumptions used in the Black-Scholes model:

	Fiscal Year		
	2021	2020	2019
Weighted average fair value of options granted	$ 16.15	$ 15.49	$ 14.77
Assumptions used:			
Expected life (years)	6.0	6.1	6.1
Risk-free interest rate	0.33 %	1.88 %	2.90 %
Volatility	24.17 %	17.97 %	17.77 %
Dividend yield	2.36 %	2.09 %	2.25 %

The following table summarizes stock option activity during fiscal year 2021:

	Options (in thousands)	Wtd. Avg. Exercise Price	Wtd. Avg. Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Outstanding at April 24, 2020	27,068	$ 78.70		
Granted	6,182	98.16		
Exercised	(4,370)	66.91		
Expired/Forfeited	(908)	95.54		
Outstanding at April 30, 2021	27,972	84.38	5.7	$ 1,302
Expected to vest at April 30, 2021	9,184	97.01	8.5	311
Exercisable at April 30, 2021	18,149	77.48	4.2	970

The following table summarizes the total cash received from the issuance of new shares upon stock option award exercises, the total intrinsic value of options exercised, and the related tax benefit during fiscal years 2021, 2020, and 2019:

	Fiscal Year		
(in millions)	2021	2020	2019
Cash proceeds from options exercised	$ 277	$ 484	$ 825
Intrinsic value of options exercised	205	349	383
Tax benefit related to options exercised	47	75	78

Unrecognized compensation expense related to outstanding stock options at April 30, 2021 was $76 million and is expected to be recognized over a weighted average period of 2.6 years.

Restricted Stock Restricted stock units are expensed over the vesting period and are subject to forfeiture if employment terminates prior to the lapse of the restrictions. The expense recognized for restricted stock units is equal to the grant date fair value, which is equal to the closing stock price on the date of grant. Beginning in fiscal year 2018, restricted stock units have a 4-year ratable vesting term. Restricted stock units issued prior to fiscal year 2018 cliff vest after four years. The Company also grants shares of performance-based restricted stock units that typically cliff vest after three years only if the Company has also achieved certain performance objectives. Performance awards are expensed over the performance period based on the

probability of achieving the performance objectives. Restricted stock units are not considered issued or outstanding ordinary shares of the Company. Dividend equivalent units are accumulated on restricted stock units during the vesting period.

The following table summarizes restricted stock activity during fiscal year 2021:

	Units (in thousands)	Wtd. Avg. Grant Price
Nonvested at April 24, 2020	7,625	$ 92.52
Granted	2,193	99.48
Vested	(3,228)	86.89
Forfeited	(610)	95.79
Nonvested at April 30, 2021	5,980	97.66

The following table summarizes the weighted-average grant date fair value of restricted stock granted, total fair value of restricted stock vested and related tax benefit during fiscal years 2021, 2020, and 2019:

	Fiscal Year		
(in millions, except per share data)	2021	2020	2019
Weighted-average grant-date fair value per restricted stock	$ 99.48	$ 103.52	$ 88.78
Fair value of restricted stock vested	280	242	174
Tax benefit related to restricted stock vested	65	62	45

Unrecognized compensation expense related to restricted stock as of April 30, 2021 was $316 million and is expected to be recognized over a weighted average period of 2.4 years.

Performance Share Units Beginning in fiscal year 2021, the Company granted performance share units to officers and key employees. Performance share units typically cliff vest after three years. The awards include three metrics: relative total shareholder return (rTSR), revenue growth, and return on investor capital (ROIC). rTSR is considered a market condition metric, and the expense is determined at the grant date and will not be adjusted even if the market condition is not met. Revenue growth and ROIC are considered performance metrics, and the expense is recorded over the performance period, which will be reassessed each reporting period based on the probability of achieving the various performance conditions. The number of shares earned at the end of the three-year period will vary, based on only actual performance, from 0% to 200% of the target number of performance share units granted. Performance share units are subject to forfeiture if employment terminates prior to the lapse of the restrictions. Performance share units are not considered issued or outstanding ordinary shares of the Company. Dividend equivalent units are accumulated on performance share units for each component of the award during the vesting period.

The Company calculates the fair value of the performance share units for each component individually. The fair value of the rTSR metric will be determined using the Monte Carlo valuation model. The fair value of the revenue growth and ROIC metrics are equal to the closing stock price on the grant date.

The following table summarizes performance share unit activity during fiscal year 2021:

	Units (in thousands)	Wtd. Avg. Grant Price
Nonvested at April 24, 2020	—	$ —
Granted	854	129.04
Forfeited	(25)	128.51
Nonvested at April 30, 2021	828	129.05

The following table summarizes the weighted-average grant date fair value of performance share units granted, total fair value of performance share units vested and related tax benefit during fiscal year 2021:

(in millions, except per share data)	Fiscal Y 202
Weighted-average grant-date fair value per performance share units	$ 1
Fair value of performance share units vested	
Tax benefit related to performance share units vested	

Unrecognized compensation expense related to performance share units as of April 30, 2021 was $57 million and is expected to be recognized over a weighted average period of 2.2 years.

Employees Stock Purchase Plan The Medtronic plc Amended and Restated 2014 Employees Stock Purchase Plan allows participating employees to purchase the Company's ordinary shares at a discount through payroll deductions. The expense recognized for shares purchased under the Company's ESPP is equal to the 15 percent discount the employee receives. Employees purchased 2 million shares at an average price of $90.16 per share in fiscal year 2021. At April 30, 2021, approximately 9 million ordinary shares were available for future purchase under the ESPP.

13. Income Taxes

The income tax provision (benefit) is based on income before income taxes reported for financial statement purposes. The components of income before income taxes, based on tax jurisdiction, are as follows:

	Fiscal Year		
(in millions)	2021	2020	2019
U.S.	$ (358)	$ 466	$ 877
International	4,253	3,589	4,320
Income before income taxes	$ 3,895	$ 4,055	$ 5,197

The income tax provision (benefit) consists of the following:

	Fiscal Year		
(in millions)	2021	2020	2019
Current tax expense:			
U.S.	$ 287	$ 151	$ 579
International	439	375	406
Total current tax expense	726	526	985
Deferred tax (benefit) expense:			
U.S.	(625)	(138)	(310)
International	165	(1,139)	(128)
Net deferred tax benefit	(461)	(1,277)	(438)
Income tax provision (benefit)	$ 265	$ (751)	$ 547

Tax assets (liabilities), shown before jurisdictional netting of deferred tax assets (liabilities), are comprised of the following:

(in millions)	April 30, 2021	April 24, 2020
Deferred tax assets:		
Net operating loss, capital loss, and credit carryforwards	$ 6,114	$ 6,432
Capitalization of research and development	408	—
Other accrued liabilities	442	390
Accrued compensation	411	285
Pension and post-retirement benefits	234	350
Stock-based compensation	132	136
Inventory	164	191
Lease obligations	106	101
Federal and state benefit on uncertain tax positions	55	96
Interest limitation	352	266
Other	336	308
Gross deferred tax assets	8,754	8,555
Valuation allowance	(5,822)	(5,482)
Total deferred tax assets	2,932	3,073
Deferred tax liabilities:		
Intangible assets	(320)	(1,017)
Realized loss on derivative financial instruments	(75)	(65)
Right of use leases	(102)	(97)
Unrealized gain on available-for-sale securities and derivative financial instruments	(16)	(12)
Accumulated depreciation	(151)	(87)
Outside basis difference of subsidiaries	(101)	(77)
Other	(81)	(110)
Total deferred tax liabilities	(846)	(1,465)
Prepaid income taxes	458	449
Income tax receivables	353	381
Tax assets, net	$ 2,897	$ 2,438
Reported as (after valuation allowance and jurisdictional netting):		
Other current assets	$ 756	$ 780
Tax assets	3,169	2,832
Deferred tax liabilities	(1,028)	(1,174)
Tax assets, net	$ 2,897	$ 2,438

No deferred taxes have been provided on the approximately $74.2 billion and $69.9 billion of undistributed earnings of the Company's subsidiaries at April 30, 2021 and April 24, 2020, respectively, since these earnings have been, and under current plans will continue to be, permanently reinvested in these subsidiaries. Due to the number of legal entities and jurisdictions involved, the complexity of the legal entity structure of the Company, and the complexity of the tax laws in the relevant jurisdictions, the Company believes it is not practicable to estimate, within any reasonable range, the amount of additional taxes which may be payable upon distribution of these undistributed earnings.

At April 30, 2021, the Company had approximately $25.2 billion of net operating loss carryforwards in certain non-U.S. jurisdictions, of which $20.2 billion have no expiration, and the remaining $5.0 billion will expire during fiscal

years 2022 through 2041. Included in these net operating loss carryforwards are $18.5 billion of net operating losses related to a subsidiary of the Company, substantially all of which were recorded in fiscal year 2008 as a result of the receipt of a favorable tax ruling from certain non-U.S. taxing authorities. The Company has recorded a full valuation allowance against these net operating

losses, as management does not believe that it is more likely than not that these net operating losses will be utilized. Certain of the remaining non-U.S. net operating loss carryforwards of $6.7 billion have a valuation allowance recorded against the carryforwards, as management does not believe that it is more likely than not that these net operating losses will be utilized.

At April 30, 2021, the Company had $361 million of U.S. federal net operating loss carryforwards, of which $81 million have no expiration. The remaining loss carryforwards will expire during fiscal years 2022 through 2038. For U.S. state purposes, the Company had $1.4 billion of net operating loss carryforwards at April 30, 2021, $57 million of which have no expiration. The remaining U.S. state loss carryforwards will expire during fiscal years 2022 through 2041.

At April 30, 2021, the Company also had $270 million of tax credits available to reduce future income taxes payable, of which $107 million have no expiration. The remaining credits will expire during fiscal years 2022 through 2041.

The Company has established valuation allowances of $5.8 billion and $5.5 billion at April 30, 2021 and April 24, 2020, respectively, primarily related to the uncertainty of the utilization of certain deferred tax assets which are primarily comprised of tax loss and credit carryforwards in various jurisdictions. The increase in the valuation allowance during fiscal year 2021 is primarily related to the generation of certain net operating losses and the effects of currency fluctuations. These valuation allowances would result in a reduction to the income tax provision in the consolidated statements of income if they are ultimately not required.

The Company's effective income tax rate varied from the U.S. federal statutory tax rate as follows:

	Fiscal Year		
	2021	2020	2019
U.S. federal statutory tax rate	21.0 %	21.0 %	21.0 %
Increase (decrease) in tax rate resulting from:			
U.S. state taxes, net of federal tax benefit	(1.1)	0.5	0.9
Research and development credit	(2.3)	(2.1)	(1.2)
Puerto Rico Excise Tax	(2.0)	(1.5)	(1.6)
International	(12.6)	(10.0)	(10.7)
U.S. Tax Reform	—	—	0.2
Stock based compensation	(0.8)	(1.5)	(1.0)
Other, net	0.9	0.4	(0.5)
Interest on uncertain tax positions	0.9	1.3	0.9
Base Erosion Anti-Abuse Tax	0.5	2.6	0.1
Foreign Derived Intangible Income Benefit	(1.9)	(1.2)	(0.6)
Divestiture-related	—	—	(0.4)
Certain tax adjustments	(1.0)	(30.8)	(0.6)
Legal entity restructuring	1.8	—	—
U.S. tax on foreign earnings	3.4	2.8	4.0
Effective tax rate	6.8 %	(18.5)%	10.5 %

During fiscal year 2021, the net benefit from certain tax adjustments of $41 million, recognized in *income tax provision (benefit)* in the consolidated statements of income, included the following:

- A net benefit of $106 million associated with the resolution of an audit at the IRS Appellate level for fiscal years 2012, 2013, and 2014. The issues resolved relate to the utilization of certain net operating losses and the allocation of income between Medtronic, Inc. and its wholly owned subsidiary operating in Puerto Rico for businesses that are not the subject of the U.S. Tax Court Case for fiscal years 2005 and 2006.

- A net cost of $73 million related to a tax basis adjustment of previously established deferred tax assets from intercompany intellectual property transactions. The cumulative amount of deferred tax benefit previously recognized from intercompany intellectual property transactions and recorded as Certain Tax Adjustments is $1.5 billion. The corresponding deferred tax assets will be amortized over a period of approximately 20 years.

- A cost of $50 million associated with the amortization of the previously established deferred tax assets from intercompany intellectual property transactions.

- A net cost of $25 million associated with an internal restructuring and intercompany sale of assets.

- A benefit of $83 million related to the capitalization of certain research and development costs for U.S. income tax purposes and the establishment of a deferred tax asset at the U.S. federal statutory tax rate.

During fiscal year 2020, the net benefit from certain tax adjustments of $1.2 billion, recognized in *income tax provision (benefit)* in the consolidated statements of income, included the following:

- A net benefit of $63 million related to the finalization of certain state tax impacts from U.S. Tax Reform, and the issuance of certain final U.S. Treasury 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 $252 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 that will be amortized and deducted over a 10-year period.

- A benefit of $658 million related to the release of a valuation allowance previously recorded against certain net operating losses. Luxembourg enacted tax legislation during the year requiring the Company to reassess the realizability of certain net operating losses. The Company evaluated both the positive and negative evidence and released valuation allowance equal to the expected benefit from the utilization of certain net operating losses in connection with a planned intercompany sale of intellectual property.

- A benefit of $269 million associated with the intercompany sale of intellectual property and the establishment of a deferred tax asset.

During fiscal year 2019, the net benefit from certain tax adjustments of $40 million, recognized in *income tax provision (benefit)* in the consolidated statements of income, included the following:

- A net benefit of $30 million associated with the finalization of the transition tax liability and the Tax Act impact to deferred tax assets, liabilities, and valuation allowances.

- 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 under the Tax Act and the current year sale of U.S. manufactured inventory held as of April 27, 2018.

- A benefit of $32 million related to intercompany legal entity restructuring.

- A net benefit of $20 million with the finalization of certain income tax aspects of the divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses.

Currently, the Company's operations in Puerto Rico, Singapore, Dominican Republic, Costa Rica, and China have various tax holidays and tax incentive grants. The tax reductions as compared to the local statutory rate favorably impacted earnings by $301 million, $231 million, and $437 million in fiscal years 2021, 2020, and 2019, respectively, and diluted earnings per share by $0.22, $0.17, and $0.32 in fiscal years 2021, 2020, and 2019, respectively. The tax holidays are conditional upon the Company meeting certain thresholds required under statutory law. The tax incentive grants, unless extended, will expire between fiscal years 2022 and 2030. The Company's historical practice has been to renew, extend, or obtain new tax incentive grants upon expiration of existing tax incentive grants. If the Company is not able to renew, extend, or obtain new tax incentive grants, the expiration of existing tax incentive grants could have a material impact on the Company's financial results in future periods. The tax incentive grants which expired during fiscal year 2021 did not have a material impact on the Company's consolidated financial statements.

The Company had $1.7 billion, $1.9 billion, and $1.8 billion of gross unrecognized tax benefits at April 30, 2021, April 24, 2020, and April 26, 2019, respectively. A reconciliation of the beginning and ending amount of unrecognized tax benefits for fiscal years 2021, 2020, and 2019 is as follows:

	Fiscal Year		
(in millions)	**2021**	**2020**	**2019**
Gross unrecognized tax benefits at beginning of fiscal year	$ 1,862	$ 1,836	$ 1,727
Gross increases:			
Prior year tax positions	88	12	34
Current year tax positions	62	55	109
Gross decreases:			
Prior year tax positions	(106)	(9)	(14)
Settlements	(216)	(5)	—
Statute of limitation lapses	(21)	(27)	(20)
Gross unrecognized tax benefits at end of fiscal year	1,668	1,862	1,836
Cash advance paid to taxing authorities	(859)	(859)	(859)
Gross unrecognized tax benefits at end of fiscal year, net of cash advance	$ 809	$ 1,003	$ 977

If all of the Company's unrecognized tax benefits at April 30, 2021, April 24, 2020, and April 26, 2019 were recognized, $1.6 billion, $1.8 billion, and $1.8 billion would impact the Company's effective tax rate, respectively. Although the Company believes that it has adequately provided for liabilities resulting from tax assessments by taxing authorities, positions taken by these tax authorities could have a material impact on the Company's effective tax rate in future periods. The Company has recorded gross unrecognized tax benefits, net of cash advance, of $809 million as a noncurrent liability. The Company estimates that within the next 12 months it is reasonably possible that its uncertain tax positions excluding interest, could decrease by as much as $14 million, net as a result of statute of limitation lapses.

The Company recognizes interest and penalties related to income tax matters in *income tax provision (benefit)* in the consolidated statements of income and records the liability in the current or noncurrent *accrued income taxes* in the consolidated balance sheets, as appropriate. The Company had $99 million, $225 million, and $172 million of accrued gross interest and penalties at April 30, 2021, April 24, 2020, and April 26, 2019, respectively. During fiscal years 2021, 2020, and 2019, the Company recognized gross interest income of $44 million, expense of $53 million, and expense of $48 million, respectively, in *income tax provision (benefit)* in the consolidated statements of income.

The Company reserves for uncertain tax positions related to unresolved matters with the IRS and other taxing authorities. These reserves are subject to a high degree of estimation and management judgment. Resolution of these significant unresolved matters, or positions taken by the IRS or other tax authorities during future tax audits, could have a material impact on the Company's financial results in future periods. The Company continues to believe that its reserves for uncertain tax positions are appropriate and that it has meritorious defenses for its tax filings and will vigorously defend them during the audit process, appellate process, and through litigation in courts, as necessary.

The major tax jurisdictions where the Company conducts business which remain subject to examination are as follows:

Jurisdiction	Earliest Year Open
United States - federal and state	2005
Australia	2016
Brazil	2016
Canada	2013
China	2015
Costa Rica	2017
Dominican Republic	2018
France	2016
Germany	2014
India	2002
Ireland	2012
Israel	2010
Italy	2005
Japan	2017
Korea	2017
Luxembourg	2015
Mexico	2007
Puerto Rico	2011
Singapore	2016
Switzerland	2010
United Kingdom	2017

See Note 18 for additional information regarding the status of current tax audits and proceedings.

14. 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 the 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 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:

	Fiscal Year		
(in millions, except per share data)	**2021**	**2020**	**2019**
Numerator:			
Net income attributable to ordinary shareholders	$ 3,606	$ 4,789	$ 4,631
Denominator:			
Basic – weighted average shares outstanding	1,344.9	1,340.7	1,346.4
Effect of dilutive securities:			
Employee stock options	6.6	7.2	7.6
Employee restricted stock units	2.1	2.8	3.2
Other	0.5	0.4	0.3
Diluted – weighted average shares outstanding	1,354.0	1,351.1	1,357.5
Basic earnings per share	$ 2.68	$ 3.57	$ 3.44
Diluted earnings per share	$ 2.66	$ 3.54	$ 3.41

The calculation of weighted average diluted shares outstanding excludes options to purchase approximately 4 million, 4 million, and 7 million ordinary shares in fiscal years 2021, 2020, and 2019, respectively, because their effect would have been anti-dilutive on the Company's earnings per share.

15. 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 expense related to these plans was $668 million, $467 million, and $539 million in fiscal years 2021, 2020, and 2019, respectively.

In the U.S., the Company maintain qualified pension plans designed to provide guaranteed minimum retirement benefits to all eligible U.S. participants. Pension coverage for non-U.S. employees is provided, to the extent deemed appropriate, through separate plans. In addition to the benefits provided under the qualified pension plan, retirement benefits associated with wages in excess of the IRS allowable limits are provided to certain employees under a non-qualified plan. U.S. and Puerto Rico employees are also eligible to receive a medical benefit component, in addition to normal retirement benefits, through the Company's post-retirement benefits.

At April 30, 2021 and April 24, 2020, the net underfunded status of the Company's benefit plans was $705 million and $1.4 billion, respectively.

During fiscal year 2021, as part of the Simplification restructuring program, the Company offered certain eligible U.S. employees voluntary early retirement packages, resulting in incremental expense of $97 million recognized. Of this amount, $73 million related to U.S. pension benefits, $11 million related to defined contribution plans, $11 million related to U.S. post-retirement benefits, and $2 million related to cash payments and administrative fees. See Note 4 for additional information on the Simplification restructuring program.

As of April 24, 2020, the Company announced the freezing of U.S. pension benefits beginning in 2027. Employees will continue to earn benefits as required by the plan until April 30, 2027, after which date benefits will no longer be earned and employees will earn benefits under a new defined contribution structure. The Company recognized curtailment benefits of $94 million in fiscal year 2020 as a result of this change.

Defined Benefit Pension Plans The change in benefit obligation and funded status of the Company's U.S. and Non-U.S. pension benefits are as follows:

	U.S. Pension Benefits		Non-U.S. Pension Benefits	
	Fiscal Year		Fiscal Year	
(in millions)	2021	2020	2021	2020
Accumulated benefit obligation at end of year:	$ 3,786	$ 3,440	$ 2,035	$ 1,785
Change in projected benefit obligation:				
Projected benefit obligation at beginning of year	$ 3,723	$ 3,404	$ 2,024	$ 1,832
Service cost	106	106	70	59
Interest cost	109	126	28	28
Employee contributions	—	—	12	11
Plan curtailments and settlements	—	(94)	(4)	(2)
Actuarial loss[1]	99	300	6	180
Benefits paid	(129)	(111)	(41)	(55)
Special termination benefits	73	—	—	—
Currency exchange rate changes and other	—	(8)	200	(29)
Projected benefit obligation at end of year	$ 3,979	$ 3,723	$ 2,294	$ 2,024
Change in plan assets:				
Fair value of plan assets at beginning of year	$ 2,982	$ 2,728	$ 1,404	$ 1,409
Actual return on plan assets	715	(72)	232	2
Employer contributions	95	444	149	54
Employee contributions	—	—	12	11
Plan settlements	—	—	(4)	(2)
Benefits paid	(129)	(111)	(41)	(55)
Currency exchange rate changes and other	—	(7)	149	(15)
Fair value of plan assets at end of year	$ 3,660	$ 2,982	$ 1,900	$ 1,404
Funded status at end of year:				
Fair value of plan assets	$ 3,660	$ 2,982	$ 1,900	$ 1,404
Benefit obligations	3,979	3,723	2,294	2,024
Underfunded status of the plans	(319)	(741)	(394)	(620)
Recognized liability	$ (319)	$ (741)	$ (394)	$ (620)
Amounts recognized on the consolidated balance sheets consist of:				
Non-current assets	$ 110	$ —	$ 48	$ 7
Current liabilities	(20)	(17)	(6)	(6)
Non-current liabilities	(408)	(724)	(436)	(621)
Recognized liability	$ (319)	$ (741)	$ (394)	$ (620)
Amounts recognized in accumulated other comprehensive loss:				
Prior service cost	$ —	$ 1	$ (6)	$ 7
Net actuarial loss	1,220	1,662	530	663
Ending balance	$ 1,220	$ 1,663	$ 524	$ 670

(1) Actuarial gains and losses result from changes in actuarial assumptions (such as changes in the discount rate and revised mortality rates). The actuarial losses in fiscal years 2021 and 2020 were primarily related to decreases in discount rates.

In certain countries outside the U.S., fully funding pension plans is not a common practice, as funding provides no income tax benefit. Consequently, certain pension plans were partially funded at April 30, 2021 and April 24, 2020. U.S. and non-U.S. pension plans with accumulated benefit obligations in excess of plan assets consist of the following:

	Fiscal Year	
(in millions)	2021	2020
Accumulated benefit obligation	$ 5,089	$ 5,105
Projected benefit obligation	5,198	5,252
Plan assets at fair value	4,561	4,074

U.S. and non-U.S. pension plans with projected benefit obligations in excess of plan assets consist of the following:

	Fiscal Year	
(in millions)	2021	2020
Projected benefit obligation	$ 5,921	$ 5,700
Plan assets at fair value	5,159	4,331

The net periodic benefit cost of the plans includes the following components:

	U.S. Pension Benefits			Non-U.S. Pension Benefits		
	Fiscal Year			Fiscal Year		
(in millions)	2021	2020	2019	2021	2020	2019
Service cost	$ 106	$ 106	$ 109	$ 70	$ 59	$ 59
Interest cost	109	126	129	28	28	30
Expected return on plan assets	(242)	(225)	(215)	(59)	(58)	(57)
Amortization of prior service cost	1	1	1	(1)	(1)	(1)
Amortization of net actuarial loss	69	56	76	25	14	12
Settlement loss (gain)	—	—	—	1	—	(2)
Special termination benefits	73	—	—	—	—	—
Net periodic benefit cost	$ 115	$ 64	$ 100	$ 64	$ 42	$ 41

The other changes in plan assets and projected benefit obligations recognized in *accumulated other comprehensive loss* for fiscal year 2021 are as follows:

(in millions)	U.S. Pension Benefits	Non-U.S. Pension Benefits
Net actuarial gain	$ (373)	$ (168)
Amortization of prior service cost	(1)	1
Amortization and settlement recognition of actuarial loss	(69)	(26)
Effect of exchange rates	—	61
Total recognized in accumulated other comprehensive loss	$ (443)	$ (132)
Total recognized in net periodic benefit cost and accumulated other comprehensive loss	$ (328)	$ (67)

The actuarial assumptions are as follows:

	U.S. Pension Benefits			Non-U.S. Pension Benefits		
	Fiscal Year			Fiscal Year		
	2021	2020	2019	2021	2020	2019
Critical assumptions – projected benefit obligation:						
Discount rate	2.80% - 3.50%	3.10% - 3.70%	3.90% - 4.20%	0.30% - 13.30%	0.30% - 13.30%	0.40% - 13.90%
Rate of compensation increase	4.83 %	3.90 %	3.90 %	2.90 %	2.91 %	2.87 %
Critical assumptions – net periodic benefit cost:						
Discount rate – benefit obligation	3.10% - 3.70%	3.90% - 4.30%	4.20% - 4.30%	0.30% - 13.90%	0.40% - 13.90%	0.50% - 11.00%
Discount rate – service cost	2.60% - 3.90%	3.70% - 4.00%	4.10% - 4.40%	0.30% - 13.90%	0.40% - 13.90%	0.50% - 11.00%
Discount rate – interest cost	2.80% - 3.20%	3.50% - 4.30%	4.00% - 4.10%	0.30% - 13.90%	0.40% - 13.90%	0.50% - 11.00%
Expected return on plan assets	7.50 %	7.90 %	7.90 %	3.78 %	4.19 %	4.23 %
Rate of compensation increase	3.90 %	3.90 %	3.90 %	2.91 %	2.87 %	2.88 %

The Company utilizes a full yield curve approach methodology to estimate the service and interest cost components of net periodic pension cost and net periodic post-retirement benefit cost for the Company's pension and other post-retirement benefits. The full yield curve approach applies specific spot rates along the yield curve to their underlying projected cash flows in estimation of the cost components. The current yield curves represent high quality, long-term fixed income instruments.

The expected long-term rate of return on plan assets assumptions are determined using a building block approach, considering historical averages and real returns of each asset class. In certain countries, where historical returns are not meaningful, consideration is given to local market expectations of long-term returns.

Retirement Benefit Plan Investment Strategy The Company sponsors trusts that hold the assets for U.S. pension plans and other U.S. post-retirement benefit plans, primarily retiree medical benefits. For investment purposes, the Medtronic U.S. pension and other U.S. post-retirement benefit plans employ similar investment strategies with different asset allocation targets.

The Company has a Qualified Plan Committee (the Plan Committee) that sets investment guidelines for U.S. pension plans and other U.S. post-retirement benefit plans with the assistance of external consultants. These guidelines are established based on market conditions, risk tolerance, funding requirements, and expected benefit payments. The Plan Committee also oversees the investment allocation process, selects the investment managers, and monitors asset performance. As pension liabilities are long-term in nature, the Company employs a long-term total return approach to maximize the long-term rate of return on plan assets for a prudent level of risk. An annual analysis on the risk versus the return of the investment portfolio is conducted to justify the expected long-term rate of return assumption.

The investment portfolios contain a diversified allocation of investment categories, including equities, fixed income securities, hedge funds, and private equity. Securities are also diversified in terms of domestic and international, short- and long-term, growth and value styles, large cap and small cap stocks, and active and passive management.

Outside the U.S., pension plan assets are typically managed by decentralized fiduciary committees. There is significant variation in policy asset allocation from country to country. Local regulations, funding rules, and financial

and tax considerations are part of the funding and investment allocation process in each country. The weighted average target asset allocations at April 30, 2021 for the plans are 40% equity securities, 31% debt securities, and 29% other.

The plans did not hold any investments in the Company's ordinary shares at April 30, 2021 or April 24, 2020.

The Company's U.S. plans target asset allocations at April 30, 2021, compared to the U.S. plans actual asset allocations at April 30, 2021 and April 24, 2020 by asset category, are as follows:

U.S. Plans

	Target Allocation	Actual Allocation	
	April 30, 2021	April 30, 2021	April 24, 2020
Asset Category:			
Equity securities	34 %	39 %	39 %
Debt securities	51	32	27
Other	15	29	34
Total	100 %	100 %	100 %

Strong performance on equity securities during the fiscal year resulted in asset allocations different than targets. Management expects to move the allocations closer to target over the intermediate term.

Retirement Benefit Plan Asset Fair Values The following is a description of the valuation methodologies used for retirement benefit plan assets measured at fair value:

Short-term investments: Valued at the closing price reported in the active markets in which the individual security is traded.

Mutual funds: Comprised of investments in equity and fixed income securities held in pooled investment vehicles. The valuations of mutual funds are based on the respective net asset values which are determined by the fund daily at market close. The net asset values are calculated based on the valuation of the underlying assets which are determined using observable inputs. The net asset values are publicly reported.

Equity commingled trusts: Comprised of investments in equity securities held in pooled investment vehicles. The valuations of equity commingled trusts are based on the respective net asset values which are determined by the fund daily at market close. The net asset values are calculated based on the valuation of the underlying assets which are determined using observable inputs. The net asset values are not publicly reported, and funds are valued at the net asset value practical expedient.

Fixed income commingled trusts: Comprised of investments in fixed income securities held in pooled investment vehicles. The valuations of fixed income commingled trusts are based on the respective net asset values which are determined by the fund daily at market close. The net asset values are calculated based on the valuation of the underlying assets which are determined using observable inputs. The net asset values are not publicly reported, and funds are valued at the net asset value practical expedient.

Partnership units: Valued based on the year-end net asset values of the underlying partnerships. The net asset values of the partnerships are based on the fair values of the underlying investments of the partnerships. Quoted market prices are used to value the underlying investments of the partnerships, where the partnerships consist of the investment pools which invest primarily in common stocks. Partnership units include partnerships, private equity investments, and real asset investments. Partnerships primarily include long/short equity and absolute return strategies. These investments may be redeemed monthly with notice periods ranging from 45 to 95 days. At April 30, 2021, there are no funds in the process of liquidation. Private equity investments consist of common stock and debt instruments of private companies. For private equity funds, the sum of the unfunded commitments at April 30, 2021 is $171 million, and the estimated liquidation period of these funds is expected to be one to 15 years. Real asset investments consist of commodities, derivatives, Real Estate Investment Trusts, and illiquid real estate holdings. These investments have redemption and liquidation periods ranging from 30 days to 10 years. At April 30, 2021, there are no real estate investments in the process of liquidation. Valuation procedures are utilized to arrive at fair value if a quoted market price is not available for a partnership investment.

Registered investment companies: Valued at net asset values which are not publicly reported. The net asset values are calculated based on the valuation of the underlying assets. The underlying assets are valued at the quoted market prices of shares held by the plan at year-end in the active market on which the individual securities are traded.

Insurance contracts: Comprised of investments in collective (group) insurance contracts, consisting of individual insurance policies. The policyholder is the employer, and each member is the owner/beneficiary of their individual insurance policy. These policies are a part of the insurance company's general portfolio and participate in the insurer's profit-sharing policy on an excess yield basis.

The methods described above may produce fair values that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Company believes its valuation methodologies are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

The following tables provide information by level for the retirement benefit plan assets that are measured at fair value, as defined by U.S. GAAP. Certain investments for which the fair value is measured using the net asset value per share (or its equivalent) practical expedient are not presented within the fair value hierarchy. The fair value amounts presented for these investments are intended to permit reconciliation to the total fair value of plan assets at April 30, 2021 and April 24, 2020.

U.S. Pension Benefits

(in millions)	Fair Value at April 30, 2021	Fair Value Measurements Using Inputs Considered as			Investments Measured at Net Asset Value
		Level 1	Level 2	Level 3	
Short-term investments	$ 232	$ 232	$ —	$ —	$ —
Mutual funds	99	99	—	—	—
Equity commingled trusts	1,420	—	—	—	1,420
Fixed income commingled trusts	1,050	—	—	—	1,050
Partnership units	860	—	—	860	—
	$ 3,660	$ 331	$ —	$ 860	$ 2,470

(in millions)	Fair Value at April 24, 2020	Fair Value Measurements Using Inputs Considered as			Investments Measured at Net Asset Value
		Level 1	Level 2	Level 3	
Short-term investments	$ 548	$ 548	$ —	$ —	$ —
Equity commingled trusts	1,204	—	—	—	1,204
Fixed income commingled trusts	605	—	—	—	605
Partnership units	625	—	—	625	—
	$ 2,982	$ 548	$ —	$ 625	$ 1,809

The following tables provide a reconciliation of the beginning and ending balances of U.S. pension benefit assets measured at fair value that used significant unobservable inputs (Level 3):

(in millions)	Partnership Units
April 26, 2019	$ 629
Total unrealized losses, net	(45)
Purchases and sales, net	41
April 24, 2020	625
Total realized gains, net	8
Total unrealized gains, net	89
Purchases and sales, net	139
April 30, 2021	$ 860

Non-U.S. Pension Benefits

(in millions)	Fair Value at April 30, 2021	Fair Value Measurements Using Inputs Considered as Level 1	Level 2	Level 3	Investments Measured at Net Asset Value
Registered investment companies	$ 1,850	$ —	$ —	$ —	$ 1,850
Insurance contracts	49	—	—	49	—
	$ 1,900	$ —	$ —	$ 49	$ 1,850

(in millions)	Fair Value at April 24, 2020	Fair Value Measurements Using Inputs Considered as Level 1	Level 2	Level 3	Investments Measured at Net Asset Value
Registered investment companies	$ 1,361	$ —	$ —	$ —	$ 1,361
Insurance contracts	43	—	—	43	—
	$ 1,404	$ —	$ —	$ 43	$ 1,361

The following tables provide a reconciliation of the beginning and ending balances of non-U.S. pension benefit assets measured at fair value that used significant unobservable inputs (Level 3):

(in millions)	Insurance Contracts
April 26, 2019	$ 41
Total unrealized gains, net	2
Purchases and sales, net	1
Currency exchange rate changes	(1)
April 24, 2020	43
Total unrealized gains, net	2
Purchases and sales, net	1
Currency exchange rate changes	4
April 30, 2021	$ 49

There were no transfers into or out of Level 3 for both the U.S. and non-US pension plans during the fiscal years ended April 30, 2021 and April 24, 2020.

Retirement Benefit Plan Funding It is the Company's policy to fund retirement costs within the limits of allowable tax deductions. During fiscal year 2021, the Company made discretionary contributions of approximately $95 million to the U.S. pension plan. Internationally, the Company contributed approximately $149 million for pension benefits during fiscal year 2021. The Company anticipates that it will make contributions of $20 million and $78 million to its U.S. pension benefit plans and non-U.S. pension benefit plans, respectively, in fiscal year 2022. Based on the guidelines under the U.S. Employee Retirement Income Security Act of 1974 and the various guidelines which govern the plans outside the U.S., the majority of anticipated fiscal year 2022 contributions will be discretionary. The

Company believes that pension assets, returns on invested pension assets, and Company contributions will be able to meet its pension and other post-retirement obligations in the future.

Retiree benefit payments, which reflect expected future service, are anticipated to be paid as follows:

(in millions)	Gross Payments	
Fiscal Year	U.S. Pension Benefits	Non-U.S. Pension Benefits
2022	$ 135	$ 62
2023	145	63
2024	157	62
2025	170	67
2026	182	67
2027 – 2031	1,068	395
Total	$ 1,856	$ 717

Post-retirement Benefit Plans The net periodic benefit cost associated with the Company's post-retirement benefit plans was income of $6 million, $15 million, and $17 million in fiscal years 2021, 2020, and 2019, respectively. The Company's projected benefit obligation for all post-retirement benefit plans was $337 million and $339 million at April 30, 2021 and April 24, 2020, respectively. The Company's fair value of plan assets for all post-retirement benefit plans was $345 million and $296 million at April 30, 2021 and April 24, 2020, respectively. The post-retirement benefit plan assets at both April 30, 2021 and April 24, 2020 primarily comprised of equity and fixed commingled trusts, consistent with the U.S. retirement benefit plan assets outlined in the fair value leveling tables above.

Defined Contribution Savings Plans The Company has defined contribution savings plans that cover substantially all U.S. employees and certain non-U.S. employees. The general purpose of these plans is to provide additional financial security during retirement by providing employees with an incentive to make regular savings. Company contributions to the plans are based on employee contributions and Company performance. Expense recognized under these plans was $495 million, $376 million, and $415 million in fiscal years 2021, 2020, and 2019, respectively.

Effective May 1, 2005, the Company froze participation in the original defined benefit pension plan in the U.S. and implemented two new plans: an additional defined benefit pension plan, the Personal Pension Account (PPA), and a new defined contribution plan, the Personal Investment Account (PIA). Employees in the U.S. hired on or after May 1, 2005 but before January 1, 2016 had the option to participate in either the PPA or the PIA. Participants in the PPA receive an annual allocation of their salary and bonus on which they will receive an annual guaranteed rate of return, which is based on the ten-year Treasury bond rate. Participants in the PIA also receive an annual allocation of their salary and bonus; however, they are allowed to determine how to invest their funds among identified fund alternatives. The cost associated with the PPA is included in U.S. Pension Benefits in the tables presented earlier. The defined contribution cost associated with the PIA was approximately $50 million, $52 million, and $54 million in fiscal years 2021, 2020, and 2019, respectively.

Effective January 1, 2016, the Company froze participation in the existing defined benefit (PPA) and contribution (PIA) pension plans in the U.S. and implemented a new form of benefit under the existing defined contribution plan for legacy Covidien employees and employees in the U.S. hired on or after January 1, 2016 or rehired after July 1, 2020. Participants in the Medtronic Core Contribution (MCC) also receive an annual allocation of their salary and bonus and are allowed to determine how to invest their funds among identified fund alternatives. The defined contribution cost associated with the MCC was approximately $73 million, $66 million, and $58 million and in fiscal years 2021, 2020, and 2019, respectively.

16. 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 fiscal year 2021 and 2020 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 were not material to the consolidated financial statements at April 30, 2021 or April 24, 2020 or for fiscal year 2021 or 2020. 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.

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 April 30, 2021 and April 24, 2020:

(in millions)	Balance Sheet Classification	April 30, 2021	April 24, 2020
Right-of-use assets	Other assets	$ 998	$ 927
Current liability	Other accrued expenses	186	171
Non-current liability	Other liabilities	829	774

The following table summarizes the weighted-average remaining lease term and weighted-average discount rate for the Company's operating leases at April 30, 2021 and April 24, 2020:

	April 30, 2021	April 24, 2020
Weighted-average remaining lease term	7.5 years	7.2 years
Weighted-average discount rate	2.3%	3.0%

The following table summarizes the components of total operating lease cost for fiscal year 2021 and 2020:

(in millions)	Fiscal Year 2021	Fiscal Year 2020
Operating lease cost	$ 216	$ 223
Short-term lease cost	35	46
Total operating lease cost	$ 251	$ 269

Rent expense for all operating leases was $305 million in fiscal year 2019.

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 fiscal year 2021 and 2020:

(in millions)	Fiscal Year 2021	Fiscal Year 2020
Cash paid for amounts included in the measurement of operating lease liabilities	$ 216	$ 221
Right-of-use assets obtained in exchange for operating lease liabilities	230	174

The following table summarizes the maturities of the Company's operating leases at April 30, 2021:

(in millions) Fiscal Year	Operating Leases
2022	$ 223
2023	166
2024	147
2025	119
2026	97
Thereafter	338
Total expected lease payments	1,090
Less: Imputed interest	(75)
Total lease liability	$ 1,015

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 fiscal year ended April 30, 2021 and April 30, 2021.

17. 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 (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 income (loss) before reclassifications	67	(1,372)	88	(266)	457	(1,026)
Reclassifications	35	—	—	75	(56)	54
Other comprehensive income (loss)	102	(1,372)	88	(191)	401	(972)
Cumulative effect of change in accounting principle[1]	47	—	—	—	—	47
April 26, 2019	(45)	(1,383)	(169)	(1,308)	194	(2,711)
Other comprehensive income (loss) before reclassifications	43	(827)	405	(596)	309	(666)
Reclassifications	2	—	—	52	(237)	(183)
Other comprehensive income (loss)	45	(827)	405	(544)	72	(849)
April 24, 2020	—	(2,210)	236	(1,852)	266	(3,560)
Other comprehensive income (loss) before reclassifications	92	1,691	(1,694)	432	(541)	(20)
Reclassifications	—	—	—	73	22	95
Other comprehensive income (loss)	92	1,691	(1,694)	505	(519)	75
April 30, 2021	$ 92	$ (519)	$ (1,458)	$ (1,347)	$ (253)	$ (3,485)

(1) The cumulative effect of change in accounting principle in 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.

The income tax on gains and losses on investment securities in other comprehensive income before reclassifications during fiscal years 2021, 2020, and 2019 was an expense of $31 million, a benefit of $13 million and a benefit of $5 million, respectively. Realized gains and losses on investment securities reclassified from AOCI were reduced by income taxes of $2 million for fiscal year 2021 and $3 million for fiscal years 2020 and 2019. When realized, gains and losses on investment securities reclassified from AOCI are recognized within *other non-operating income, net*. Refer to Note 5 for additional information.

During fiscal years 2021, 2020, and 2019, the income tax on cumulative translation adjustment was an expense of $7 million, a benefit of $9 million, and a benefit of $7 million, respectively.

During fiscal years 2021, 2020, and 2019, there were no tax impacts on net investment hedges. Refer to Note 7 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. The income tax on the net change in retirement obligations in other comprehensive income before reclassifications during fiscal years 2021, 2020, and 2019 resulted in an expense of $115 million and a benefit of $159 million, and $63 million, respectively. During fiscal years 2021, 2020, and 2019, the gains and losses on defined benefit and pension items reclassified from AOCI were reduced by income taxes of $16 million, $12 million, and $19 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 15 for additional information.

The income tax on unrealized gains and losses on cash flow hedges in other comprehensive income before reclassifications during fiscal years 2021, 2020, and 2019 was a benefit of $87 million and an expense of $88 million and $158 million, respectively. Amounts reclassified from AOCI related to cash flow hedges included income taxes of $14 million, $80 million, and $24 million for fiscal years 2021, 2020, and 2019, 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 7 for additional information.

18. 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, 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 fiscal years 2021, 2020, and 2019, the Company recognized $118 million, $313 million, and $166 million, respectively, of certain litigation charges. At April 30, 2021 and April 24, 2020, accrued litigation was approximately $0.4 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 16,200 claimants have asserted or may assert claims involving products manufactured by Covidien's subsidiaries. As of June 2, 2021, the Company had reached agreements to settle approximately 15,900 of these claims. The Company's accrued expenses for this matter are included within accrued litigation as discussed above.

Hernia Mesh Litigation

Starting in fiscal year 2020, plaintiffs filed lawsuits against certain subsidiaries of the Company in U.S. state and federal courts alleging personal injury from hernia mesh products sold by those subsidiaries. The majority of the pending cases are in Massachusetts state court, where they have been consolidated before a single judge. Certain plaintiffs' law firms have advised the Company that they may file a large volume of additional cases in the future. The pending lawsuits relate almost entirely to hernia mesh products that have not been subject to recalls, withdrawals or other adverse regulatory action. The Company has not recorded an expense related to damages in connection with these matters 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.

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 March 2021, the consolidated action was dismissed with prejudice, pursuant to a settlement agreement.

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. On June 15, 2021, pursuant to an order from the state court, the Company paid the judgment plus accrued interest to Dr. Sasso, subject to repayment if the Company's ongoing appeal is successful.

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. In April 2021, the parties reach an agreement to resolve this matter, bringing it to a conclusion.

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. In March 2021, the parties notified the Court that they had agreed on a settlement in principle of all issues in this matter. Finalization of the proposed settlement remains subject to a fairness hearing and Court approval.

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

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. The U.S. Tax Court trial was held in June 2021.

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. During January 2021, Medtronic, Inc. and the IRS resolved the outstanding matters related to the allocation of income between Medtronic,

Inc. and its wholly-owned subsidiary operating in Puerto Rico for the businesses that are not the subject of the U.S. Tax Court Case and the utilization of certain net operating losses. The remaining unresolved issue for fiscal years 2012, 2013 and 2014 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 November 2020, the IRS issued its audit report on Medtronic, Inc. for fiscal years 2015 and 2016. Medtronic, Inc. reached agreement with the IRS on some but not all matters related to these fiscal years. The significant issue that remains unresolved 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.

Medtronic, Inc.'s fiscal years 2017, 2018, and 2019 U.S. federal income tax returns are currently being audited by the IRS.

In January 2021, the IRS issued its audit report for Covidien's fiscal year 2015 U.S. federal income tax returns. Covidien reached agreement with the IRS on all matters related to fiscal year 2015. The statute of limitations for Covidien's 2016 and 2017 U.S. federal income tax returns lapsed during the third quarter of fiscal year 2020 and 2021, respectively.

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.

See Note 13 for additional discussion of income taxes.

Guarantees

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, and/or cash flows.

19. Segment and Geographic Information

Effective February 1, 2021, the Company implemented a new operating model, moving from a Group structure to a Portfolio structure: Cardiovascular Portfolio (formerly Cardiac and Vascular Group), Neuroscience Portfolio (formerly Restorative Therapies Group), and Medical Surgical Portfolio (formerly Minimally Invasive Therapies Group). The Diabetes Operating Unit (formerly Diabetes Group) remains a separate operating and reportable segment in the new structure. There were no changes to the reportable segments during the fiscal year ended April 30, 2021, such that the four principal operating and reportable segments are as follows: Cardiovascular Portfolio, Neuroscience Portfolio, Medical Surgical Portfolio, and Diabetes Operating Unit.

The Company's management has chosen to organize the entity based upon therapy solutions provided by each segment. The four principal segments are strategic businesses that are managed separately, as each one develops and manufactures products and provides services oriented toward targeted therapy solutions.

The primary products and services from which the Cardiovascular Portfolio segment derives its revenues include products for the diagnosis, treatment, and management of cardiac rhythm disorders and cardiovascular disease, as well as services to diagnose, treat, and manage heart and vascular-related disorders and diseases.

The primary products and services from which the Medical Surgical Portfolio segment derives its revenues include those focused on diseases of the respiratory system, gastrointestinal tract, renal system, lungs, pelvic region, kidneys, obesity, and other preventable complications.

The primary products and services from which the Neuroscience Portfolio segment derives its revenues include those focused on neurostimulation therapies and drug delivery systems for the treatment of chronic pain, as well as various areas of the spine and brain, along with pelvic health and conditions of the ear, nose, and throat.

The primary products from which the Diabetes Operating Unit segment derives its revenues include those focused on diabetes management, including insulin pumps, continuous glucose monitoring systems, smart insulin pens, and insulin pump consumables.

Segment disclosures are on a performance basis, consistent with internal management reporting. Net sales of the Company's 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 the performance of the segments and allocates resources based on net sales and 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 accounting policies of the segments are the same as those described in Note 1. 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.

Segment Operating Profit

	Fiscal Year		
(in millions)	**2021**	**2020**	**2019**
Cardiovascular	$ 3,850	$ 3,719	$ 4,532
Medical Surgical	3,021	3,044	3,262
Neuroscience	3,162	2,915	3,319
Diabetes	598	546	739
Segment operating profit	10,632	10,224	11,852
Interest expense	(925)	(1,092)	(1,444)
Other non-operating income, net	336	356	373
Amortization of intangible assets	(1,783)	(1,756)	(1,764)
Corporate	(1,577)	(1,239)	(1,291)
Centralized distribution costs	(1,877)	(1,420)	(1,689)
Restructuring and associated costs	(617)	(441)	(407)
Acquisition-related items	15	(66)	(88)
Certain litigation charges	(118)	(313)	(166)
Impairment charges	(76)	—	—
IPR&D charges	(31)	(25)	(58)
Exit of businesses	—	(52)	(149)
Debt tender premium and other charges	—	7	28
Medical device regulations	(83)	(48)	—
Contribution to Medtronic Foundation	—	(80)	—
Income before income taxes	$ 3,895	$ 4,055	$ 5,197

Total Assets and Depreciation Expense

(in millions)	Total Assets		Depreciation Expense		
	April 30, 2021	April 24, 2020	2021	2020	2019
Cardiovascular	$ 15,027	$ 14,844	$ 212	$ 210	$ 194
Medical Surgical	39,319	39,666	195	194	206
Neuroscience	17,151	16,850	236	233	217
Diabetes	3,671	3,165	53	38	34
Segments	75,168	74,525	696	675	651
Corporate	17,915	16,164	223	232	244
Total	$ 93,083	$ 90,689	$ 919	$ 907	$ 895

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. Geographic property, plant, and equipment are attributed to the country based on the physical location of the assets.

The following table presents net sales for fiscal years 2021, 2020, and 2019, and property, plant, and equipment, net at April 30, 2021 and April 24, 2020 for the Company's country of domicile, countries with significant concentrations, and all other countries:

	Net sales			Property, plant, and equipment, net	
(in millions)	2021	2020	2019	April 30, 2021	April 24, 2020
Ireland	$ 100	$ 85	$ 91	$ 170	$ 164
United States	15,526	14,919	16,194	3,688	3,459
Rest of world	14,491	13,909	14,272	1,363	1,205
Total other countries, excluding Ireland	30,017	28,828	30,466	5,051	4,664
Total	$ 30,117	$ 28,913	$ 30,557	$ 5,221	$ 4,828

No single customer represented over 10 percent of the Company’s consolidated net sales in fiscal years 2021, 2020, or 2019.

20. Subsequent Events

On June 3, 2021, the Company announced the decision to stop the distribution and sale of the Medtronic HVAD System in light of a growing body of observational clinical comparisons indicating a lower frequency of neurological adverse events and mortality with another circulatory support device available to patients compared to the HVAD system. Fiscal year 2021 HVAD system and associated accessory revenue was $141 million and is included in our Cardiovascular segment. The Company expects to record a non-cash pre-tax impairment of long-lived assets of $400 million to $500 million in the quarter ending July 30, 2021 primarily related to intangible assets. The Company remains committed to serving the needs of the 4,000 patients currently implanted with this device.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

Not applicable.

Item 9A. Controls and Procedures

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 annual report, our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act) are effective.

Management's Annual Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company (as defined in Exchange Act Rule 13a-15(f)). Management conducted an evaluation of the effectiveness of internal control over financial reporting based on the framework in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, management concluded that the Company's internal control over financial reporting was effective at April 30, 2021. The effectiveness of the Company's internal control over financial reporting as of April 30, 2021 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in its report which is included in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Changes in Internal Control Over Financial Reporting

During the quarter ended April 30, 2021, there were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) under the Exchange Act) that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting. The Company has not experienced any material impacts to its internal controls over financial reporting despite the fact that most of its employees are working remotely due to the COVID-19 pandemic.

Item 9B. Other Information

Medtronic has engaged in certain activities that it is required to disclose pursuant to Section 13(r)(1)(D)(ii) of the Securities Exchange Act of 1934, as amended. The activities described herein are expressly authorized by the U.S. Government under applicable economic sanctions regulations.

Specifically, Medtronic's affiliate in Russia, Medtronic Russia LLC ("Medtronic Russia"), is required under Russian law to complete certain notification and filing requirements to Russia's Federal Security Service ("FSB") regarding certain Medtronic medical devices that make use of encryption functionality that are imported into Russia. While the FSB has been included on the Specially Designated Nationals ("SDN") List administered by the Office of Foreign Assets Control ("OFAC"), these activities are and remain authorized. In particular, Cyber General License No. 1B ("Cyber GL 1B"), issued by OFAC, authorizes all transactions ordinarily incident to obtaining such permits from the FSB, provided that certain conditions are met.

Historically, Medtronic has not been required to disclose these lawful dealings with the FSB. However, on March 2, 2021, OFAC designated the FSB pursuant to an additional sanctions authority. While OFAC amended the applicable general license to confirm that all previously authorized dealings with the FSB remain authorized (notwithstanding the additional designation), the designation of the FSB with a [NPWMD] tag pursuant to Executive Order 13382 means that Medtronic is required under Section 13(r)(1)(D)(ii) of the Securities Exchange Act to disclose certain information as a result of this additional designation, as Section 13(r)(1)(D)(ii) does not contain an exception from its reporting requirements for activities that are authorized by the U.S. Government.

Since March 2, 2021, in the normal course of business and consistent with the authorization of Cyber GL 1B, Medtronic Russia filed five notifications with the FSB, as required under local Russian law for the import of medical

devices that make use of encryption functionality. These activities did not directly result in any revenues or profits for Medtronic. Medtronic intends to continue engaging in activities for which it is authorized by Cyber GL 1B (or any successor GL), to the extent necessary to comply with local law requirements in Russia.

PART III

Part III of this Annual Report on Form 10-K incorporates information by reference from the Company's 2021 definitive proxy statement, which will be filed no later than 120 days after April 30, 2021.

Item 10. Directors, Executive Officers, and Corporate Governance

The sections entitled “Proposal 1 — Election of Directors — Directors and Nominees,” “Corporate Governance — Committees of the Board and Meetings,” and “Share Ownership Information — Delinquent Section 16(a) Report” in the Company's Proxy Statement for our 2021 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 30, 2021, are incorporated herein by reference.

Set forth below are the names and ages of our Section 16(b) executive officers of Medtronic, as well as information regarding their positions with Medtronic, their periods of service in these capacities, and their business experiences. There are no family relationships among any of the officers named, nor is there any arrangement or understanding pursuant to which any person was selected as an officer.

The following table shows the name, age, and position as of April 30, 2021 of each of our executive officers:

Name	Age	Position with the Company
Geoffrey S. Martha	51	Chairman and Chief Executive Officer
Richard Kuntz, M.D.	64	Senior Vice President and Chief Medical and Scientific Officer
Bradley E. Lerman	64	Senior Vice President, General Counsel and Corporate Secretary of the Company
Karen L. Parkhill	55	Executive Vice President and Chief Financial Officer
Carol A. Surface	55	Senior Vice President and Chief Human Resources Officer
Robert ten Hoedt	60	Executive Vice President and President, EMEA Region
Robert J. White	58	Executive Vice President and President, Medical Surgical Portfolio
John Liddicoat, M.D.	57	Executive Vice President and President, Americas Region
Sean Salmon	56	Executive Vice President and President, Diabetes Operating Unit, President, Cardiovascular Portfolio
Brett Wall	56	Executive Vice President and President, Neuroscience Portfolio

Geoffrey S. Martha, age 51, is Chairman of the Board of Directors and Chief Executive Officer of Medtronic. Geoff assumed the role of CEO on April 27, 2020 and became Chairman of the Board on December 11, 2020. Prior to his role as Chairman and CEO, he served as President of Medtronic from November 2019 through April 2020 and joined the Board of Directors in November 2019. Previously, Mr. Martha served as Executive Vice President and President, Restorative Therapies Group, a role he held since August 2015. Mr. Martha previously served as Senior Vice President of Strategy and Business Development of the Company beginning in January 2015 and of Medtronic, Inc. beginning in August 2011. Prior to that, he served as Managing Director of Business Development at GE Healthcare from April 2007 to July 2011; General Manager for GE Capital Technology Finance Services from November 2003 to March 2007; Senior Vice President, Business Development for GE Capital Vendor Financial Services from February 2002 to October 2003; General Manager for GE Capital Colonial Pacific Leasing from February 2001 to January 2002; and Vice President, Business Development for Potomac Federal, the GE Capital federal financing investment bank from May 1998 to January 2001.

Richard Kuntz, M.D., age 64, has been Senior Vice President and Chief Medical and Scientific Officer of the Company since January 2015 and of Medtronic, Inc. since August 2009. Prior to that, he was Senior Vice President and President, Neuromodulation from October 2005 to August 2009; and prior to that, he was an interventional cardiologist and Chief of the Division of Clinical Biometrics at Brigham and Women’s Hospital and Associate Professor of Medicine and Chief Scientific Officer of the Harvard Clinical Research Institute.

Bradley E. Lerman, age 64, has been Senior Vice President, General Counsel and Corporate Secretary of the Company since January 2015 and of Medtronic, Inc. since May 2014. Prior to that, he was Executive Vice President, General Counsel and Corporate Secretary at Federal National Mortgage Association (Fannie Mae) from October 2012 to May 2014; Senior Vice President and Chief Litigation Counsel at Pfizer, Inc. from January 2009 to September 2012; Partner at Winston & Strawn from August 1998 to January 2009; partner at Kirkland & Ellis from

March 1996 to July 1998; Associate Independent Counsel from October 1994 to March 1996; and Assistant U.S. Attorney in the Northern District of Illinois from February 1986 to September 1994. Mr. Lerman is also a current member of the Board of Directors of McKesson Corporation.

Karen L. Parkhill, age 55, joined the Company as Executive Vice President and Chief Financial Officer in June 2016. From 2011 to 2016, Ms. Parkhill served as Vice Chairman and Chief Financial Officer of Comerica Incorporated. Ms. Parkhill was a member of Comerica's Management Executive Committee and the Comerica Bank Board of Directors. Prior to joining Comerica, Ms. Parkhill worked for J.P. Morgan Chase & Co. in various capacities from 1992 to 2011, including serving as Chief Financial Officer of the Commercial Banking business from 2007 to 2011. Ms. Parkhill is also a current member of the Board of Directors for American Express.

Carol A. Surface, age 55, has been Senior Vice President and Chief Human Resources Officer of the Company since January 2015 and of Medtronic, Inc. since September 2013. Prior to that, she was the Executive Vice President and Chief Human Resources Officer at Best Buy Co., Inc. from March 2010 to September 2013, and held a series of HR leadership roles at PepsiCo Inc., from May 2000 to March 2010.

Robert ten Hoedt, age 60, has been Executive Vice President and President, EMEA of the Company since January 2015 and of Medtronic, Inc. since May 2014. Prior to that, he was Senior Vice President and President, EMEA and Canada from 2009 to 2014; Vice President CardioVascular Europe and Central Asia from 2006 to 2009; Vice President and General Manager, Vitatron from 1999 to 2006; Gastro-Uro leader from 1994 to 1999; and Marketing Manager, Neurological from 1991 to 1994.

Robert J. White, age 58, is Executive Vice President and President, Medical Surgical Portfolio. Since 2017, Mr. White has served as Executive Vice President and Group President of the Minimally Invasive Therapies Group of Medtronic. Prior to that, he was Senior Vice President and President, Asia Pacific from January 2015 to December 2017. He had served as President, Emerging Markets, President, Respiratory and Monitoring Solutions and Vice President and General Manager of Patient Monitoring at Covidien. He also held various leadership positions at GE Healthcare and IBM. Mr. White is also a current member of the Board of Directors of Smith & Nephew plc.

John Liddicoat, M.D., age 57, was named Executive Vice President and President, Americas Region in September 2018. Dr. Liddicoat joined Medtronic in 2006 as Vice President of Atrial Fibrillation Technologies. In December of 2006, Dr. Liddicoat was named Vice President and General Manager of the Structural Heart Disease Business. Beginning in August 2014, Dr. Liddicoat served as Senior Vice President and President, Cardiac Rhythm and Heart Failure.

Sean Salmon, age 56, has been Executive Vice President and Group President, Diabetes Group of the company since October 2019, and also assumed the role of Executive Vice President and President, Cardiovascular Portfolio in January 2021. Mr. Salmon previously served as Senior Vice President and President of Coronary and Structural Heart Business within the Cardiac and Vascular Group of the Company beginning in July 2014. Mr. Salmon is a seasoned leader who has been with Medtronic since 2004 and spent the past 16 years in increasingly senior levels of management. Prior to joining Medtronic, Mr. Salmon worked at CR Bard and Johnson & Johnson.

Brett Wall, age 56, is Executive Vice President and President of Medtronic's Neuroscience Portfolio. Mr. Wall previously served as Senior Vice President and President of the Brain Therapies division of Medtronic within the Restorative Therapies Group of the Company from March 2016 to November 2019. Prior to that, Mr. Wall served as SVP and President of Medtronic's Neurovascular business. Prior to joining Medtronic, he served as Covidien's SVP and President of Neurovascular as well as Senior Vice President and President of the International Vascular Therapies business for Covidien. Mr. Wall also served as Senior Vice President and President, International at ev3, Inc. From 2000 to 2008, Brett held various marketing and sales positions with ev3, Inc. and Micro Therapeutics, Inc. Mr. Wall has also worked at Boston Scientific as Director of Marketing, Cardiovascular, Asia Pacifica and Marketing Manager, Japan, from September 1995 to September 2000.

Item 11. Executive Compensation

The sections entitled "Corporate Governance — Director Compensation," "Corporate Governance — Committees of the Board and Meetings," "Compensation Discussion and Analysis," and "Executive Compensation" in Medtronic's Proxy Statement for the Company's 2021 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 30, 2021, are incorporated herein by reference. The section entitled "Compensation Committee Report" in Medtronic's Proxy Statement for the Company's 2021 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 30, 2021, is furnished herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters

The sections entitled “Share Ownership Information – Significant Shareholders,” “Share Ownership Information – Beneficial Ownership of Management,” and “Executive Compensation — Equity Compensation Plan Information” in Medtronic's Proxy Statement for the Company's 2021 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 30, 2021, are incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The sections entitled “Corporate Governance — Director Independence” and “Corporate Governance — Related Party Transactions and Other Matters” in Medtronic's Proxy Statement for the Company's 2021 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 30, 2021, are incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The sections entitled “Corporate Governance — Committees of the Board and Meetings” and “Audit and Non-Audit Fees” in Medtronic's Proxy Statement for the Company's 2021 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 30, 2021, are incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) **1. Financial Statement Schedules**

Schedule II. Valuation and Qualifying Accounts — years ended April 30, 2021, April 24, 2020, and April 26, 2019.

MEDTRONIC PLC AND SUBSIDIARIES
SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS
(in millions)

		Additions		Deductions	
	Balance at Beginning of Fiscal Year	Charges to Income	Charges to Other Accounts	Other Changes (Debit) Credit	Balance at End of Fiscal Year
Allowance for doubtful accounts:					
Fiscal year ended April 30, 2021	$ 208	$ 128	$ —	$ (95) (a)	$ 241
Fiscal year ended April 24, 2020	190	99	—	(81) (a)	208
Fiscal year ended April 26, 2019	193	78	—	(81) (a)	190
Inventory reserve:					
Fiscal year ended April 30, 2021	$ 544	$ 483	$ —	$ (398) (b)	$ 629
Fiscal year ended April 24, 2020	521	282	—	(259) (b)	544
Fiscal year ended April 26, 2019	452	224	—	(155) (b)	521
Deferred tax valuation allowance:					
Fiscal year ended April 30, 2021	$ 5,482	$ 342	$ 170 (e)	$ (172) (d)	$ 5,822
Fiscal year ended April 24, 2020	6,300	119	(6) (c)	(744) (d)	5,482
				(187) (e)	
Fiscal year ended April 26, 2019	7,166	378	(11) (c)	(770) (d)	6,300
				(463) (e)	

(a) Primarily consists of uncollectible accounts written off, less recoveries.

(b) Primarily reflects utilization of the inventory reserve.

(c) Reflects the impact from acquisitions and amounts recognized in accumulated other comprehensive income/loss.

(d) Primarily reflects carryover attribute utilization and expiration.

(e) Primarily reflects the effects of currency fluctuations.

All other schedules are omitted because they are not applicable or the required information is shown in the financial statements or notes thereto.

2. Exhibits

Exhibit No.	Description
3.1	Certificate of Incorporation of Medtronic plc (incorporated by reference to Exhibit 3.1 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
3.2	Amended and Restated Memorandum and Articles of Association of Medtronic plc (incorporated by reference to Exhibit 3.2 to Medtronic plc's Registration Statement on Form S-3, filed on February 6, 2017, File No. 333-215895).

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4.1	Form of Indenture between Medtronic, Inc. and Wells Fargo Bank, National Association regarding 2009 offering (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Registration Statement on Form S-3, filed on March 9, 2009, File No. 333-157777).
4.2	First Supplemental Indenture, dated March 12, 2009, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 12, 2009, File No. 001-07707).
4.3	Second Supplemental Indenture, dated March 16, 2010, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 16, 2010, File No. 001-07707).
4.4	Third Supplemental Indenture, dated March 15, 2011, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current report on Form 8-K, filed on March 16, 2011, File No. 001-07707).
4.5	Fourth Supplemental Indenture, dated March 19, 2012, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.2 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 20, 2012, File No. 001-07707).
4.6	Fifth Supplemental Indenture, dated March 26, 2013, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 26, 2013, File No. 001-07707).
4.7	Sixth Supplemental Indenture, dated February 27, 2014, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Form of Global Note thereof) (incorporated by reference to Exhibit 4.2 to Medtronic, Inc.'s Current Report on Form 8-K, filed on February 27, 2014, File No. 001-07707).
4.8	Seventh Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic plc, Medtronic, Inc., Medtronic Global Holdings S.C.A. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.2 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.9	Indenture, dated December 10, 2014, between Medtronic, Inc. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K filed with the Commission on December 10, 2014, File No. 001-07707).
4.10	First Supplemental Indenture, dated December 10, 2014, between Medtronic, Inc. and Wells Fargo Bank, National Association (including Form of Floating Rate Senior Notes due 2020, Form of 1.500% Senior Notes due 2018, Form of 2.500% Senior Notes due 2020, Form of 3.150% Senior Notes due 2022, Form of 3.500% Senior Notes due 2025, Form of 4.375% Senior Notes due 2035 and Form of 4.625% Senior Notes due 2045) (incorporated by reference to Exhibit 4.2 of Medtronic, Inc.'s Current Report on Form 8-K filed with the Commission on December 10, 2014, File No. 001-07707).
4.11	Second Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic plc and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.3 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.12	Third Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic Global Holdings S.C.A. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.4 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.13	Indenture, dated as of October 22, 2007, by and among Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1(a) to Covidien plc's Current Report on Form 8-K filed on October 22, 2007, File No. 001-33259).
4.14	Fourth Supplemental Indenture, dated as of October 22, 2007, by and among Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1(e) to Covidien plc's Current Report on Form 8-K filed on October 22, 2007, File No. 001-33259).

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4.15	Fifth Supplemental Indenture, dated as of June 4, 2009, by and among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K12G3 filed on June 5, 2009, File No. 001-33259).
4.16	Sixth Supplemental Indenture, dated as of June 28, 2010, among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K filed on June 28, 2010, File No. 001-33259).
4.17	Seventh Supplemental Indenture, dated as of May 30, 2012, among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K filed on May 30, 2012, File No. 001-33259).
4.18	Eighth Supplemental Indenture, dated as of May 16, 2013, among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K filed on May 16, 2013, File No. 001-33259).
4.19	Ninth Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Covidien public limited company, Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.5 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.20	Senior Indenture, dated as of March 28, 2017, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Medtronic, Inc., and Wells Fargo Bank, N.A. (incorporated by reference to Exhibit 4.1 to Medtronic plc's Current Report on Form 8-K, filed on March 28, 2017, File No. 001-36820).
4.21	First Supplemental Indenture, dated as of March 28, 2017, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Medtronic, Inc., and Wells Fargo Bank, N.A. (incorporated by reference to Exhibit 4.2 to Medtronic plc's Current Report on Form 8-K, filed on March 28, 2017, File No. 001-36820).
4.22	Second Supplemental Indenture, dated as of March 7, 2019, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Medtronic, Inc., Wells Fargo Bank, N.A., and Elavon Financial Services DAC, UK Branch (incorporated by reference to Exhibit 4.1 to Medtronic plc's Current Report on Form 8-K, filed on March 7, 2019, File No. 001-36820).
4.23	Third Supplemental Indenture, dated as of July 2, 2019, among Medtronic Global Holdings S.C.A., Medtronic, Inc. and Medtronic plc, Wells Fargo Bank, N.A., as trustee, and Elavon Financial Services DAC (incorporated by reference to Exhibit 4.1 to Medtronic plc' Current Report on Form 8-K, filed July 2, 2019, File No. 001-36820).
4.24	Fourth Supplemental Indenture, dated as of September 29, 2020, among Medtronic Global Holdings S.C.A., Medtronic, Inc. and Medtronic plc, Wells Fargo Bank, N.A., as trustee, and Elavon Financial Services DAC, as paying agent (including the forms of the 2023 Notes, the 2025 Notes, the 2028 Notes, the 2032 Notes, the 2040 Notes and the 2050 Notes) (incorporated by reference to Exhibit 4.1 to Medtronic plc' Current Report on Form 8-K, filed September 29, 2020, File No. 001-36820).
#4.25	Description of Registrant's Securities.
10.1	Amended and Restated Credit Agreement, dated as of December 12, 2018, by and among Medtronic Global Holdings, SCA, certain subsidiaries named therein, Medtronic, Inc., Medtronic PLC, the lenders from time to time party thereto, and Bank of America, N.A. as Administration Agent (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K, filed on December 13, 2018, File No. 001-36820).
10.2	Amendment No. 1 and Extension Agreement to the Amended and Restated Credit Agreement, dated as of December 12, 2019, among Medtronic Global Holdings S.C.A., Medtronic, Inc., Medtronic PLC, the Lenders party thereto and Bank of America, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 10-Q, filed on February 28, 2020, File No. 001-36820).

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10.3	Term Loan Agreement, dated as of May 12, 2020, among Medtronic Global Holdings S.C.A., Medtronic, Inc., Medtronic PLC, the Lenders party thereto and Mizuho Bank, LTD., as Administrative Agent (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K, filed on May 12, 2020, File No. 001-36820).
10.4	Form of Deed of Indemnification (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
10.5	Form of Indemnification Agreement (incorporated by reference to Exhibit 10.2 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
*10.6	Change of Control Severance Plan - Section 16B Officers (as amended and restated as of January 26, 2015) (incorporated by reference to Exhibit 10.14 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.7	Letter Agreement by and between Medtronic, Inc. and Carol Surface dated August 22, 2013 (incorporated by reference to Exhibit 10.44 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2014, filed on June 20, 2014, File No. 001-07707).
*10.8	Letter Agreement by and between Medtronic, Inc. and Bradley E. Lerman dated May 2, 2014 (incorporated by reference to Exhibit 10.4 of Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2014, filed on August 29, 2014, File No. 001-07707).
*10.9	Letter Agreement by and between Medtronic, Inc. and Karen Parkhill dated May 2, 2016 (incorporated by reference to Exhibit 10.1 to Medtronic, plc's Current Report on Form 8-K, filed on May 4, 2016, File No. 001-36820).
*10.10	Office of Chairman and Chief Executive Officer Letter Agreement (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-Q, filed on December 3, 2019, File No. 001-36820).
*10.11	Form of Offer Letter Amendment (incorporated by reference to Exhibit 10.25 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.12	1998 Outside Director Stock Compensation Plan (as amended and restated effective as of January 1, 2008) (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 25, 2008, filed on, filed on March 4, 2008, File No. 001-07707).
*10.13	Amendment to the 1998 Outside Director Stock Compensation Plan (incorporated by reference to Exhibit 10.2 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.14	2003 Long-Term Incentive Plan (as amended and restated effective January 1, 2008) (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2008, filed on March 4, 2008, File No. 001-07707).
*10.15	Amendment to the 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.16	Form of Restricted Stock Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2005, filed on March 7, 2005, File No. 001-07707).
*10.17	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan (four year vesting) (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2005, filed on March 7, 2005, File No. 001-07707).
*10.18	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan (immediate vesting) (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2005, filed on March 7, 2005, File No. 001-07707).
*10.19	Form of Restricted Stock Units Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.20 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 29, 2005, filed on June 29, 2005, File No. 001-07707).
*10.20	Form of Performance Share Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.21 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 29, 2005, filed on June 29, 2005, File No. 001-07707).

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*10.21	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.23 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.22	Form of Restricted Stock Award Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.24 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.23	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.25 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.24	Form of Performance Award Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.26 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.25	Form of Restricted Stock Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 26, 2007, filed on December 4, 2007, File No. 001-07707).
*10.26	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 26, 2007, filed on December 4, 2007, File No. 001-07707).
*10.27	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.39 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2008, filed on June 24, 2008, File No. 001-07707).
*10.28	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.40 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2008, filed on June 24, 2008, File No. 001-07707).
*10.29	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.41 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2008, filed on June 24, 2008, File No. 001-07707).
*10.30	Israeli Amendment to the 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 25, 2008, filed on March 4, 2008, File No. 001-07707).
*10.31	2008 Stock Award and Incentive Plan (as amended and restated effective August 27, 2009) (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 30, 2009, filed on December 9, 2009, File No. 001-07707).
*10.32	Amendment to the 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.33	Form of Restricted Stock Unit Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.34	Form of Restricted Stock Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.35	Form of Restricted Stock Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.36	Form of Restricted Stock Unit Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.37	Form of Non-Qualified Stock Option Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.6 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.38	Terms of Non-Employee Director Compensation under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.42 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 27, 2012, filed on June 26, 2012, File No. 001-07707).

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*10.39	Form of Non-Employee Director Initial Option Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.40	Form of Non-Employee Director Annual Option Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.41	Form of Non-Employee Director Deferred Unit Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.42	Form of Non-Employee Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.65 to Medtronic plc's Annual Report on Form 10-K for the year ended April 24, 2015, filed on June 23, 2015, File No. 001-36820).
*10.43	Israeli Amendment to the Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.10 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.44	Form of Restricted Stock Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-K for the quarter ended July 28, 2017, filed on September 1, 2017, File No. 001-36820).
*10.45	Medtronic plc Amended and Restated 2013 Stock Award and Incentive Plan (as amended and restated generally effective December 8, 2017) (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K, filed on December 12, 2017, File No. 001-36820).
*10.46	Form of Non-qualified Stock Option Agreement Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.50 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820).
*10.47	Form of Restricted Stock Unit Award Agreement Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.51 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820).
*10.48	Form of Restricted Stock Award Agreement Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.52 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820)
*10.49	Form of Long Term Performance Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.53 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820).
*10.50	Form of Non-Qualified Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.31 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.51	Form of Performance Share Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended October 30, 2020, filed on December 3, 2020, File No. 001-36820).
*10.52	Form of Non-Employee Director Deferred Unit Award Agreement under the 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.53	Form of Non-Qualified Stock Option Agreement under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.54	Form of Restricted Stock Unit Award Agreement (U.S. Employees) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.55	Form of Restricted Stock Unit Award Agreement (Non-U.S. Employees) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).

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*10.56	Form of Restricted Stock Unit Award Agreement (Time-Based) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.57	Form of Restricted Stock Unit Award Agreement (Israeli-Employees) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.8 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.58	Form of Non-Qualified Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.48 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.59	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.49 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.60	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.50 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.61	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.51 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.62	Form of Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.53 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.63	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.54 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.64	Form of Restricted Stock Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.69 to Medtronic plc's Annual Report on Form 10-K for the year ended April 24, 2020, filed on June 19, 2020, File No. 001-36820).
*10.65	Form of Non-Qualified Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.70 to Medtronic plc's Annual Report on Form 10-K for the year ended April 24, 2020, filed on June 19, 2020, File No. 001-36820).
*10.66	Medtronic plc 2014 Amended and Restated Employees Stock Purchase Plan (incorporated by reference to Exhibit 10.8 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.67	Medtronic plc Incentive Plan (as amended and restated effective January 26, 2015) (incorporated by reference to Exhibit 10.11 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.68	Medtronic plc Supplemental Executive Retirement Plan (as restated generally effective January 26, 2015) (incorporated by reference to Exhibit 10.15 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.69	Medtronic Non-Qualified Retirement Plan Supplemental (restated November 6, 2020, and formerly known as the Supplemental Executive Retirement Plan) (incorporated by reference to Exhibit 10.3 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended October 30, 2020, filed on December 3, 2020, File No. 001-36820).
*10.70	Medtronic plc Savings and Investment Plan (as amended and restated generally effective January 26, 2015) (incorporated by reference to Exhibit 4.22 to Medtronic plc's Registration Statement on Form S-8 filed on January 28, 2015, File No. 333-201737).
*10.71	Medtronic plc Puerto Rico Employees' Savings and Investment Plan (as amended and restated generally effective January 26, 2015) (incorporated by reference to Exhibit 4.23 to Medtronic plc's Registration Statement on Form S-8 filed on January 28, 2015, File No. 333-201737).

*10.72	Medtronic plc Capital Accumulation Plan Deferral Program (as amended and restated generally effective January 26, 2015) (incorporated by reference to Exhibit 10.13 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.73	Capital Accumulation Plan Deferral Program (as amended and restated generally effective January 1, 2017) (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended October 28, 2016, filed on December 5, 2016, File No. 001-36820).
*10.74	Amended and Restated Covidien Supplemental Savings and Retirement Plan (restated November 6, 2020) (incorporated by reference to Exhibit 10.2 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended October 30, 2020, filed on December 3, 2020, File No. 001-36820).
*10.75	Medtronic Capital Accumulation Plan Deferral Program (restated November 6, 2020) (incorporated by reference to Exhibit 10.4 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended October 30, 2020, filed on December 3, 2020, File No. 001-36820).
#21	List of Subsidiaries of Medtronic plc.
#22	List of Senior Notes, Issuers and Guarantors.
#23	Consent of Independent Registered Public Accounting Firm.
#24	Power of Attorney.
#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	XBRL Taxonomy Extension Schema Document
#101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
#101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
#101.LAB	XBRL Taxonomy Extension Label Linkbase Document
#101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
#104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

*Exhibits that are management contracts or compensatory plans or arrangements.
#Filed herewith

Item 16. Form 10-K Summary

Registrants may voluntarily include a summary of information required by Form 10-K under this Item 16. The Company has not elected to include such summary information.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Medtronic plc

Dated: June 25, 2021	**By:**	**/s/ Geoffrey S. Martha**
		Geoffrey S. Martha
		Chairman and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, the report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Medtronic plc

Dated: June 25, 2021	**By:**	**/s/ Geoffrey S. Martha**
		Geoffrey S. Martha
		Chairman and Chief Executive Officer
		(Principal Executive Officer)
Dated: June 25, 2021	**By:**	/s/ **Karen L. Parkhill**
		Karen L. Parkhill
		Executive Vice President and Chief Financial Officer
		(Principal Financial and Accounting Officer)

Directors

Richard H. Anderson*
Craig Arnold*
Scott C. Donnelly*
Andrea J. Goldsmith, PH.D.*
Randall J. Hogan,*
Michael O. Leavitt*
James T. Lenehan*
Kevin E. Lofton*
Geoffrey S. Martha
Elizabeth G. Nabel, M.D.*
Denise M. O'Leary*
Kendall J. Powell*

*Bradley E. Lerman, by signing his name hereto, does hereby sign this document on behalf of each of the above named directors of the registrant pursuant to powers of attorney duly executed by such persons.

Dated: June 25, 2021	**By:**	**/s/ Bradley E. Lerman**
		Bradley E. Lerman

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

FORM 10-K

☒ **Annual report pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934.**
For the fiscal year ended April 24, 2020.

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

Commission File No. 1-36820
mdt-20200424_g1.jpg®
MEDTRONIC PUBLIC LIMITED COMPANY
(Exact name of registrant as specified in its charter)

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

20 On Hatch, Lower Hatch Street
Dublin 2, Ireland
(Address of principal executive offices)
+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(s)	Name
Ordinary shares, par value $0.0001 per share	MDT	
Floating Rate Notes due 2021	MDT/21	
0.000% Senior Notes due 2021	MDT/21A	
0.000% Senior Notes due 2022	MDT/22B	
0.375% Senior Notes due 2023	MDT/23B	
0.25% Senior Notes due 2025	MDT/25	
1.125% Senior Notes due 2027	MDT/27	
1.625% Senior Notes due 2031	MDT/31	
1.00% Senior Notes due 2031	MDT/31A	
2.250% Senior Notes due 2039	MDT/39A	
1.50% Senior Notes due 2039	MDT/39B	
1.75% Senior Notes due 2049	MDT/49	

Securities registered pursuant to section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act. Yes ☐ No ☒

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

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

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes ☒ No ☐

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

Aggregate market value of voting and non-voting common equity of Medtronic plc held by non-affiliates of the registrant as of October 25, 2019, based on the closing price of $105.44 as reported on the New York Stock Exchange: approximately $141.3 billion. Number of Ordinary Shares outstanding on June 17, 2020: 1,341,298,882

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for its 2020 Annual General Meeting are incorporated by reference into Part III hereof.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, and other written reports of Medtronic public limited company, organized under the laws of Ireland (together with its consolidated subsidiaries, Medtronic, the Company, or we, us, or our), 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 Annual Report on Form 10-K, 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, the potential or anticipated direct or indirect impact of COVID-19 on our business, results of operations and/or financial condition, restructuring and cost-saving initiatives, intellectual property rights, litigation and tax matters, governmental proceedings and 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 Annual 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 United States (U.S.) Food and Drug Administration (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 healthcare 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 governmental proceedings and 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, results of operations and cash flows. These forward-looking statements speak only as of the date of this Annual Report on Form 10-K and are subject to a number of risks, uncertainties and assumptions described in the "Risk Factors" section and elsewhere in this 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 this Annual Report on Form 10-K, as well as those related to:

- the COVID-19 pandemic and the actions of businesses, communities and governments in response;
- competition in the medical device industry;
- reduction or interruption in our supply;
- laws and governmental regulations;

- quality problems;
- liquidity shortfalls;
- decreasing prices and pricing pressure;
- fluctuations in currency exchange rates;
- changes in applicable tax rates;

- positions taken by taxing authorities;
- adverse regulatory action;
- delays in regulatory approvals;
- litigation results;
- self-insurance;
- commercial insurance;
- healthcare 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.

PART I

Item 1. Business

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Medtronic plc, headquartered in Dublin, Ireland, 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. Medtronic was founded in 1949 and today serves hospitals, physicians, clinicians, and patients in more than 150 countries worldwide. We remain committed to a mission written by our founder in 1960 that directs us “to contribute to human welfare by the application of biomedical engineering in the research, design, manufacture, and sale of products to alleviate pain, restore health, and extend life.”

With innovation and market leadership, we have pioneered advances in medical technology. Our commitment to enhance our offerings by developing and acquiring new products, wrap-around programs, and solutions to meet the needs of a broader set of stakeholders is driven by the following primary strategies:

- Therapy Innovation: Delivering a strong launch cadence of meaningful therapies and procedures.
- Globalization: Addressing the inequity in healthcare access globally, primarily in emerging markets.
- Economic Value: Becoming a leader in value-based healthcare by offering new services and solutions to improve outcomes and efficiencies, lower costs by reducing hospitalizations, improve remote clinical management, and increase patient engagement.

Our primary customers include hospitals, clinics, third-party healthcare providers, distributors, and other institutions, including governmental healthcare programs and group purchasing organizations (GPOs).

Medtronic plc is the successor to Medtronic, Inc., a Minnesota corporation. Medtronic, Inc. and Covidien plc (Covidien) were combined under and became subsidiaries of Medtronic plc on January 26, 2015.

On July 29, 2017, we completed the divestiture of our Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses (the Divestiture). Among the product lines included in the divestiture were the dental and animal health, chart paper, wound care, incontinence, electrodes, SharpSafety, thermometry, perinatal protection, blood collection, compression, and enteral feeding offerings. Prior to the divestiture, these businesses were included within the Minimally Invasive Therapies Group segment.

We have four operating and reportable segments that primarily develop, manufacture, distribute, and sell device-based medical therapies and services: the Cardiac and Vascular Group, the Minimally Invasive Therapies Group, the Restorative Therapies Group, and the Diabetes Group. For more information regarding our segments, please see Note 21 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

CARDIAC AND VASCULAR GROUP

The Cardiac and Vascular Group is made up of the Cardiac Rhythm & Heart Failure, Coronary & Structural Heart, and Aortic, Peripheral & Venous divisions. The primary medical specialists who use our Cardiac and Vascular products include electrophysiologists, implanting cardiologists, heart failure specialists, cardiovascular, cardiothoracic, and vascular surgeons, and interventional cardiologists and radiologists.

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Cardiac Rhythm & Heart Failure

Our Cardiac Rhythm & Heart Failure division develops, manufactures, and markets products for the diagnosis, treatment, and management of heart rhythm disorders and heart failure. Our products include implantable devices, leads and delivery systems, products for the treatment of atrial fibrillation (AF), products designed to reduce surgical site infections, information systems for the management of patients with Cardiac Rhythm & Heart Failure devices, ventricular assist systems, and an integrated health solutions business. Principal products and services offered include:

- Implantable cardiac pacemakers including the Azure MRI SureScan, Adapta, Advisa MRI SureScan, Micra Transcatheter Pacing System, which is leadless and does not have a subcutaneous device pocket like a conventional pacemaker, and Micra AV, which can treat patients with atrioventricular block.
- Implantable cardioverter defibrillators (ICDs), including the Visia AF, Evera MRI SureScan, and the Cobalt and Chrome portfolio of BlueSync-enabled ICDs, as well as defibrillator leads, including the Sprint Quattro Secure lead.
- Implantable cardiac resynchronization therapy devices (CRT-Ds and CRT-Ps) including the Claria/Amplia/Compia family of MRI Quad CRT-D SureScan systems and the Cobalt and Chrome portfolio of BlueSync-enabled CRT-Ds, as well as the Percepta/Serena/Solara family of MRI Quad CRT-P SureScan systems.
- AF ablation products including the Arctic Front Cardiac CryoAblation Catheter System, designed for pulmonary vein isolation in the treatment of patients with drug refractory paroxysmal AF.
- Insertable cardiac monitoring systems including the Reveal LINQ, which is used to record the heart's electrical activity before, during, and after transient symptoms such as syncope (i.e. fainting) and palpitations to assist in diagnosis.
- Mechanical circulatory support products including miniaturized implantable heart pumps, or ventricular assist devices, patient accessories and surgical tools to treat patients suffering from advanced heart failure.
- TYRX products including the Cardiac and Neuro Absorbable Antibacterial Envelopes, which are designed to stabilize electronic implantable devices and help prevent infection associated with implantable pacemakers, and defibrillators.
- Remote monitoring services and patient-centered software to enable efficient care coordination and specialized telehealth nurse support as well as services related to hospital operational efficiency.

Coronary & Structural Heart

Our Coronary & Structural Heart division includes therapies to treat coronary artery disease and heart valve disorders. Our products include coronary stents and related delivery systems, including a broad line of balloon angioplasty catheters, guide catheters, guide wires, diagnostic catheters, and accessories, as well as products for the repair and replacement of heart valves, perfusion systems, positioning and stabilization systems for beating heart revascularization surgery, and surgical ablation products. Principal products offered include:

- CoreValve family of aortic valves, including the Evolut R, Evolut PRO, and Evolut PRO+ systems for transcatheter aortic valve replacement.
- Percutaneous Coronary Intervention stent products including our Resolute Onyx drug-eluting stent.

- Surgical valve replacement and repair products for damaged or diseased heart valves, including both tissue and mechanical valves, blood-handling products that form a circulatory support system to maintain and monitor blood circulation and coagulation status, oxygen supply, and body temperature during arrested heart surgery, and surgical ablation systems and positioning and stabilization technologies.

Aortic, Peripheral & Venous

Our Aortic, Peripheral & Venous division is comprised of a comprehensive line of products and therapies to treat aortic disease, such as aneurysms, dissections, and transections, as well as peripheral vascular disease, and venous disease. Our products include endovascular stent graft systems, peripheral drug coated balloons, stent and angioplasty systems, and carotid embolic protection systems for the treatment of vascular disease outside the heart, and products for superficial and deep venous disease. Principal products offered include:

- Endovascular stent grafts and accessories including the Endurant II Stent Grant System for the treatment of abdominal aortic aneurysms, the Valiant Navion Thoracic Stent Grant System for thoracic endovascular aortic repair procedures, and the Heli-FX EndoAnchor System.
- Percutaneous angioplasty balloons including the IN.PACT family of drug-coated balloons, vascular stents, directional atherectomy products, and other procedure support tools.
- Products to treat superficial venous diseases in the lower extremities including the ClosureFast radiofrequency ablation system and the VenaSeal medical adhesive closure system.

MINIMALLY INVASIVE THERAPIES GROUP

The Minimally Invasive Therapies Group is made up of the Surgical Innovations and Respiratory, Gastrointestinal, & Renal divisions. Products and therapies of this group are used primarily by hospitals, physicians' offices, ambulatory care centers, and other alternate site healthcare providers. While less frequent, some products and therapies are also used in home settings.

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Surgical Innovations

Our Surgical Innovations division develops, manufactures, and markets advanced and general surgical products including surgical stapling devices, vessel sealing instruments, wound closure, electrosurgery products, hernia mechanical devices, mesh implants, and gynecology products and therapies to treat diseases and conditions that are typically, but not exclusively, addressed by surgeons. Principal products and services offered include:

- Advanced stapling and energy products, including the Tri-Staple technology platform for endoscopic stapling, including the Endo GIA reloads and reinforced reloads with Tri-Staple Technology and the Endo GIA ultra universal stapler, the LigaSure Exact Dissector and L-Hook Laparoscopic Sealer/Divider, and the Sonicision curved jaw cordless ultrasonic dissection system.
- Electrosurgical hardware and instruments, including the Valleylab FT10 energy platform, and the Force TriVerse electrosurgical pencils, and surgical artificial intelligence (AI), data and analytics, and digital education and training to support robotic assisted surgery platform.
- Products designed for the treatment of hernias, including the AbsorbaTack absorbable mesh fixation device for hernia repair, the Symbotex composite mesh for surgical laparoscopic and open ventral hernia repair, and Parietex ProGrip, a self-gripping, biocompatible solution for inguinal hernias.

Respiratory, Gastrointestinal, & Renal

Our Respiratory, Gastrointestinal, & Renal division develops, manufactures, and markets products in the emerging fields of minimally invasive gastrointestinal and hepatologic diagnostics and therapies, patient monitoring, respiratory interventions including airway management and ventilation therapies, and for the treatment of renal disease. Principal products and services offered include:

- Gastrointestinal and endoscopy products, including the PillCam portfolio, the Bravo calibration-free reflux testing systems, the EndoFLIP imaging systems, the Emprint ablation system with Thermosphere Technology, the Barrx platform through ablation with the Barrx 360 Express catheter, the Cool-tip radiofrequency ablation system, and the HET Bipolar System.
- Airway, ventilation, and inhalation therapies products, including the Puritan Bennett 980, 840, and 560 ventilators, the Newport e360 and HT70 ventilators, the TaperGuard Evac tube, Shiley Endotracheal Tubes, Shiley Tracheostomy Tubes, McGRATH MAC video laryngoscopes, and DAR Filters.
- Products focused on patient monitoring, including Capnostream capnography monitors, Nellcor pulse oximetry monitors, INVOS cerebral/somatic oximetry systems, and Bispectral Index (BIS) brain monitoring technology.
- Products providing solutions for the treatment of renal disease, including Palindrome, Mahurkar and Mahurkar Elite Dialysis Access Catheters for renal therapy, and other products designed for use in treatment of both acute and chronic renal failure conditions.

RESTORATIVE THERAPIES GROUP

The Restorative Therapies Group is made up of the Brain Therapies, Spine, Specialty Therapies, and Pain Therapies divisions. The primary medical specialists who use the products of this group include spinal surgeons, neurosurgeons, neurologists, pain management specialists, anesthesiologists, orthopedic surgeons, urologists, colorectal surgeons, urogynecologists, interventional radiologists, and ear, nose, and throat specialists.

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Brain Therapies

Our Brain Therapies division develops, manufactures, and markets an integrated portfolio of devices and therapies for the treatment of neurological disorders and diseases, as well as surgical technologies designed to improve the precision and workflow of neuro procedures. Principal products and services offered include:

- Neurovascular products to treat diseases of the vasculature in and around the brain. This includes coils, neurovascular stent retrievers, and flow diversion products, as well as access and delivery products to support procedures. Products also include the Pipeline Flex Embolization Devices, endovascular treatments for large or giant wide-necked brain aneurysms, the portfolio of Solitaire revascularization devices for treatment of acute ischemic stroke, the Riptide Aspiration System and a portfolio of associated access catheters including our React aspiration catheters also for the treatment of acute ischemic stroke.
- Brain modulation products, including those for the treatment of the disabling symptoms of Parkinson's disease, essential tremor, refractory epilepsy, severe, treatment-resistant obsessive compulsive disorder (approved under a Humanitarian Device Exemption (HDE) in the U.S.), and chronic, intractable primary dystonia (approved under a HDE in the U.S.). Specifically, this includes our family of Activa Neurostimulators, including Activa SC (single-channel primary cell battery), Activa PC (dual channel primary cell battery), and Activa RC (dual channel rechargeable battery). This also includes our Percept PC Neurostimulator DBS system with BrainSense technology, which received CE Mark approval in January of 2020.

- Neurosurgery products, including platform technologies, implant therapies, and advanced energy products. Our StealthStation S8 Navigation System, Stealth Autoguide cranial robotic guidance platform, and O-arm Imaging System are platforms used in cranial, spinal, sinus, and orthopedic procedures. Our Mazor X robotic guidance systems are used in robot-assisted spine procedures and combine the best-in-class robotics and navigation capability. Our Midas Rex Surgical Drills, including our new MR8 high-speed drill system, are used in cranial, spinal, ENT, and orthopedic procedures. Our CSF Management Portfolio is used in treating hydrocephalus and other conditions impacting the intracranial pressure, and our Visualase MRI-guided laser ablation is used in cranial procedures. Our PEAK Surgery System and Aquamantys Sealers are advanced energy products. Our PEAK Surgery System is a tissue dissection system that consists of the PEAK PlasmaBlade and PULSAR Generator and is cleared for use in a variety of settings, including plastic reconstructive surgery, general surgery, and certain conditions of ENT. Our Aquamantys Sealers use patented transcollation technology to provide haemostatic sealing of soft tissue and bone and are cleared for use in a variety of surgical procedures, including orthopedic surgery, spine, solid organ resection and thoracic procedures.

Spine

Our Spine division develops, manufactures, and markets a comprehensive line of medical devices and implants used in the treatment of the spine and musculoskeletal system. Our Spine division also provides biologic solutions for the orthopedic and dental markets and, in concert with our Neurosurgery business, offers unique and highly differentiated imaging, navigation, power instruments, nerve monitoring, and Mazor robotic guidance systems used in robot assisted spine procedures. Principal products and services offered include:

- Products to treat a variety of conditions affecting the spine, including degenerative disc disease, spinal deformity, spinal tumors, fractures of the spine, and stenosis. These products include our CD HORIZON SOLERA system, T2 Strastosphere, and the CLYDESDALE, and ELEVATE interbody spacers. These products also include titanium interbody implants and surface technologies from Titan Spine, acquired in June of 2019.

- Products that facilitate less invasive thoracolumbar surgeries, including the CD HORIZON SOLERA VOYAGER and LONGITUDE Percutaneous Fixation Systems.

- Products to treat conditions in the cervical region of the spine, including the ZEVO Anterior Cervical Plate System, the INFINITY OCT System, and PRESTIGE LP Cervical Artificial Discs.

- Biologic solutions products, including our INFUSE Bone Graft (InductOs in the European Union (E.U.)), which contains a recombinant human bone morphogenetic protein, rhBMP-2, for certain spinal, trauma, and oral maxillofacial applications.

- Demineralized Bone Matrix products, including MagniFuse, GRAFTON/GRAFTON PLUS, COREX, and PROGENIX, and the MASTERGRAFT family of synthetic bone graft products - Matrix, Putty, and Granules.

Specialty Therapies

Our Specialty Therapies division develops, manufactures, and markets products and therapies to treat diseases of the ear, nose and throat (ENT), help control the systems of overactive bladder, (non-obstructive) urinary retention, and chronic fecal incontinence. Principal products and services offered include:

- Pelvic health and gastric therapies products, including our Interstim, InterStim Micro, and InterStim II neurostimulators, and InterStim SureScan MRI leads, to help control the systems of overactive bladder, (non-obstructive) urinary retention, and chronic fecal incontinence. Our NURO System delivers Percutaneous Tibial Neuromodulation therapy to treat overactive bladder and associated symptoms of urinary urgency, urinary frequency, and urge incontinence. Our Enterra gastric neurostimulator is approved as a humanitarian device and is used for the treatment of chronic, intractable nausea and vomiting due to gastroparesis.

- ENT products, including the Straightshot M5 Microdebrider Handpiece, the IPC system, NIM Nerve Monitoring Systems, FUSION Compact and StealthStation ENT Navigation System, as well as products for hearing restoration and obstructive sleep apnea.

Pain Therapies

Our Pain Therapies division develops, manufactures, and markets spinal cord stimulation systems, implantable drug infusion systems for chronic pain, as well as interventional products. Principal products and services offered include:

- Spinal cord stimulation products, including rechargeable and non-rechargeable devices and a large selection of leads used to treat chronic back and/or limb pain. This includes the Intellis Spinal Cord Stimulation System, with

AdaptiveStim and SureScan MRI Technology, DTM (differential target multiplexed) proprietary waveform, the Evolve workflow algorithm, and Snapshot reporting. Products also include our RestoreSensor (rechargeable) SureScan MRI neurostimulation system, with its proprietary AdaptiveStim technology.

- Implantable drug infusion systems, including our SynchroMed II Implantable Infusion System, that deliver small quantities of drug directly into the intrathecal space surrounding the spinal cord.
- Interventional products, including the Xpander II Balloon Kyphoplasty system, the Kyphon-V vertebroplasty system and the OsteoCool RF Tumor ablation system.
- The Accurian nerve ablation system, which conducts radio frequency ablation of nerve tissues.

DIABETES GROUP

The Diabetes Group develops, manufactures, and markets products and services for the management of Type 1 and Type 2 diabetes. The primary medical specialists who use and/or prescribe our Diabetes products are endocrinologists and primary care physicians.

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Principal products and services offered include:

- Insulin pumps, including the MiniMed 670G system, which is the world's first hybrid closed loop system. The system, powered by SmartGuard technology, mimics some of the functions of a healthy pancreas by providing two levels of automated insulin delivery to maximize Time in Range with reduced user input.
- Continuous glucose monitoring (CGM) systems, including the Guardian Connect smart CGM system, the iPro2 professional CGM, and the Envision PRO professional CGM, are products worn by patients capturing glucose data to reveal patterns and potential problems, such as hyperglycemic and hypoglycemic episodes.

OTHER FACTORS IMPACTING OUR OPERATIONS

COVID-19 Pandemic

The global COVID-19 pandemic, together with the preventative and precautionary measures taken by businesses, communities and governments, is impacting, and we expect will continue to impact significant aspects of our Company and business, including demand for our products, our operations, supply chains and distribution systems, and our ability to research and develop and bring new products and services to market. See “Item 1A. Risk Factors” in this Annual Report on Form 10-K.

Research and Development

The markets in which we participate are subject to rapid technological advances. Constant improvement of existing products and introduction of new products is necessary to maintain market leadership. Our research and development (R&D) efforts are directed toward maintaining or achieving technological leadership in each of the markets we serve in order to help ensure that patients using our devices and therapies receive the most advanced and effective treatment possible. We remain committed to developing technological enhancements and new indications for existing products, and less invasive and new technologies for new and emerging markets to address unmet patient needs. That commitment leads to our initiation and participation in many clinical trials each fiscal year as the demand for clinical and economic evidence remains high. Furthermore, our development activities are intended to help reduce patient care costs and the length of hospital stays in the future. We have not engaged in significant customer or government-sponsored research.

Our R&D activities include improving existing products and therapies, expanding their indications and applications for use, and developing new therapies and procedures. We continue to focus on optimizing innovation, improving our R&D productivity, driving growth in emerging markets, clinical evidence generation, and assessing our R&D programs based on their ability to deliver economic value to our customers.

Intellectual Property

We rely on a combination of patents, trademarks, tradenames, copyrights, trade secrets, and agreements (non-disclosure and non-competition agreements) to protect our business and proprietary technology. In addition, we have entered into exclusive and non-exclusive licenses relating to a wide array of third-party technologies. In the aggregate, these intellectual property assets and licenses are of material importance to our business; however, we believe that no single intellectual property asset or license is material in relation to any segment of our business or to our business as a whole.

We operate in an industry characterized by extensive patent litigation. Patent litigation may result in significant damage awards and injunctions that could prevent the manufacture and sale of affected products or result in significant royalty payments in order to continue selling the products. At any given time, we are involved as both a plaintiff and a defendant in a number of patent infringement actions, the outcomes of which may not be known for prolonged periods of time. For additional information, see Note 19 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Sales and Distribution

We sell most of our medical devices and therapies through direct sales representatives in the U.S. and a combination of direct sales representatives and independent distributors in markets outside the U.S. For certain portions of our business, we also sell through distributors in the U.S. Our medical supplies products are used primarily in hospitals, surgi-centers and alternate care facilities, such as home care and long-term care facilities, and are marketed to materials managers, GPOs and integrated delivery networks (IDNs). We often negotiate with GPOs and IDNs, which enter into supply contracts for the benefit of their member facilities. Our four largest markets are the U.S., Western Europe, China, and Japan. Emerging markets are an area of increasing focus and opportunity, as we believe they remain under-penetrated.

Our marketing and sales strategy is focused on rapid, cost-effective delivery of high-quality products to a diverse group of customers worldwide. To achieve this objective, we organize our marketing and sales teams around physician specialties. This focus enables us to develop highly knowledgeable and dedicated sales representatives who are able to foster strong relationships with physicians and other customers and enhance our ability to cross-sell complementary products.

We are not dependent on any single customer for more than 10 percent of our total net sales.

Competition, Industry and Cost Containment

We compete in both the therapeutic and diagnostic medical markets in more than 150 countries throughout the world. These markets are characterized by rapid change resulting from technological advances and scientific discoveries. Our product lines face a mix of competitors ranging from large manufacturers with multiple business lines to small manufacturers offering a limited selection of products. In addition, we face competition from providers of other medical therapies, such as pharmaceutical companies.

Major shifts in industry market share have occurred in connection with product problems, physician advisories, safety alerts, results of clinical trials to support superiority claims, and publications about our products, reflecting the importance of product quality, product efficacy and quality systems in the medical device industry. In the current environment of managed care, economically motivated customers, consolidation among healthcare providers, increased competition, and declining reimbursement rates, we have been increasingly required to compete on the basis of price. In order to continue to compete effectively, we must continue to create or acquire advanced technology, incorporate this technology into proprietary products, obtain regulatory approvals in a timely manner, maintain high-quality manufacturing processes, and successfully market these products.

Government and private sector initiatives to limit the growth of healthcare costs, including price regulation, competitive pricing, bidding and tender mechanics, coverage and payment policies, comparative effectiveness of

therapies, technology assessments and managed-care arrangements, are continuing in many countries where we do business, including the U.S. These initiatives put increased emphasis on the delivery of more cost-effective medical devices and therapies. Government programs, including Medicare and Medicaid, private healthcare insurance and managed-care plans have attempted to control costs by limiting the amount of reimbursement they will pay for particular procedures or treatments, tying reimbursement to outcomes, shifting to population health management, and other mechanisms. Hospitals, which purchase our technology, are also seeking to reduce

costs through a variety of mechanisms, including, for example, centralized purchasing, and in some cases, limiting the number of vendors that may participate in the purchasing program. Hospitals are also aligning interests with physicians through employment and other arrangements, such as gainsharing, where a hospital agrees with physicians to share any realized cost savings resulting from changes in practice patterns such as device standardization. This has created an increased level of price sensitivity among customers for our products.

Worldwide Operations

Our global operations are accompanied by certain financial and other risks. Relationships with customers and effective terms of sale vary by country. Exchange rate fluctuations may affect revenues, earnings, and cash flows from operations. We use operational and economic hedges, as well as derivative contracts, to manage the impact of currency exchange rate changes on earnings and cash flow. See “Item 7A. Quantitative and Qualitative Disclosures About Market Risk” and Note 8 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Net sales and property, plant, and equipment attributable to significant geographic areas are presented in Note 21 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Production and Availability of Raw Materials

We manufacture products at manufacturing facilities located in various countries throughout the world. We purchase many of the components and raw materials used in manufacturing our products from numerous suppliers in various countries. Certain components and raw materials are available only from a sole supplier. We work closely with our suppliers to help ensure continuity of supply while maintaining high quality and reliability. Generally, we have been able to obtain adequate supplies of such raw materials and components. However, due to the U.S. FDA’s manufacturing requirements, we may not be able to quickly establish additional or replacement sources for certain components or materials if we experience a sudden or unexpected reduction or interruption in supply and are unable to develop alternative sources.

For additional information related to our manufacturing facilities refer to “Item 2. Properties” in this Annual Report on Form 10-K.

Quality Management and Product Liability

Our business success depends on the quality of our products, and we have global processes, procedures and programs, including our “Quality Begins with Me” program, that are intended to help us maintain the highest possible level of quality in all products. We operate in an industry susceptible to significant product liability claims. These claims may be brought by individuals seeking relief on their own behalf or purporting to represent a class.

Working Capital

Our goal is to carry sufficient levels of inventory to meet the product delivery needs of our customers. We also provide payment terms to customers in the normal course of business and rights to return product under warranty to meet the operational demands of our customers.

Employees

On April 24, 2020, we employed more than 90,000 full-time employees. Our employees are vital to our success. We believe we have been successful in attracting and retaining qualified personnel in a highly competitive labor market due to our competitive compensation and benefits and our rewarding work environment.

Seasonality

Worldwide sales do not reflect a significant degree of seasonality. However, the number of medical procedures incorporating Medtronic products is generally lower during summer months in the northern hemisphere due to summer vacation schedules, particularly in European countries.

Government Regulation

Our operations and products are subject to extensive regulation by numerous government agencies, including the U.S. FDA, European regulatory authorities such as the Medicines and Healthcare Products Regulatory Agency in the United Kingdom (U.K.) and the Federal Institute for Drugs and Medical Devices in Germany, the China National Medical Product Administration (NMPA), and other government agencies inside and outside the U.S. To varying degrees, each of these agencies requires us to comply with laws and regulations governing the development, testing, manufacturing, labeling, marketing,

distribution and post-marketing surveillance of our products. Our business is also affected by patient privacy laws and government payer cost containment initiatives, as well as environmental health and safety laws and regulations.

Product Approval and Monitoring

Many countries where we sell medical devices subject such medical devices and technologies to their own approval and other regulatory requirements regarding performance, safety, and quality of our products. Authorization to commercially distribute a new medical device in the U.S. is generally obtained in one of two ways. The first, known as pre-market notification or the 510(k) process, requires us to demonstrate that our medical device is substantially equivalent to a legally marketed medical device. The second, more rigorous process, known as pre-market approval, requires us to independently demonstrate that a medical device is safe and effective for its intended use. This process is generally much more time-consuming and expensive than the 510(k) process.

In the E.U., a single regulatory approval process exists, and conformity with the legal requirements is represented by the CE Mark. To obtain a CE Mark, defined products must meet minimum standards of performance, safety, and quality (i.e., the essential requirements), and then, according to their classification, comply with one or more of a selection of conformity assessment routes. The competent authorities of the E.U. countries separately regulate the clinical research for medical devices and the market surveillance of products once they are placed on the market. A new Medical Device Regulation was published by the E.U. in 2017 which imposes significant additional premarket and postmarket requirements (EU MDR). The regulation initially provided a three-year implementation period to May 2020, but that timeline has been delayed to May 2021 due to COVID-19 and its impact on audits and technical file review by Notified Bodies. After that time, medical devices marketed in the E.U. will require certification according to these new requirements, except that devices with valid CE certificates, issued pursuant to the Medical Device Directives before May 2020, can be placed on the market until May 2024.

The global regulatory environment is increasingly stringent and unpredictable. Several countries that did not have regulatory requirements for medical devices have established such requirements in recent years, and other countries have expanded, or plan to expand, their existing regulations. While harmonization of global regulations has been pursued, requirements continue to differ significantly among countries. We expect this global regulatory environment will continue to evolve, which could impact the cost, the time needed to approve, and ultimately, our ability to maintain existing approvals or obtain future approvals for our products. Regulations of the U.S. FDA and other regulatory agencies in and outside the U.S. impose extensive compliance and monitoring obligations on our business. These agencies review our design and manufacturing practices, labeling, record keeping, and manufacturers' required reports of adverse experiences and other information to identify potential problems with marketed medical devices. We are also subject to periodic inspections for compliance with applicable quality system regulations, which govern the methods used in, and the facilities and controls used for, the design, manufacture, packaging, and servicing of finished medical devices intended for human use. In addition, the U.S. FDA and other regulatory bodies, both in and outside the U.S. (including the Federal Trade Commission, the Office of the Inspector General of the Department of Health and Human Services, the U.S. Department of Justice, and various state Attorneys General), monitor the promotion and advertising of our products. Any adverse regulatory action, depending on its magnitude, may limit our ability to effectively market and sell our products, limit our ability to obtain future premarket approvals or result in a substantial modification to our business practices and operations. For additional information, see "Item 1A. Risk Factors" *We are subject to costly and complex laws and governmental regulations and any adverse regulatory action may materially adversely affect our financial condition and business operation*s.

In April 2015, we entered into a consent decree with the U.S. FDA relating to our Pain Therapies division's SynchroMed II drug infusion system and its associated quality system. The consent decree requires us to complete certain corrections and enhancements to the SynchroMed pump and the Neuromodulation quality system. The consent decree's limitations on our ability to manufacture and distribute the SynchroMed drug infusion system were lifted by the U.S. FDA in September 2017. Following the successful completion of the required third-party expert audits and subsequent FDA inspection, and in coordination with the FDA, Medtronic can move to have the consent decree vacated. The Company must undergo third-party audits and submit audit reports to the U.S. FDA through calendar 2020.

In June 2016, TYRX received a Warning Letter from the U.S. FDA following an inspection at the TYRX facility in Monmouth Junction, New Jersey. The U.S. FDA completed its follow up inspection to the Warning Letter in March 2018 and issued a Form-483 with observations. FDA completed its Warning Letter reinspection at the TYRX facility in Minneapolis, since the manufacturing operations at Monmouth Junction have ceased. The inspection concluded in March 2020 with zero observations, and in April 2020 the Warning Letter was lifted by FDA. In June 2014,

HeartWare Inc. received a Warning Letter from the U.S. FDA following an inspection at the HeartWare facility in Miami Lakes, Florida. Medtronic acquired HeartWare in August 2016, and implemented corrective actions and process improvements to address the items in the Warning Letter. In July 2018, HeartWare received a Form-483 after a U.S. FDA inspection and is implementing additional corrective actions, primarily related to the Pioneer 2.0 Controller, in response to the observations. We have been communicating monthly with the U.S. FDA on the progress of the actions and the timing for reinspection. In August 2018, we received two FDA Warning Letters, one

issued to the CRHF facility in Mounds View, MN, and the other issued to the Juncos facility in Puerto Rico. The letters were limited to the Blackwell ICD and focused on the manufacturing and design processes for Blackwell. Reinspection was completed at Juncos in November 2019 and resulted in four 483 observations. Reinspection was completed at Mounds View in January 2020 and resulted in zero 483 observations. Both the Juncos and Mounds View Warning Letters were lifted in February 2020.

Trade Regulations

The movement of products, services, and investment across borders subject us to extensive trade regulations. A variety of laws and regulations in the countries in which we transact business apply to the sale, shipment and provision of goods, services and technology across borders. These laws and regulations govern, among other things, our import, export and other business activities. We are also subject to the risk that these laws and regulations could change in a way that would expose us to additional costs, penalties or liabilities. Some governments also impose economic sanctions against certain countries, persons or entities. In addition to our need to comply with such regulations in connection with our direct activities, we also sell and provide goods, technology and services to agents, representatives and distributors who may export such items to customers and end-users. If we, or the third parties through which we do business, are not in compliance with applicable import, export control or economic sanctions laws and regulations, we may be subject to civil or criminal enforcement action, and varying degrees of liability. Such actions may disrupt or delay sales of our products or services or result in restrictions on our distribution and sales of products or services that may materially impact our business.

Anti-Boycott Laws

Under U.S. laws and regulations, U.S. companies and their subsidiaries and affiliates outside the U.S. are prohibited from participating or agreeing to participate in unsanctioned foreign boycotts in connection with certain business activities, including the sale, purchase, transfer, shipping or financing of goods or services within the U.S. or between the U.S. and countries outside of the U.S. If we, or certain third parties through which we sell or provide goods or services, violate anti-boycott laws and regulations, we may be subject to civil or criminal enforcement action and varying degrees of liability.

Data Privacy and Security Laws and Regulations

As a business with a significant global footprint, compliance with evolving regulations and standards in data privacy and cybersecurity has resulted, and may continue to result, in increased costs, new compliance challenges, and the threat of increased regulatory enforcement activity. Our business relies on the secure electronic transmission, storage and hosting of sensitive information, including personal information, protected health information, financial information, intellectual property and other sensitive information related to our customers and workforce.

For example, in the U.S., the collection, maintenance, protection, use, transmission, disclosure and disposal of certain personal information and the security of medical devices are regulated at the U.S. federal and state, international and industry levels. U.S. federal and state laws protect the confidentiality of certain patient health information, including patient medical records, and restrict the use and disclosure of patient health information by healthcare providers. Privacy and Security Rules under the Health Insurance Portability and Accountability Act of 1996 (HIPAA), as amended, and the Health Information Technology for Economic and Clinical Health Act of 2009 (HITECH), govern the use, disclosure, and security of protected health information by “Covered Entities,” (which are healthcare providers that submit electronic claims, health plans, and healthcare clearinghouses) and by their “Business Associates” (which is anyone that performs a service on behalf of a Covered Entity involving the use or disclosure of protected health information and is not a member of the Covered Entity’s workforce). Rules under HIPAA and HITECH include specific security standards and breach notification requirements. The U.S. Department of Health and Human Services (HHS) (through the Office of Civil Rights) has direct enforcement authority against Covered Entities and Business Associates with regard to both the Security and Privacy Rules, including civil and criminal liability. With the exception of certain of its operations in its Diabetes and care management services businesses, Medtronic is generally not a Covered Entity. Medtronic also operates as a Business Associate to Covered Entities in a limited number of instances. There are comparable state laws governing the use and protection of personal health information by healthcare providers, and Medtronic may be subject to these laws in certain of its businesses.

In addition to the regulation of personal health information, a number of states have also adopted laws and regulations that may affect our privacy and data security practices for other kinds of personally identifiable information, such as state laws that govern the use, disclosure and protection of sensitive personal information, such as social security numbers, or that are designed to protect credit card account data. State consumer protection laws

may also establish privacy and security standards for use and management of personally identifiable information, including information related to consumers and care providers.

Outside the U.S., we are impacted by the privacy and data security requirements at the international, national and regional level, and on an industry specific basis. We serve customers in more than 150 countries. Legal requirements in these countries relating to the collection, storage, handling and transfer of personal data and potentially intellectual property continue to evolve

with increasingly strict enforcement regimes. More privacy and security laws and regulations are being adopted, and more are being enforced, with potential for significant financial penalties. In the E.U., stringent data protection and privacy rules which substantially impact the use of patient data across the healthcare industry became effective in May 2018. The E.U. General Data Protection Regulation (GDPR) applies uniformly across the E.U. and includes, among other things, a requirement for prompt notice of data breaches to data subjects and supervisory authorities in certain circumstances and significant fines for non-compliance. The GDPR also requires companies processing personal data of individuals residing in the E.U. to comply with E.U. privacy and data protection rules.

Because the laws and regulations continue to expand, differ from jurisdiction to jurisdiction, and are subject to evolving (and at times inconsistent) governmental interpretation, compliance with these laws and regulations may require significant additional cost expenditures or changes in products or business that increase competition or reduce revenue. Noncompliance could result in the imposition of fines, penalties, or orders to stop noncompliant activities.

Regulations Governing Reimbursement

The delivery of our devices is subject to regulation by HHS and comparable state and non-U.S. agencies responsible for reimbursement and regulation of healthcare items and services. U.S. laws and regulations are imposed primarily in connection with federally funded healthcare programs, such as the Medicare and Medicaid programs, as well as the government's interest in regulating the quality and cost of healthcare. Other governments also impose regulations in connection with their healthcare reimbursement programs and the delivery of healthcare items and services.

U.S. federal healthcare laws apply when we or customers submit claims for items or services that are reimbursed under federally-funded healthcare programs, including laws related to kickbacks, false claims, self-referrals and healthcare fraud. There are often similar state false claims, anti-kickback, and anti-self-referral and insurance laws that apply to state-funded Medicaid and other healthcare programs and private third-party payers. In some circumstances, insurance companies attempt to bring a private cause of action against a manufacturer for a pattern of causing false claims. In addition, as a manufacturer of U.S. FDA-approved devices reimbursable by federal healthcare programs, we are subject to the Physician Payments Sunshine Act, which requires us to annually report certain payments and other transfers of value we make to U.S.-licensed physicians or U.S. teaching hospitals. Any failure to comply with these laws and regulations could subject us or our officers and employees to criminal and civil financial penalties.

Implementation of further legislative or administrative reforms to reimbursement systems, or adverse decisions relating to our products by administrators of these systems in coverage or reimbursement, could significantly reduce reimbursement or result in the denial of coverage, which could have an impact on the acceptance of and demand for our products and the prices that our customers are willing to pay for them. Further, as a result of the Patient Protection and Affordable Care Act (the "ACA"), the U.S. is implementing value-based payment methodologies and seeking to create alternate payment models, such as bundled payments, to continue to drive improved value.

Environmental Health and Safety Laws

We are also subject to various environmental health and safety laws and regulations both within and outside the U.S. Like other companies in our industry, our manufacturing and other operations involve the use and transportation of substances regulated under environmental health and safety laws including those related to the transportation of hazardous materials.

Available Information

We maintain a website at www.medtronic.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (Exchange Act) are made available under the "About Medtronic - Investors" caption and "Financial Information - SEC Filings" subcaption of our website free of charge as soon as reasonably practicable after we electronically file them with, or furnish them to, the Securities and Exchange Commission (SEC).

Information relating to our corporate governance, including our Principles of Corporate Governance, Code of Conduct (including our Code of Ethics for Senior Financial Officers), Code of Business Conduct and Ethics for Members of the Board of Directors, and information concerning our executive officers, directors and Board committees (including committee charters) is available through our website at www.medtronic.com under the "About

Medtronic - Corporate Governance" caption. Information relating to transactions in Medtronic securities by directors and officers is available through our website at www.medtronic.com under the "About Medtronic - Investors" caption and the "Financial Information - SEC Filings" subcaption.

The information listed above may also be obtained upon request from the Medtronic Investor Relations Department, 710 Medtronic Parkway, Minneapolis, MN 55432 USA.

Our website and the information contained on or connected to our website are not incorporated by reference into this Form 10-K.

The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers, including the Company, that file electronically with the SEC. The public may obtain any documents that we file with the SEC at http://www.sec.gov. We file annual reports, quarterly reports, proxy statements, and other documents with the SEC under the Exchange Act.

Item 1A. Risk Factors

Investing in our securities involves a variety of risks and uncertainties, known and unknown, including, among others, those discussed below. Each of the following risks should be carefully considered, together with all the other information included in this Annual Report on Form 10-K, including our consolidated financial statements and the related notes and in our other filings with the SEC. Furthermore, additional risks and uncertainty not presently known to us or that we currently believe to be immaterial may also adversely affect our business. Our business, financial condition, operating results, cash flow and prospects could be materially and adversely affected by any of these risks or uncertainties.

Risks Relating to the Company

The novel coronavirus disease 2019 (COVID-19) has had, and we expect will continue to have, an adverse effect on our business, results of operations, financial condition and cash flows, the nature and extent of which are highly uncertain and unpredictable.

Our global operations and interactions with healthcare systems, providers and patients around the world expose us to risks associated with public health crises, including epidemics and pandemics such as COVID-19. In particular, the continuing global spread of COVID-19, including corresponding preventative and precautionary measures that we and other businesses, communities and governments are taking to mitigate the spread of the disease, has led to unprecedented restrictions on, disruptions in, and other related impacts on business and personal activities. Further, in addition to travel restrictions put in place in early 2020, countries, states and governments may continue to close borders, impose prolonged quarantines or other restrictions and requirements on travel, and further limit our ability to conduct business in-person as we did prior to COVID-19, requiring businesses, including our business, to use alternative methods of communication. It is likely the COVID-19 pandemic will cause an economic slowdown of potentially extended duration, and it is possible that it could cause a global recession.

Together with the preventative and precautionary measures being taken, as well as the corresponding need to adapt to new and different methods of communication and conducting business, COVID-19 is having, and will likely continue to have, an adverse impact on significant aspects of our Company and business, including on demand for and supply of our products, operations, supply chains and distribution systems, our ability to research and develop and bring to market new products and services, and our ability to generate cash flow, and may have an adverse impact on our ability to access capital. Some of our products are particularly sensitive to reductions in deferrable and emergent medical procedures, and, as hospital systems prioritize treatment of COVID-19 patients and otherwise comply with government guidelines, certain medical procedures have been suspended or postponed in many of the markets where our products are marketed and sold, which has caused a reduction in sales of these products. The Company has certain product lines that are in higher demand as a result of COVID-19 such as ventilators, pulse oximetry, capnography, advanced parameter monitoring, and extracorporeal life support products. It is not possible to predict the timing of a broad resumption of deferrable medical procedures and, to the extent individuals and hospital systems continue to de-prioritize, delay or cancel these procedures, or if unemployment or loss of insurance coverage adversely impacts an individual's ability to pay for our products and services, our business, cash flows, financial condition and results of operations would continue to be negatively affected. Further, the COVID-19 pandemic is straining hospital systems around the world, resulting in adverse financial impacts to those systems that could result in reduced future expenditures for capital equipment and other products and services we provide, as well as disruption of product launches of our recently approved products. Clinical trials generally have suspended enrollment due to facility closures and governmental restrictions, which we expect will delay the results from those clinical trials and will impact our ability to timely develop and bring to market new products.

In addition, a significant number of our global suppliers, vendors, distributors and manufacturing facilities have been adversely affected by the COVID-19 pandemic, including by adversely impacting the ability of their employees to get to their places of work and maintain the continuity of their on-site operations. These impacts could impair our

ability to move our products through distribution channels to end customers, and any such delay or shortage in the supply of components or materials may result in our inability to satisfy consumer demand for our products in a timely manner or at all, which could harm our reputation, future sales and profitability.

In addition, COVID-19 has impacted and may further impact the global economy and capital markets, including by negatively impacting demand for a number of our products, access to capital markets (including the commercial paper market), foreign

currency exchange rates, and interest rates, each of which may adversely impact our business and liquidity. We could experience loss of sales and profits due to delayed payments or insolvency of healthcare professionals, hospitals and other customers, suppliers and vendors facing liquidity issues. As a result, we may be compelled to take additional measures to preserve our cash flow.

In addition, COVID-19 could adversely impact our ability to retain key employees and the continued service and availability of skilled personnel necessary to run our complex productions and operations, including our executive officers and other members of our management team, as well as the ability of our third-party suppliers, manufacturers, distributors and vendors to retain their key employees. To the extent our management or other personnel are impacted in significant numbers by COVID-19 and are not available to perform their job duties, we could experience delays in, or the suspension of, our manufacturing operations, research and product development activities, regulatory work streams, clinical development programs and other important commercial functions.

While the impact of COVID-19 has had, and we expect it to continue to have, an adverse effect on our business, results of operations, financial condition and cash flows, the nature and extent of such impact is highly uncertain and unpredictable.

We operate in a highly competitive industry and we may be unable to compete effectively.

We compete in both the therapeutic and diagnostic medical markets in more than 150 countries throughout the world. These markets are characterized by rapid change resulting from technological advances and scientific discoveries. In the product lines in which we compete, we face a range of competitors from large companies with multiple business lines to small, specialized manufacturers that offer a limited selection of niche products. Development by other companies of new or improved products, processes, technologies, or the introduction of reprocessed products or generic versions when our proprietary products lose their patent protection may make our existing or planned products less competitive. In addition, we face competition from providers of alternative medical therapies, such as pharmaceutical companies.

We believe our ability to compete depends upon many factors both within and beyond our control, including:

- product performance and reliability,
- product technology and innovation,
- product quality and safety,
- breadth of product lines,
- product support services,
- customer support,
- cost-effectiveness and price,
- reimbursement approval from healthcare insurance providers, and
- changes to the regulatory environment.

Competition may increase as additional companies enter our markets or modify their existing products to compete directly with ours. In addition, academic institutions, governmental agencies and other public and private research organizations also may conduct research, seek patent protection and establish collaborative arrangements for discovery, research, clinical development and marketing of products similar to ours. These companies and institutions compete with us in recruiting and retaining qualified scientific and management personnel, as well as in acquiring necessary product technologies. From time to time we have lost, and may in the future lose, market share in connection with product problems, physician advisories, safety alerts and publications about our products, which highlights the importance of product quality, product efficacy and quality systems to our business. In the current environment of managed care, consolidation among healthcare providers, increased competition, and declining reimbursement rates, we have been increasingly required to compete on the basis of price. Further, our continued growth and success depend on our ability to develop, acquire and market new and differentiated products, technologies and intellectual property, and as a result we also face competition for marketing, distribution, and collaborative development agreements, establishing relationships with academic and research institutions and licenses to intellectual property. In order to continue to compete effectively, we must continue to create, invest in or acquire advanced technology, incorporate this technology into our proprietary products, obtain regulatory approvals in a timely manner, and manufacture and successfully market our products. Given these factors, we cannot guarantee that we will be able to compete effectively or continue our level of success.

Reduction or interruption in supply or other manufacturing difficulties may adversely affect our manufacturing operations and related product sales.

The manufacture of our products requires the timely delivery of a sufficient amount of quality components and materials and is highly exacting and complex, due in part to strict regulatory requirements. We manufacture the majority of our products and procure important third-party services, such as sterilization services, at numerous facilities worldwide. We purchase many of

the components, raw materials and services needed to manufacture these products from numerous suppliers in various countries. We have generally been able to obtain adequate supplies of such raw materials, components and services. However, for reasons of quality assurance, cost effectiveness, or availability, certain components, raw materials and services needed to manufacture our products are obtained from a sole supplier. Although we work closely with our suppliers to try to ensure continuity of supply while maintaining high quality and reliability, the supply of these components, raw materials and services may be interrupted or insufficient. In addition, due to the stringent regulations and requirements of regulatory agencies, including the U.S. FDA, regarding the manufacture of our products, we may not be able to quickly establish additional or replacement sources. Furthermore, the prices of commodities and other materials used in our products, which are often volatile and outside of our control, could adversely impact our supply. We use resins, other petroleum-based materials and pulp as raw materials in some of our products, and the prices of oil and gas also significantly affect our costs for freight and utilities. A reduction or interruption in supply, and an inability to develop alternative sources for such supply, could adversely affect our ability to manufacture our products in a timely or cost-effective manner and could result in lost sales.

Other disruptions in the manufacturing process or product sales and fulfillment systems for any reason, including equipment malfunction, failure to follow specific protocols and procedures, supplier facility shut-downs, defective raw materials, natural disasters such as hurricanes, tornadoes or wildfires, property damage from riots, and other environmental factors and the impact of epidemics or pandemics, such as COVID-19, and actions by businesses, communities and governments in response, could lead to launch delays, product shortage, unanticipated costs, lost revenues and damage to our reputation. For example, in the past we have experienced a global information technology systems interruption that affected our customer ordering, distribution, and manufacturing processes, and we are currently adversely impacted by, and expect to continue to be adversely impacted by, the global COVID-19 pandemic and the responses of governments and of our partners, including suppliers, manufacturers, distributors and other businesses. Furthermore, any failure to identify and address manufacturing problems prior to the release of products to our customers could result in quality or safety issues.

In addition, several of our key products are manufactured or sterilized at a particular facility, with limited alternate facilities. If an event occurs that results in damage to or closure of one or more of such facilities, such as the damage caused by Hurricane Maria in Puerto Rico in September 2017, we may be unable to manufacture or sterilize the relevant products at the previous levels or at all. Because of the time required to approve and license a manufacturing or sterilization facility, a third-party may not be available on a timely basis to replace production capacity in the event manufacturing or sterilization capacity is lost.

We are subject to costly and complex laws and governmental regulations and any adverse regulatory action may materially adversely affect our financial condition and business operations.

Our medical devices and technologies, as well as our business activities, are subject to a complex set of regulations and rigorous enforcement, including by the U.S. FDA, U.S. Department of Justice, Health and Human Services-Office of the Inspector General, and numerous other federal, state, and non-U.S. governmental authorities. To varying degrees, each of these agencies requires us to comply with laws and regulations governing the development, testing, manufacturing, labeling, marketing and distribution of our products. As a part of the regulatory process of obtaining marketing clearance for new products and new indications for existing products, we conduct and participate in numerous clinical trials with a variety of study designs, patient populations, and trial endpoints. Unfavorable or inconsistent clinical data from existing or future clinical trials or the market's or U.S. FDA's perception of this clinical data, may adversely impact our ability to obtain product approvals, our position in, and share of, the markets in which we participate, and our business, financial condition, results of operations and cash flows. We cannot guarantee that we will be able to obtain or maintain marketing clearance for our new products or enhancements or modifications to existing products, and the failure to maintain approvals or obtain approval or clearance could have a material adverse effect on our business, results of operations, financial condition and cash flows. Even if we are able to obtain approval or clearance, it may:

- take a significant amount of time,
- require the expenditure of substantial resources,
- involve stringent clinical and pre-clinical testing, as well as increased post-market surveillance,
- involve modifications, repairs or replacements of our products, and
- limit the proposed uses of our products.

Both before and after a product is commercially released, we have ongoing responsibilities under the U.S. FDA and other applicable non-U.S. government agency regulations. For instance, many of our facilities and procedures and

those of our suppliers are also subject to periodic inspections by the U.S. FDA to determine compliance with applicable regulations. The results of these inspections can include inspectional observations on the U.S. FDA's Form-483, warning letters, or other forms of enforcement. If the U.S. FDA were to conclude that we are not in compliance with applicable laws or regulations, or that any of our medical products are ineffective or pose an unreasonable health risk, the U.S. FDA could ban such medical products, detain or seize adulterated or misbranded medical products, order a recall, repair, replacement, or refund of such products, refuse to grant pending pre-market approval applications or require certificates of non-U.S governments for exports, and/or

require us to notify health professionals and others that the devices present unreasonable risks of substantial harm to the public health. The U.S. FDA and other non-U.S. government agencies may also assess civil or criminal penalties against us, our officers or employees and impose operating restrictions on a company-wide basis. The U.S. FDA may also recommend prosecution to the U.S. Department of Justice. Any adverse regulatory action, depending on its magnitude, may restrict us from effectively marketing and selling our products and limit our ability to obtain future pre-market clearances or approvals, and could result in a substantial modification to our business practices and operations. Furthermore, we occasionally receive subpoenas or other requests for information from state and federal governmental agencies, and while these investigations typically relate primarily to financial arrangements with healthcare providers, regulatory compliance and product promotional practices, we cannot predict the timing, outcome or impact of any such investigations. Any adverse outcome in one or more of these investigations could include the commencement of civil and/or criminal proceedings, substantial fines, penalties, and/or administrative remedies, including exclusion from government reimbursement programs and/or entry into Corporate Integrity Agreements (CIAs) with governmental agencies. In addition, resolution of any of these matters could involve the imposition of additional, costly compliance obligations. These potential consequences, as well as any adverse outcome from government investigations, could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

In addition, the U.S. FDA has taken the position that device manufacturers are prohibited from promoting their products other than for the uses and indications set forth in the approved product labeling, and any failure to comply could subject us to significant civil or criminal exposure, administrative obligations and costs, and/or other potential penalties from, and/or agreements with, the federal government.

Governmental regulations outside the U.S. have, and may continue to, become increasingly stringent and common. In the European Union, for example, a new Medical Device Regulation was published in 2017 which, when it enters into force in May 2021, will include significant additional premarket and post-market requirements. Penalties for regulatory non-compliance could be severe, including fines and revocation or suspension of a company's business license, mandatory price reductions and criminal sanctions. Future laws and regulations may have a material adverse effect on us.

Our failure to comply with laws and regulations relating to reimbursement of healthcare goods and services may subject us to penalties and adversely impact our reputation, business, results of operations, financial condition and cash flows.

Our devices, products and therapies are purchased principally by hospitals or physicians that typically bill various third-party payers, such as governmental healthcare programs (e.g., Medicare, Medicaid and comparable non-U.S. programs), private insurance plans and managed care plans, for the healthcare services provided to their patients. The ability of our customers to obtain appropriate reimbursement for products and services from third-party payers is critical because it affects which products customers purchase and the prices they are willing to pay. As a result, our devices, products and therapies are subject to regulation regarding quality and cost by HHS, including the Centers for Medicare & Medicaid Services (CMS), as well as comparable state and non-U.S. agencies responsible for reimbursement and regulation of health are goods and services, including laws and regulations related to kickbacks, false claims, self-referrals and healthcare fraud. Many states have similar laws that apply to reimbursement by state Medicaid and other funded programs as well as in some cases to all payers. In certain circumstances, insurance companies attempt to bring a private cause of action against a manufacturer for causing false claims. In addition, as a manufacturer of U.S. FDA-approved devices reimbursable by federal healthcare programs, we are subject to the Physician Payments Sunshine Act, which requires us to annually report certain payments and other transfers of value we make to U.S.-licensed physicians or U.S. teaching hospitals. Any failure to comply with these laws and regulations could subject us or our officers and employees to criminal and civil financial penalties.

We are also subject to risks relating to changes in government and private medical reimbursement programs and policies, and changes in legal regulatory requirements in the U.S. and around the world. Implementation of further legislative or administrative reforms to these reimbursement systems, or adverse decisions relating to coverage of or reimbursement for our products by administrators of these systems, could have an impact on the acceptance of and demand for our products and the prices that our customers are willing to pay for them.

We are substantially dependent on patent and other proprietary rights and failing to protect such rights or to be successful in litigation related to our rights or the rights of others may result in our payment of significant monetary damages and/or royalty payments, negatively impacting our ability to sell current or future products.

We are substantially dependent on patent and other proprietary rights and rely on a combination of patents, trademarks, tradenames, copyrights, trade secrets, and agreements (such as employee, non-disclosure and non-competition agreements) to protect our business and proprietary intellectual property. We also operate in an industry characterized by extensive patent litigation. Patent litigation can result in significant damage awards and injunctions that could prevent our manufacture and sale of affected products or require us to pay significant royalties in order to continue to manufacture or sell affected products. At any given time, we are generally involved as both a plaintiff and a defendant in a number of patent infringement actions, the outcomes of which may not be known for prolonged periods of time. While it is not possible to predict the outcome of patent litigation, it is possible that the results of such litigation could require us to pay significant monetary damages and/or royalty payments, negatively impact our ability to sell current or future products, or that enforcement actions to protect our patent and proprietary rights against others could be unsuccessful, any of which could have a material adverse impact on our business, results of operations, financial condition, and cash flows.

While we intend to defend against any threats to our intellectual property, our patents, trademarks, tradenames, copyrights, trade secrets or agreements (such as employee, non-disclosure and non-competition agreements) may not adequately protect our intellectual property. Further, pending patent applications may not result in patents being issued to us, patents issued to or licensed by us may be challenged or circumvented by competitors and such patents may be found invalid, unenforceable or too limited in scope to protect our technology or provide us with any competitive advantage. Third parties could obtain patents that may require us to negotiate licenses to conduct our business, and such licenses may not be available on reasonable terms or at all. We also rely on non-disclosure and non-competition agreements with certain employees, consultants and other parties to protect, in part, trade secrets and other proprietary rights. We cannot be certain that these agreements will not be breached, that we will have adequate remedies for any breach, that others will not independently develop substantially equivalent proprietary information, or that third parties will not otherwise gain access to our trade secrets or proprietary knowledge.

In addition, the laws of certain countries in which we market or manufacture some of our products do not protect our intellectual property rights to the same extent as the laws of the U.S., which could make it easier for competitors to capture market position. Competitors also may harm our sales by designing products that mirror the capabilities of our products or technology without infringing our intellectual property rights. If we are unable to protect our intellectual property in these countries, it could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

Quality problems and product liability claims could lead to recalls or safety alerts, reputational harm, adverse verdicts or costly settlements, and could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Quality is extremely important to us and our customers due to the impact on patients, and the serious and potentially costly consequences of product failure. Our business exposes us to potential product liability risks that are inherent in the design, manufacture, and marketing of medical devices. In addition, many of our products are often used in intensive care settings with seriously ill patients and some of the medical devices we manufacture and sell are designed to be implanted in the human body for long periods of time or indefinitely. Component failures, manufacturing nonconformances, design defects, off-label use, or inadequate disclosure of product-related risks or product-related information with respect to our products, if they were to occur, could result in an unsafe condition or injury to, or death of, a patient. These problems could lead to recall of, or issuance of a safety alert relating to, our products, and could result in product liability claims and lawsuits, including class actions, which could ultimately result, in certain cases, in the removal from the body of such products and claims regarding costs associated therewith. Due to the strong name recognition of the Medtronic and Covidien brands, a material adverse event involving one of our products could result in reduced market acceptance and demand for all products within that brand, and could harm our reputation and ability to market products in the future. Further, we may be exposed to additional potential product liability risks related to products designed, manufactured and/or marketed in response to the COVID-19 pandemic, and unpredictable or accelerated changes in demand for certain of our products in connection with COVID-19 and its related impacts could impact development and production of products and services and could increase the risk of regulatory enforcement actions, product defects or related claims, as well as adversely impact our customer relationships and reputation.

Strong product quality is critical to the success of our goods and services. If we fall short of these standards and our products are the subject of recalls or safety alerts, our reputation could be damaged, we could lose customers and our revenue and results of operations could decline. Our success also can depend on our ability to manufacture to exact specification precision-engineered components, subassemblies and finished devices from multiple materials. If our components fail to meet these standards or fail to adapt to evolving standards, our reputation, competitive advantage and market share could be harmed. In certain situations, we may undertake a voluntary recall of products or temporarily shut down production lines based on performance relative to our own internal safety and quality monitoring and testing data.

Any of the foregoing problems, including future product liability claims or recalls, regardless of their ultimate outcome, could harm our reputation and have a material adverse effect on our business, results of operations, financial condition and cash flows.

Our research and development efforts rely upon investments and investment collaborations, and we cannot guarantee that any previous or future investments or investment collaborations will be successful.

Our mission is to provide a broad range of therapies to restore patients to fuller, healthier lives, which requires a wide variety of technologies, products and capabilities. The rapid pace of technological development in the medical industry and the specialized expertise required in different areas of medicine make it difficult for one company alone to develop a broad portfolio of technological solutions. In addition to internally generated growth through our research and development efforts, historically we have relied, and expect to continue to rely, upon investments and investment collaborations to provide us access to new technologies both in areas served by our existing businesses as well as in new areas.

We expect to make future investments where we believe that we can stimulate the development or acquisition of new technologies and products to further our strategic objectives and strengthen our existing businesses. Investments and investment collaborations in and with medical technology companies are inherently risky, and we cannot guarantee that any of our previous or future investments or investment collaborations will be successful or will not materially adversely affect our business, results of operations, financial condition and cash flows.

Healthcare policy changes may have a material adverse effect on us.

In response to perceived increases in healthcare costs in recent years, there have been and continue to be proposals by several governments, regulators and third-party payers globally, including the U.S. federal and state governments, to control these costs and, more generally, to reform healthcare systems, including U.S. healthcare reform legislation. Certain of these proposals could, among other things, limit the prices we are able to charge for our products or the amounts of reimbursement available for our products and could limit the acceptance and availability of our products. The adoption of some or all of these proposals could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Our insurance program may not be adequate to cover future losses.

We have elected to self-insure most of our insurable risks across the Company, and we made this decision based on cost and availability factors in the insurance marketplace. We manage and maintain a portion of our self-insured program through a wholly-owned captive insurance company. We continue to maintain a directors and officers liability insurance policy with third-party insurers that provides coverage for the directors and officers of the Company. We continue to monitor the insurance marketplace to evaluate the value of obtaining insurance coverage for other categories of losses in the future. Although we believe, based on historical loss trends, that our self-insurance program accruals and our existing insurance coverage will be adequate to cover future losses, historical trends may not be indicative of future losses. The absence of third-party insurance coverage for other categories of losses increases our exposure to unanticipated claims and these losses could have a material adverse impact on our business, results of operations, financial condition and cash flows.

If we experience decreasing prices for our goods and services and we are unable to reduce our expenses, there may be a material adverse effect on our business, results of operations, financial condition and cash flows.

We have experienced, and may continue to experience, decreasing prices for certain of our goods and services due to pricing pressure from managed care organizations and other third-party payers on our customers, increased market power of our customers as the medical device industry consolidates and increased competition among medical engineering and manufacturing services providers. If the prices for our goods and services decrease and we are unable to reduce our expenses, our business, results of operations, financial condition and cash flows will be adversely affected.

We are subject to a variety of risks associated with global operations that could adversely affect our profitability and operating results.

We develop, manufacture, distribute and sell our products globally. We intend to continue to expand our operations and to pursue growth opportunities outside the U.S., especially in emerging markets. Operations in different countries including emerging markets could expose us to additional and greater risks and potential costs, including:

- fluctuations in currency exchange rates,
- healthcare reform legislation,
- the need to comply with different regulatory regimes worldwide that are subject to change and that could restrict our ability to manufacture and sell our products,
- local product preferences and product requirements,
- longer-term receivables than are typical in the U.S.,

- trade protection measures, tariffs and other border taxes, and import or export licensing requirements,
- less intellectual property protection in some countries outside the U.S. than exists in the U.S.,
- different labor regulations and workforce instability,
- political and economic instability,
- the expiration and non-renewal of foreign tax rulings and/or grants,
- potentially negative consequences from changes in or interpretations of tax laws, and
- economic instability and inflation, recession or interest rate fluctuations.

The escalating global economic competition and trade tensions between the U.S. and China present risk to Medtronic. Although we have been able to mitigate some of the impact on Medtronic from increased duties imposed by both sides (through petitioning both governments for tariff exclusions and other mitigations), the risk remains of additional tariffs and other kinds of restrictions. Tariff exclusions awarded to Medtronic by the U.S. Government require annual renewal, and policies for granting exclusions could shift. The U.S. and China could impose other types of restrictions such as limitations on government procurement or technology export restrictions, which could affect Medtronic's access to the markets. China comprises approximately seven percent of our total revenues.

More generally, several governments including the U.S. have raised the possibility of policies to induce "re-shoring" of supply chains, less reliance on imported supplies, and greater national production. One example would be stronger "Buy America" requirements in the U.S. or U.S. withdrawal from the World Trade Organization Agreement on Government Procurement (GPA). If such steps triggered retaliation in other markets restricting access to foreign products in purchases by their government-owned healthcare systems, the result could be a significant impact on Medtronic.

Other significant changes or disruptions to international trade arrangements, such as termination or modifications of other existing trade agreements or the final terms of the "Brexit" arrangement between the United Kingdom and European Union, may adversely affect our business, results of operations, financial condition and cash flows.

In addition, a significant amount of our trade receivables are with national healthcare systems in many countries. Repayment of these receivables is dependent upon the political and financial stability of those countries. In light of these global economic fluctuations, we continue to monitor the creditworthiness of customers. Failure to receive payment of all or a significant portion of these receivables could adversely affect our business, results of operations, financial condition and cash flows.

In addition, COVID-19, and the responses of business and governments to COVID-19, have resulted in reduced availability of air transport, port closures, increased border controls or closures, increased transportation costs and increased security threats to our supply chain, and countries may continue to close borders, impose prolonged quarantines, and further restrict travel and other activities. Our business could be adversely impacted if we are unable to successfully manage these and other risks of global operations.

Finally, changes in currency exchange rates may impact the reported value of our revenues, expenses, and cash flows. We cannot predict changes in currency exchange rates, the impact of exchange rate changes, nor the degree to which we will be able to manage the impact of currency exchange rate changes.

The failure to comply with anti-corruption laws could materially adversely affect our business and result in civil and/or criminal sanctions.

The U.S. Foreign Corrupt Practices Act (FCPA), the Irish Criminal Justice (Corruption Offences) Act 2018, and similar anti-corruption laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to government officials for the purpose of obtaining or retaining business. Because of the predominance of government-administered healthcare systems in many jurisdictions around the world, many of our customer relationships outside of the U.S. are with governmental entities and are therefore potentially subject to such laws. We also participate in public-private partnerships and other commercial and policy arrangements with governments around the globe.

Global enforcement of anti-corruption laws has increased in recent years, including investigations and enforcement proceedings leading to assessment of significant fines and penalties against companies and individuals. Our international operations create a risk of unauthorized payments or offers of payments by one of our employees, consultants, sales agents, or distributors. We maintain policies and programs to implement safeguards to educate our employees and agents on these legal requirements, and to prevent and prohibit improper practices. However, existing safeguards and any future improvements may not always be effective, and our employees, consultants, sales agents

or distributors may engage in conduct for which we could be held responsible. In addition, regulators could seek to hold us liable for conduct committed by companies in which we invest or that we acquire. Any alleged or actual violations of these regulations may subject us to government scrutiny, criminal or civil sanctions and other liabilities, including exclusion from government contracting, and could disrupt our business, adversely affect our reputation and result in a material adverse effect on our business, results of operations, financial condition and cash flows.

Laws and regulations governing international business operations could adversely impact our business.

The U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC), and the Bureau of Industry and Security at the U.S. Department of Commerce (BIS), administer certain laws and regulations that restrict U.S. persons and, in some instances, non-U.S. persons, in conducting activities, transacting business with or making investments in certain countries, governments, entities and individuals subject to U.S. economic sanctions. Our international operations subject us to these laws and regulations, which are complex, restrict our business dealings with certain countries, governments, entities, and individuals, and are constantly changing. Further restrictions may be enacted, amended, enforced or interpreted in a manner that materially impacts our operations.

From time to time, certain of our subsidiaries have limited business dealings in countries subject to comprehensive sanctions, including Iran, Sudan, Syria, Cuba and the region of Crimea. Certain of our subsidiaries sell medical devices, and may provide related services, to distributors and other purchasing bodies in such countries. These business dealings represent an insignificant amount of our consolidated revenues and income, but expose us to a heightened risk of violating applicable sanctions regulations. Violations of these regulations are punishable by civil penalties, including fines, denial of export privileges, injunctions, asset seizures, debarment from government contracts and revocations or restrictions of licenses, as well as criminal fines and imprisonment. We have established policies and procedures designed to assist with our compliance with such laws and regulations. However, there can be no assurance that our policies and procedures will prevent us from violating these regulations in every transaction in which we may engage, and such a violation could adversely affect our reputation, business, financial condition, results of operations and cash flows.

Consolidation in the healthcare industry could have an adverse effect on our revenues and results of operations.

Many healthcare industry companies, including healthcare systems, distributors, manufacturers, providers, and insurers, are consolidating or have formed strategic alliances. As the healthcare industry consolidates, competition to provide goods and services to industry participants will become more intense. Further, this consolidation creates larger enterprises with greater negotiating power, which they can use to negotiate price concessions. If we must reduce our prices because of industry consolidation, or if we lose customers as a result of consolidation, our business, financial condition, results of operations and cash flows could be adversely affected.

Healthcare industry cost-containment measures could result in reduced sales of our medical devices and medical device components.

Most of our customers, and the healthcare providers to whom our customers supply medical devices, rely on third-party payers, including government programs and private health insurance plans, to reimburse some or all of the cost of the procedures in which medical devices that incorporate components we manufacture or assemble are used. The continuing efforts of governmental authorities, insurance companies and other payers of healthcare costs to contain or reduce these costs could lead to patients being unable to obtain approval for payment from these third-party payers. If third-party payer payment approval cannot be obtained by patients, sales of finished medical devices that include our components may decline significantly and our customers may reduce or eliminate purchases of our components. The cost-containment measures that healthcare providers are instituting, both in the U.S. and outside of the U.S., could harm our ability to operate profitably. For example, managed care organizations have successfully negotiated volume discounts for pharmaceuticals, and GPOs and IDNs have also concentrated purchasing decisions for some customers, which has led to downward pricing pressure for medical device companies, including us.

We are subject to environmental laws and regulations and the risk of environmental liabilities, violations and litigation.

We are subject to numerous U.S. federal, state, local and non-U.S. environmental, health and safety laws and regulations concerning, among other things, the health and safety of our employees, the generation, storage, use and transportation of hazardous materials, emissions or discharges of substances into the environment, investigation and remediation of hazardous substances or materials at various sites, chemical constituents in medical products and end-of-life disposal and take-back programs for medical devices. Our operations and those of certain third-party suppliers involve the use of substances subject to these laws and regulations, primarily those used in manufacturing and sterilization processes. If we or our suppliers violate these environmental laws and regulations, facilities could be shut down and violators could be fined, criminally charged or otherwise sanctioned. Furthermore, environmental laws outside of the U.S. are becoming more stringent, resulting in increased costs and compliance burdens.

In addition, certain environmental laws assess liability on current or previous owners or operators of real property for the costs of investigation, removal or remediation of hazardous substances or materials at their properties or at properties which they have disposed of hazardous substances. In addition to cleanup actions brought by governmental authorities, private parties could bring personal injury or other claims due to the presence of, or exposure to, hazardous substances. The ultimate cost of

site cleanup and timing of future cash outflows is difficult to predict, given the uncertainties regarding the extent of the required cleanup, the interpretation of applicable laws and regulations, and alternative cleanup methods.

The costs of complying with current or future environmental protection and health and safety laws and regulations, or liabilities arising from past or future releases of, or exposures to, hazardous substances, may exceed our estimates, or have a material adverse effect on our business, results of operations, financial condition, and cash flows.

The continuing development of many of our products depends upon us maintaining strong relationships with healthcare professionals.

If we fail to maintain our working relationships with healthcare professionals, many of our products may not be developed and marketed in line with the needs and expectations of the professionals who use and support our products, which could cause a decline in our earnings and profitability. The research, development, marketing and sales of many of our new and improved products depends on our maintaining working relationships with healthcare professionals. We rely on these professionals to provide us with considerable knowledge and experience regarding the development, marketing and sale of our products. Physicians assist us as researchers, marketing and product consultants, inventors and public speakers. In addition, as a result of the COVID-19 pandemic, our access to these professionals has been limited, and travel restrictions, shutdowns and similar measures have impacted our ability to maintain these relationships, thereby affecting our ability to develop, market and sell new and improved products. If we are unable to maintain strong relationships with these professionals, the development and marketing of our products could suffer, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We rely on the proper function, security and availability of our information technology systems and data to operate our business, and a breach, cyber-attack or other disruption to these systems or data could materially and adversely affect our business, results of operations, financial condition, cash flows, reputation or competitive position.

We are increasingly dependent on sophisticated information technology systems to operate our business, including to process, transmit and store sensitive data, and many of our products and services include integrated software and information technology that collects data regarding patients or connects to our systems. Like other large multi-national corporations, we could experience, and in the past have experienced, attempted or actual interference with the integrity of, and interruptions in, our technology systems, as well as data breaches, such as cyber-attacks, malicious intrusions, breakdowns, interference with the integrity of our products and data or other significant disruptions. Furthermore, we rely on third-party vendors to supply and/or support certain aspects of our information technology systems. These third-party systems could also become vulnerable to cyber-attack, malicious intrusions, breakdowns, interference or other significant disruptions, and may contain defects in design or manufacture or other problems that could result in system disruption or compromise the information security of our own systems. In addition, we continue to grow in part through new business acquisitions and, as a result, may face risks associated with defects and vulnerabilities in their systems, or difficulties or other breakdowns or disruptions in connection with the integration of the acquisitions into our information technology systems.

Our worldwide operations mean that we are subject to laws and regulations, including data protection and cybersecurity laws and regulations, in many jurisdictions. The variety of U.S. and international privacy and cybersecurity laws and regulations impacting our operations are described in “Item 1. Business" - *Other Factors Impacting Our Operations - Data Privacy and Security Laws and Regulations*. For example, GDPR requires us to manage personal data in the E.U. and may impose fines of up to four percent of our global revenue in the event of certain violations. Furthermore, there has been a developing trend of civil lawsuits and class actions relating to breaches of consumer data held by large companies or incidents arising from other cyber-attacks. Any data security breaches, cyber-attacks, malicious intrusions or significant disruptions could result in actions by regulatory bodies and/or civil litigation, any of which could materially and adversely affect our business, results of operations, financial condition, cash flows, reputation or competitive position.

In addition, our information technology systems require an ongoing commitment of significant resources to maintain, protect, and enhance existing systems and develop new systems to keep pace with continuing changes in information processing technology, evolving legal and regulatory standards, the increasing need to protect patient and customer information, changes in the techniques used to obtain unauthorized access to data and information systems, and the information technology needs associated with our changing products and services. There can be no assurance that our

process of consolidating, protecting, upgrading and expanding our systems and capabilities, continuing to build security into the design of our products, and developing new systems to keep pace with continuing changes in information processing technology will be successful or that additional systems issues will not arise in the future. Further, a greater number of our employees are working remotely in response to the COVID-19 pandemic and related government actions, which could expose us to greater risks related to cybersecurity and our information technologies systems.

If our information technology systems, products or services or sensitive data are compromised, patients or employees could be exposed to financial or medical identity theft or suffer a loss of product functionality, and we could lose existing customers, have difficulty attracting new customers, have difficulty preventing, detecting, and controlling fraud, be exposed to the loss or misuse of confidential information, have disputes with customers, physicians, and other healthcare professionals, suffer regulatory sanctions or penalties under federal laws, state laws, or the laws of other jurisdictions, experience increases in operating expenses or an impairment in our ability to conduct our operations, incur expenses or lose revenues as a result of a data privacy breach, product failure, information technology outages or disruptions, or suffer other adverse consequences including lawsuits or other legal action and damage to our reputation.

Our substantial leverage and debt service obligations could adversely affect our business.

At April 24, 2020, we had approximately $2.8 billion of current debt obligations and $22.0 billion of long-term debt outstanding. We may also incur additional indebtedness in the future. Our substantial indebtedness could have adverse consequences, including:

- making it more difficult for us to satisfy our financial obligations,
- increasing our vulnerability to adverse economic, regulatory and industry conditions, and placing us at a disadvantage compared to our competitors that are less leveraged,
- limiting our ability to compete and our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate,
- limiting our ability to borrow additional funds for working capital, capital expenditures, acquisitions and general corporate or other purposes, and
- exposing us to greater interest rate risk since the interest rate on floating rate borrowings is variable.

Our debt service obligations require us to use a portion of our operating cash flow to pay interest and principal on indebtedness instead of for other corporate purposes, including funding future expansion of our business, acquisitions, and ongoing capital expenditures, which could impede our growth. If our operating cash flow and capital resources are insufficient to service our debt obligations, we may be forced to sell assets, seek additional equity or debt financing or restructure our debt, which could harm our long-term business prospects. Our failure to comply with the terms of our revolving credit facility and other indebtedness could result in an event of default which, if not cured or waived, could result in the acceleration of all of our debt.

Failure to integrate acquired businesses into our operations successfully, as well as liabilities or claims relating to such acquired businesses, could adversely affect our business.

As part of our strategy to develop and identify new products and technologies, we have made several significant acquisitions in recent years, and may make additional acquisitions in the future. Our integration of the operations of acquired businesses requires significant efforts, including the coordination of information technologies, research and development, sales and marketing, operations, manufacturing, and finance. These efforts result in additional expenses and involve significant amounts of management's time that cannot then be dedicated to other projects. Our failure to manage and coordinate the growth of acquired companies successfully could also have an adverse impact on our business. Further, acquired businesses may have liabilities, or be subject to claims, litigation or investigations, that we did not anticipate or which exceed our estimates at the time of the acquisition. In addition, we cannot be certain that the businesses we acquire will become profitable or remain so. Factors that will affect the success of our acquisitions include:

- the presence or absence of adequate internal controls and/or significant fraud in the financial systems of acquired companies,
- our ability or inability to integrate information technology systems of acquired companies in a secure and reliable manner,
- liabilities, claims, litigation, investigations or other adverse developments relating to acquired businesses or the business practices of acquired companies, including investigations by governmental entities, potential FCPA or product liability claims or other unanticipated liabilities,
- any decrease in customer loyalty and product orders caused by dissatisfaction with the combined companies' product lines and sales and marketing practices, including price increases,
- our ability to retain key employees, and

- the ability to achieve synergies among acquired companies, such as increasing sales of the integrated company's products, achieving cost savings, and effectively combining technologies to develop new products.

We also could experience negative effects on our business, financial condition, results of operations and cash flows from acquisition-related charges, amortization of intangible assets and asset impairment charges. These effects, individually or in the aggregate, could cause a deterioration of our credit rating and result in increased borrowing costs and interest expense.

Changes in tax laws or exposure to additional income tax liabilities could have a material impact on our business, results of operations, financial condition and cash flows.

We are subject to income taxes, as well as non-income based taxes, in the U.S., Ireland, and various other jurisdictions in which we operate. The tax laws in the U.S., Ireland and other countries in which we and our affiliates do business could change on a prospective or retroactive basis, and any such changes could materially adversely affect our business and our effective tax rate. For example, on December 22, 2017, the U.S. enacted comprehensive tax legislation, commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"), which resulted in a significant charge to tax expense during our fiscal year 2018 associated with the U.S. taxation of accumulated foreign earnings as well as the requirement to revalue U.S. deferred tax assets and liabilities resulting from the reduction in the U.S. corporate tax rate. The U.S. Treasury is expected to issue additional subsequent guidance and interpretation of the Tax Act. This guidance could have a material impact on our business, financial condition, results of operations, and cash flows.

In 2013, the Organization for Economic Cooperation and Development (OECD) published an action plan called Base Erosion and Profit Shifting (BEPS) with a view to tackling perceived tax abuse and inconsistency between taxing authorities and their respective approach to International tax matters. The final BEPS action plan was published in October 2015 and subsequent to this many taxing authorities have adopted the guidelines provided within their local laws. The EU expanded upon these guidelines with the Anti-Tax Avoidance Directive (ATAD 1 & 2) to be applied by all member states by 2020. The OECD announced its intention to expand the scope of BEPS in March 2018 and in January 2019 they issued a short policy note that announced agreement on the way forward for developing a long term solution to the tax challenges thrown up by the global digital economy and is commonly referred to as BEPS2.0. The OECD has set a very aggressive timetable for releasing final agreed BEPS2.0 guidelines on taxing the digital economy for December 2020. The proposals as currently drafted are very wide ranging and could affect all multinational enterprises across all industries without regard to their level of engagement with the digital economy. The aggressive nature of the timeline set by the OECD may mean that all implications for business may not have been fully worked through or fully understood by the OECD before final guidelines are issued. We continue to monitor any and all implications potentially resulting from this guidance. This action together with other legislative changes on the mandatory sharing of company information (financial and operational) with taxing authorities on a local and global basis under various information sharing initiatives, could lead to disagreements between jurisdictions associated with the proper allocation of profits between such jurisdictions.

We are subject to ongoing tax audits in the various jurisdictions in which we operate. Tax authorities may disagree with certain positions we have taken and assess additional taxes. We regularly assess the likely outcomes of these audits in order to determine the appropriateness of our tax provision. However, there can be no assurance that we will accurately predict the outcomes of these audits, and the actual outcomes of these audits could have a material impact on our business, financial condition, results of operations, and cash flows.

We have recorded reserves for potential payments of tax to various tax authorities related to uncertain tax positions. However, the calculation of such tax liabilities involves the application of complex tax regulations in many jurisdictions. Therefore, any dispute with a tax authority may result in a payment that is significantly different from current estimates. If payment of these amounts ultimately proves to be less than the recorded amounts, the reversal of the liabilities generally would result in tax benefits being recognized in the period when we determine the liabilities are no longer necessary. If our estimate of tax liabilities proves to be less than the amount for which it is ultimately liable, we would incur additional charges, and such charges could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

The Medtronic, Inc. tax court proceeding outcome could have a material adverse impact on our financial condition.

In March 2009, the IRS issued its audit report for Medtronic Inc. for fiscal years 2005 and 2006. Medtronic, Inc. reached agreements 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 our key manufacturing sites. An adverse outcome in this matter could materially and adversely affect our business, financial condition, results of operations and cash flows. See Note 19 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Future potential changes to the U.S. tax laws could result in us being treated as a U.S. corporation for U.S. federal tax purposes, and the IRS may not agree with the conclusion that we should be treated as a foreign corporation for U.S federal income tax purposes.

Because Medtronic plc is organized under the laws of Ireland, we would generally be classified as a foreign corporation under the general rule that a corporation is considered tax resident in the jurisdiction of its organization or incorporation for U.S. federal income tax purposes. Even so, the IRS may assert that we should be treated as a U.S. corporation (and, therefore, a U.S. tax resident) for U.S. federal income tax purposes pursuant to Section 7874 of the U.S. Internal Revenue Code of 1986, as amended (the Code).

Under Section 7874 of the Code, if Medtronic Inc.'s shareholders immediately prior to the Covidien transaction held 80% or more of the vote or value of our shares by reason of holding stock in Medtronic, Inc. immediately after the transaction (the ownership test), and our expanded affiliated group after the transaction did not have substantial business activities in Ireland relative to its worldwide activities (the substantial business activities test), we would have been treated as a U.S. corporation for U.S. federal income tax purposes. Based on the rules for determining share ownership under Section 7874 of the Code, Medtronic, Inc.'s shareholders received approximately 70% of our ordinary shares (by both vote and value) by reason of holding stock in Medtronic, Inc. Therefore, under current law, Medtronic plc should not be treated as a U.S. corporation for U.S. federal income tax purposes. However, there is limited guidance regarding the application of Section 7874, including the application of the ownership test. If we were to be treated as a U.S. corporation for federal tax purposes, we could be subject to substantially greater U.S. tax liability than currently contemplated as a non-U.S. corporation.

Legislative or other governmental action relating to the denial of U.S. federal or state governmental contracts to U.S. companies that redomicile abroad could adversely affect our business.

Various U.S. federal and state legislative proposals that would deny governmental contracts to U.S. companies that move their corporate location abroad may affect us. We are unable to predict the likelihood that, or final form in which, any such proposed legislation might become law, the nature of the regulations that may be promulgated under any future legislative enactments, or the effect such enactments and increased regulatory scrutiny may have on our business.

Risks Relating to Our Jurisdiction of Incorporation

We are incorporated in Ireland, and Irish law differs from the laws in effect in the U.S. and may afford less protection to holders of our securities.

Our shareholders may have more difficulty protecting their interests than would shareholders of a corporation incorporated in a jurisdiction of the United States. It may not be possible to enforce court judgments obtained in the U.S. against us in Ireland based on the civil liability provisions of the U.S. federal or state securities laws. In addition, there is some uncertainty as to whether the courts of Ireland would recognize or enforce judgments of U.S. courts obtained against us or our directors or officers based on the civil liabilities provisions of the U.S. federal or state securities laws or hear actions against us or those persons based on those laws. We have been advised that the U.S. currently does not have a treaty with Ireland providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters. Therefore, a final judgment for the payment of money rendered by any U.S. federal or state court based on civil liability, whether or not based solely on U.S. federal or state securities laws, would not automatically be enforceable in Ireland.

As an Irish company, we are governed by the Irish Companies Act 2014, which differs in some material respects from laws generally applicable to U.S. corporations and shareholders, including, among others, differences relating to interested director and officer transactions and shareholder lawsuits. Likewise, the duties of directors and officers of an Irish company generally are owed to the company only. Shareholders of Irish companies generally do not have a personal right of action against directors or officers of the company and may exercise such rights of action on behalf of the company only in limited circumstances. Accordingly, holders of our securities may have more difficulty protecting their interests than would holders of securities of a corporation incorporated in the U.S.

As an Irish public limited company, certain capital structure decisions require shareholder approval, which may limit Medtronic's flexibility to manage its capital structure.

Under Irish law, our authorized share capital can be increased by an ordinary resolution of our shareholders and the directors may issue new ordinary or preferred shares, without shareholder approval, once authorized to do so by our articles of association or by an ordinary resolution of our shareholders. Additionally, subject to specified exceptions, Irish law grants statutory preemption rights to existing shareholders where shares are being issued for cash consideration but allows shareholders to disapply such statutory preemption rights either in our articles of association or by way of special resolution. Such disapplication can either be generally applicable or be in respect of a particular allotment of shares. Accordingly, at our 2019 Annual General Meeting, our Shareholders authorized our Board of Directors to issue up to 33% of our issued ordinary

shares and further authorized our Board of Directors to issue up to 10% of such shares for cash without first offering them to our existing shareholders (provided that with respect to 5% of such shares, such allotment is to be used for the purposes of a specified capital investment). Both of these authorizations will expire on June 6, 2021, unless renewed by shareholders for a further period. We anticipate seeking new authorizations at our 2020 Annual General Meeting and in subsequent years. We cannot provide any assurance that these authorizations will always be approved, which could limit our ability to issue equity and thereby adversely affect the holders of our securities.

A transfer of our shares, other than ones effected by means of the transfer of book-entry interests in the Depository Trust Company, may be subject to Irish stamp duty.

Transfers of our shares effected by means of the transfer of book entry interests in the Depository Trust Company (DTC) will not be subject to Irish stamp duty. However, if a shareholder holds our shares directly rather than beneficially through DTC, any transfer of shares could be subject to Irish stamp duty (currently at the rate of 1% of the higher of the price paid or the market value of the shares acquired). Payment of Irish stamp duty is generally a legal obligation of the transferee. The potential for stamp duty could adversely affect the price of shares.

In certain limited circumstances, dividends we pay may be subject to Irish dividend withholding tax and dividends received by Irish residents and certain other shareholders may be subject to Irish income tax.

In certain limited circumstances, dividend withholding tax (currently at a rate of 25%) may arise in respect of dividends paid on our shares. A number of exemptions from dividend withholding tax exist such that shareholders resident in the U.S. and other specified countries that have a tax treaty with Ireland may be entitled to exemptions from dividend withholding tax.

Shareholders resident in the U.S. that hold their shares through DTC will not be subject to dividend withholding tax, provided the addresses of the beneficial owners of such shares in the records of the brokers holding such shares are recorded as being in the U.S. (and such brokers have further transmitted the relevant information to a qualifying intermediary appointed by us). However, other shareholders may be subject to dividend withholding tax, which could adversely affect the price of their shares.

Shareholders entitled to an exemption from Irish dividend withholding tax on dividends received from us will not be subject to Irish income tax in respect of those dividends unless they have some connection with Ireland other than their shareholding in our Company (for example, they are resident in Ireland). Shareholders who receive dividends subject to Irish dividend withholding tax generally have no further liability to Irish income tax on those dividends.

Our shares received by means of a gift or inheritance could be subject to Irish capital acquisitions tax.

Irish capital acquisitions tax (CAT) could apply to a gift or inheritance of our shares irrespective of the place of residence, ordinary residence or domicile of the parties. This is because our shares will be regarded as property situated in Ireland. The person who receives the gift or inheritance has primary liability for CAT. Gifts and inheritances passing between spouses are exempt from CAT. Children have a tax-free threshold which Irish Revenue typically updates annually in respect of taxable gifts or inheritances received from their parents.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Medtronic's principal executive office is located in Dublin, Ireland and is leased by the Company, while its main operational offices are located in the Minneapolis, Minnesota metropolitan area and are owned by the Company.

The Company's total manufacturing and research space is approximately 9.4 million square feet. Approximately 37 percent of the manufacturing or research facilities are owned by Medtronic and the balance is leased. The following is a summary of the Company's largest manufacturing and research facilities by location:

Location Country or State	Square Feet (in thousands)
Connecticut	1,138
Minnesota	985
Puerto Rico	831
China	823
Mexico	762
Italy	454
Ireland	446
California	410
Colorado	320
Arizona	319
Dominican Republic	304
Switzerland	283
Israel	297
India	254
Massachusetts	217

Medtronic also maintains sales and administrative offices in the U.S. at 4 locations in 4 states and outside the U.S. at 145 locations in 64 countries. Most of these locations are leased. The Company is using substantially all of its currently available productive space to develop, manufacture, and market products. The Company's facilities are well-maintained, suitable for their respective uses, and adequate for current needs.

Item 3. Legal Proceedings

A discussion of the Company’s legal proceedings is contained in Note 19 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Medtronic's Common Equity, Related Shareholder Matters, and Issuer Purchases of Equity Securities

The Company's ordinary shares are listed on the New York Stock Exchange under the symbol "MDT."

The following table provides information about the shares repurchased by the Company during the fourth 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	Maximum Approximate Dollar Value of Shares that may yet be Purchased Under the Program
1/25/2020-2/21/2020	950,308	$ 118.23	950,308	$ 5,950,169,124
2/22/2020-3/27/2020	—	—	—	5,950,169,124
3/28/2020-4/24/2020	—	—	—	5,950,169,124
Total	950,308	$ 118.23	950,308	5,950,169,124

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. The Company has deprioritized repurchases of ordinary shares as a result of the COVID-19 pandemic.

On June 17, 2020, there were approximately 24,933 shareholders of record of the Company's ordinary shares. Ordinary cash dividends declared and paid totaled 54.0 cents per share for each quarter of fiscal year 2020 and 50.0 cents per share for each quarter of fiscal year 2019.

Stock Performance Graph

The following graph compares the cumulative total shareholder return on Medtronic's ordinary shares with the cumulative total shareholder return on the Standard & Poor's (S&P) 500 Index and the S&P 500 Health Care Equipment Index for the last five fiscal years. The graph assumes that $100 was invested at market close on April 24, 2015 in Medtronic's ordinary shares, the S&P 500 Index, and the S&P 500 Health Care Equipment Index and that all dividends were reinvested.

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Company/Index	April 2015	April 2016	April 2017	April 2018	April 2019	April 2020
Medtronic plc	$ 100.00	$ 104.10	$ 111.62	$ 111.69	$ 122.69	$ 142.51
S&P 500 Index	100.00	99.69	117.55	134.24	150.80	148.44
S&P 500 Health Care Equipment Index	100.00	105.96	124.14	149.40	175.35	199.55

For information on the Company's equity compensation plans, see "Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters" in this Annual Report on Form 10-K.

Irish Restrictions on Import and Export of Capital

Except as indicated below, there are no restrictions on non-residents of Ireland dealing in Irish domestic securities, which includes ordinary shares of Irish companies. Except as indicated below, dividends and redemption proceeds also continue to be freely transferable to non-resident holders of such securities. The Financial Transfers Act, 1992, provides that the Irish Minister for Finance can make provision for the restriction of financial transfers between Ireland and other countries. For the purposes of this Act, "financial transfers" include all transfers which would be movements of capital or payments within the meaning of the treaties governing the E.U. if they had been made between Member States of the E.U. This Act has been used by the Minister for Finance to implement European Council Directives, which provide for the restriction of financial transfers to certain countries, organizations and people including the Al-Qaeda network and the Taliban, Afghanistan, Belarus, Burma (Myanmar), Democratic People's Republic of Korea, Democratic Republic of Congo, Egypt, Iran, Iraq, Ivory Coast, Lebanon, Liberia, Libya, Republic of Guinea, Somalia, Sudan, Syria, Tunisia, Ukraine and Zimbabwe.

Any transfer of, or payment in respect of, a share or interest in a share involving the government of any country that is currently the subject of United Nations sanctions, any person or body controlled by any of the foregoing, or by any person acting on behalf of the foregoing, may be subject to restrictions pursuant to such sanctions as implemented into Irish law.

Irish Taxes Applicable to U.S. Holders

Dividends paid by Medtronic will generally be subject to Irish dividend withholding tax (currently at a rate of 25 percent) unless an exemption applies.

Dividends paid to U.S. residents will not be subject to Irish dividend withholding tax provided that:

- in the case of a beneficial owner of Medtronic shares held in the Depository Trust Company (DTC), the address of the beneficial owner in the records of his or her broker is in the United States and this information is provided by the broker to the Company's qualifying intermediary; or
- in the case of a record owner, the record owner has provided to the Company's transfer agent a valid U.S. Certification of Residence (Form 6166) or valid Irish Non-Resident Form V2.

Irish income tax may also arise with respect to dividends paid on Medtronic's ordinary shares. A U.S. resident who meets one of the exemptions from dividend withholding tax described above and who does not hold Medtronic shares through a branch or agency in Ireland through which a trade is carried on generally will not have any Irish income tax liability on a dividend paid by Medtronic. In addition, if a U.S. shareholder is subject to the dividend withholding tax, the withholding payment discharges any Irish income tax liability, provided the shareholder furnishes to the Irish Revenue authorities a statement of the dividend withholding tax imposed.

While the U.S./Ireland Double Tax Treaty contains provisions regarding withholding, due to the wide scope of the exemptions from dividend withholding tax available under Irish domestic law, it would generally be unnecessary for a U.S. resident shareholder to rely on the treaty provisions.

Item 6. Selected Financial Data

Our fiscal year-end is the last Friday in April, and therefore, the total weeks in a fiscal year fluctuates between 52 and 53 weeks. Fiscal years 2017 through 2020 were 52-week years. Fiscal year 2016 was a 53-week year, as will be fiscal year 2021, with the additional week occurring in the first quarter. The table below illustrates operating results and other selected financial data for fiscal years 2016 to 2020. Certain reclassifications have been made to prior year selected financial data to conform to classifications used in the current year.

	Fiscal Year				
(in millions, except per share data and additional information)	**2020**	**2019**	**2018**	**2017**	**2016**
Operating Results:					
Net sales	$ 28,913	$ 30,557	$ 29,953	$ 29,710	$ 28,833
Cost of products sold	9,424	9,155	9,067	9,294	9,128
Research and development expense	2,331	2,330	2,256	2,193	2,211
Selling, general, and administrative expense	10,109	10,418	10,238	10,018	9,770
Amortization of intangible assets	1,756	1,764	1,823	1,980	1,931
Restructuring charges, net	118	198	30	303	290
Certain litigation charges	313	166	61	300	26
Gain on sale of businesses	—	—	(697)	—	—
Other operating expense, net	71	258	535	239	93
Operating profit	4,791	6,268	6,640	5,383	5,384
Other non-operating income, net	(356)	(373)	(181)	(313)	(338)
Interest expense	1,092	1,444	1,146	1,094	1,386
Income before income taxes	4,055	5,197	5,675	4,602	4,336
Income tax (benefit) provision	(751)	547	2,580	578	798
Net income	4,806	4,650	3,095	4,024	3,538
Net (income) loss attributable to noncontrolling interests	(17)	(19)	9	4	—
Net income attributable to Medtronic	$ 4,789	$ 4,631	$ 3,104	$ 4,028	$ 3,538
Basic earnings per share	$ 3.57	$ 3.44	$ 2.29	$ 2.92	$ 2.51
Diluted earnings per share	3.54	3.41	2.27	2.89	2.48
Cash dividends declared per ordinary share	2.16	2.00	1.84	1.72	1.52
Financial Position at Fiscal Year-end:					
Total assets	90,689	89,694	91,393	99,857	99,685
Long-term debt	22,021	24,486	23,699	25,921	30,109
Shareholders' equity	50,737	50,091	50,720	50,208	51,977
Additional Information:					
Full-time employees at year-end	93,792	90,071	86,368	91,267	88,063
Full-time equivalent employees at year-end	104,950	101,013	98,003	102,688	98,017

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis provides information management believes to be relevant to understanding the financial condition and results of operations of the Company. You should read this discussion and analysis along with our consolidated financial statements and related notes thereto at April 24, 2020 and April 26, 2019 and for each of the three fiscal years ended April 24, 2020 (fiscal year 2020), April 26, 2019 (fiscal year 2019), and April 27, 2018 (fiscal year 2018), which are presented within "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

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 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 benefits 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 global healthcare system is facing an unprecedented challenge as a result of the Covid-19 pandemic ("COVID-19" or the "pandemic"). The Company's top priority during this pandemic has been to ensure the health and well-being of our more than 90,000 employees and their families around the globe. In addition, the Company is focused on fulfilling our mission and getting our products and therapies to those who need them by rapidly expanding the production and distribution of critical products in the fight against COVID-19, including dramatically increased ventilator production and partnering with key government authorities to allocate our ventilators to the communities that need them most. In fiscal year 2020, sales of Airway and Ventilator products represented approximately ten percent of the Minimally Invasive Therapies Group's net sales. Medtronic has been supporting our communities during this time of need by, among other things, providing direct support in the form of donations of certain products, and we made an $80 million contribution to the Medtronic Foundation during fiscal year 2020, which has provided direct financial assistance to communities around the world.

COVID-19 is having, and will likely continue to have, an adverse impact on significant aspects of our Company and business, including the demand for our products, our operations, supply chains and distribution systems, and our ability to research and develop and bring to market new products and services. Almost all of our businesses have been affected by a decline in procedure volumes as a result of COVID-19 as hospital resources have been diverted to fight the pandemic, and many government agencies in conjunction with healthcare systems have made decisions to postpone many deferrable and semi-deferrable procedures that use our products. In addition, some people are avoiding seeking treatment for non-COVID-19 emergency procedures, resulting in an impact to those emergent product lines. It is not possible to accurately predict the timing of a broad resumption of deferrable medical procedures and, to the extent individuals and hospital systems continue to de-prioritize, delay or cancel these procedures, our business, cash flows, financial condition and results of operations would continue to be negatively affected.

Further, COVID-19 is straining hospital systems around the world, resulting in adverse financial impacts to those systems which has resulted in and may continue to result in reduced future expenditures for capital equipment and other products and services we provide. The Company has experienced recent changes in customer buying patterns as customers have prioritized preservation of cash and reduced their holdings of certain purchased product inventories, especially in more deferrable procedure categories. As COVID-19 continues to impact hospital systems and other customers, we may encounter higher inventory levels which could result in inventory obsolescence due to excess and/or expired inventory. Additionally, the pandemic's impact on our customers may adversely impact the collectability of our current and future accounts receivable balance. COVID-19 has also disrupted and may continue to disrupt our product launches for our recently approved products and may negatively impact the regulatory approval of new products. Clinical trials generally have suspended enrollment due to facility closures and governmental restrictions, which we expect will delay the results from those clinical trials and will impact our ability to timely bring new products to market.

In addition, a significant number of our global suppliers, vendors, and distributors have been adversely affected by COVID-19, including an adverse impact on the ability of their employees to get to their places of work and maintain the continuity of their on-site operations. Therefore, although we work closely with our suppliers to try to ensure continuity of supply while maintaining high quality and reliability, the supply of certain components, raw materials, and services has been and may continue to be interrupted, in certain instances, as a direct result of COVID-19.

As of the June 19, 2020 filing date of this Annual Report on Form 10-K, which is in the middle of our first quarter of fiscal year 2021, we are starting to see signs of medical procedure recovery in certain geographies and across certain therapies. We expect medical procedure recovery rates to vary by therapy and country, and to be impacted by COVID-19 case volumes, hospital and clinical occupancy and staffing levels, patient's willingness to re-book previously deferred procedures, travel restrictions, transportation limitations, quarantine restrictions, and potential COVID-19 resurgence.

The following is a summary of revenue, diluted earnings per share, and cash flow for fiscal years 2020 and 2019:

mdt-20200424_g22.jpg**GAAP to Non-GAAP Reconciliations** The tables below present reconciliations of our Non-GAAP financial measures to the most directly comparable financial measures prepared in accordance with U.S. GAAP for fiscal years 2020 and 2019:

	Fiscal year ended April 24, 2020				
(in millions, except per share data)	Income Before Income Taxes	Income Tax (Benefit) Provision	Net Income Attributable to Medtronic	Diluted EPS [1]	Effective Tax Rate
GAAP	$ 4,055	$ (751)	$ 4,789	$ 3.54	(18.5)%
Non-GAAP Adjustments:					
Restructuring and associated costs [2]	441	69	372	0.28	15.6
Acquisition-related items [3]	66	13	53	0.04	19.7
Certain litigation charges	313	59	254	0.19	18.8
(Gain)/loss on minority investments [4]	19	(3)	22	0.02	(15.8)
Debt tender premium and other charges [5]	406	86	320	0.24	21.2
Medical device regulations [6]	48	6	42	0.03	12.5
Exit of businesses [7]	52	12	40	0.03	23.1
IPR&D charges [8]	25	3	22	0.02	12.0
Contribution to Medtronic Foundation	80	18	62	0.05	22.5
Amortization of intangible assets	1,756	284	1,472	1.09	16.2
Certain tax adjustments, net [9]	—	1,242	(1,242)	(0.92)	—
Non-GAAP	$ 7,261	$ 1,038	$ 6,206	$ 4.59	14.3 %

(in millions, except per share data)	Fiscal year ended April 26, 2019				
	Income Before Income Taxes	Income Tax (Benefit) Provision	Net Income Attributable to Medtronic	Diluted EPS [1]	Effective Tax Rate
GAAP	$ 5,197	$ 547	$ 4,631	$ 3.41	10.5 %
Non-GAAP Adjustments:					
Restructuring and associated costs [2]	407	66	341	0.25	16.2
Acquisition-related items [3]	88	16	72	0.05	18.2
Certain litigation charges	166	24	142	0.10	14.5
(Gain)/loss on minority investments [4]	(62)	3	(65)	(0.05)	(4.8)
Debt tender premium and other charges [10]	457	113	344	0.25	24.7
Exit of businesses [7]	149	31	118	0.09	20.8
IPR&D charges [8]	58	9	49	0.04	15.5
Amortization of intangible assets	1,764	267	1,497	1.10	15.1
Certain tax adjustments, net [11]	—	40	(40)	(0.03)	—
Non-GAAP	$ 8,224	$ 1,116	$ 7,089	$ 5.22	13.6 %

(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 fair value of contingent consideration.
(4) We exclude unrealized and realized gains and losses on our minority investments as we do not believe 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 relates to the early redemption of approximately $5.2 billion of debt.
(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 charges represent acquired in-process research and development (IPR&D) in connection with asset acquisitions and charges recognized in connection with the impairment of IPR&D assets.
(9) The net benefit primarily relates to the release of a valuation allowance on certain net operating losses, the impact of an intercompany sale of intellectual property, and the impact of tax reform in Switzerland and the United States.
(10) The charges, which include $485 million recognized in *interest expense* and ($28 million) recognized in *other operating expense, net,* primarily relates to the early redemption of approximately $6.4 billion of Medtronic Inc. and CIFSA senior notes.
(11) The net benefit relates to the impacts of U.S. tax reform, along with intercompany legal entity restructuring, and the finalization of certain income tax aspects of the Divestiture.

NET SALES

Segment and Division

The table below illustrates net sales by segment and division for fiscal years 2020 and 2019:

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(in millions)	Net Sales by Fiscal Year 2020	Net Sales by Fiscal Year 2019	Percent Change 2020
Cardiac Rhythm & Heart Failure	$ 5,141	$ 5,849	(12)%
Coronary & Structural Heart	3,541	3,730	(5)
Aortic, Peripheral & Venous	1,786	1,926	(7)
Cardiac and Vascular Group	10,468	11,505	(9)
Surgical Innovations	5,513	5,753	(4)
Respiratory, Gastrointestinal, & Renal	2,839	2,725	4
Minimally Invasive Therapies Group	8,352	8,478	(1)
Brain Therapies	2,922	2,938	(1)
Spine	2,503	2,654	(6)
Specialty Therapies	1,193	1,307	(9)
Pain Therapies	1,107	1,284	(14)
Restorative Therapies Group	7,725	8,183	(6)
Diabetes Group	2,368	2,391	(1)
Total	$ 28,913	$ 30,557	(5)%

The decrease in net sales for fiscal year 2020 as compared to fiscal year 2019 was primarily attributable to the decline in procedure volume and, to a lesser extent, changing customer buying patterns resulting from the impact of COVID-19 in the fourth quarter of fiscal year 2020. Changing customer buying patterns were primarily experienced in the Cardiac Rhythm & Heart Failure business, and to a lesser extent in the Restorative Therapies Group with our Biologics business in Spine, and our Pain Therapies business.

We remain focused 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. We remain focused on our globalization strategy as our emerging markets continue to benefit from geographic diversification, with balanced results around the world. Finally, in our third growth strategy, economic value, we continue to execute our value-based healthcare signature programs and develop unique, value-based healthcare solutions that directly link our therapies to improving outcomes while delivering 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.

Segment and Market Geography

The tables below include net sales by market geography for each of our segments for fiscal years 2020 and 2019:

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	U.S.[1, 2]			Non-U.S. Developed Markets[1, 3]			Emerging Markets[1, 4]		
(in millions)	Fiscal Year 2020	Fiscal Year 2019	% Change	Fiscal Year 2020	Fiscal Year 2019	% Change	Fiscal Year 2020	Fiscal Year 2019	% Change
Cardiac and Vascular Group	$ 5,062	$ 5,750	(12)%	$ 3,519	$ 3,767	(7)%	$ 1,887	$ 1,988	(5)%
Minimally Invasive Therapies Group	3,532	3,630	(3)	3,169	3,250	(2)	1,651	1,598	3
Restorative Therapies Group	5,122	5,478	(6)	1,659	1,759	(6)	945	946	—
Diabetes Group	1,204	1,336	(10)	940	855	10	224	200	12
Total	$ 14,919	$ 16,194	(8)%	$ 9,287	$ 9,631	(4)%	$ 4,707	$ 4,732	(1)%

(1) The data in this schedule has been intentionally rounded to the nearest million and, therefore, may not sum.
(2) U.S. includes the United States and U.S. territories.
(3) Non-U.S. developed markets include Japan, Australia, New Zealand, Korea, Canada, and the countries within Western Europe.
(4) 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.

Net sales decreases in the U.S., non-U.S. developed markets, and emerging markets for fiscal year 2020 as compared to fiscal year 2019 were primarily attributable to the impact of COVID-19 in the fourth quarter of fiscal year 2020 driven by a combination of deferred procedures and reduced demand for certain products as hospital systems prioritized treatment of COVID-19 patients and customers sought to preserve cash. Net sales decreases in non-U.S. developed markets for fiscal year 2020 were partially offset by growth in the Diabetes group due to strong demand for supplies internationally. Net sales decreases in non-U.S. developed markets were led by Australia and New Zealand as well as Western Europe, partially offset by growth in Korea. Net sales decreases in emerging markets were led by China, partially offset by strong performance in Eastern Europe and Southeast Asia. Currency had an unfavorable impact on net sales in non-U.S. developed markets and emerging markets of $418 million for fiscal year 2020. For the nine months ended January 24, 2020, which was prior to the impact of COVID-19, net sales increased one percent and ten percent in the U.S. and emerging markets, respectively, while net sales remained flat in non-U.S. development markets.

Looking ahead, we expect COVID-19 to continue to have a significant impact on our business, noting that it is not possible to accurately predict the length and severity of the pandemic. Additionally, 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, the 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 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 fiscal year 2020 were $10.5 billion, a decrease of 9 percent as compared to fiscal year 2019. Currency had an unfavorable impact on net sales for fiscal year 2020 of $162 million. The Cardiac and Vascular Group's net sales decline for fiscal year 2020, as compared to fiscal year 2019, was experienced across all divisions and reflected the impact of COVID-19, specifically a significant decline in deferrable procedure volumes and reduced demand for certain of our products experienced in the fourth quarter of fiscal year 2020 as hospital systems prioritized treatment of COVID-19 patients.

The graphs below illustrate percent of Cardiac and Vascular Group net sales by division for fiscal years 2020 and 2019:

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Cardiac Rhythm & Heart Failure (CRHF) net sales for fiscal year 2020 were $5.1 billion, a decrease of 12 percent as compared to fiscal year 2019. Declines were experienced in ICDs, CRT-Ds, LVADs, insertable cardiac monitoring systems, pacemakers, and products for the treatment of atrial fibrillation as a result of a global slowdown in procedural volumes experienced in the fourth quarter of fiscal year 2020 related to COVID-19. Additionally, Arrhythmia Management products were impacted by changing customer buying patterns during the fourth quarter resulting from COVID-19. While the overall Pacing business declined, the Micra transcatheter pacing system experienced growth during the year resulting from continued adoption and the third quarter launch of Micra AV. Additionally, LVAD headwinds resulting from competitive pressures in the U.S continue to negatively impact the division's sales.

Coronary & Structural Heart (CSH) net sales for fiscal year 2020 were $3.5 billion, a decrease of 5 percent as compared to fiscal year 2019. Procedural volume declines related to COVID-19 resulted in decreased sales across the division, with the exception of transcatheter aortic valves which experienced sales growth during the year, and guide catheters which were flat compared to fiscal year 2019. Sales growth in transcatheter aortic valves was driven by expansion of the Evolut Pro+ platform into the low risk patient population.

Aortic, Peripheral & Venous (APV) net sales for fiscal year 2020 were $1.8 billion, a decrease of 7 percent as compared to fiscal year 2019, which was also driven by COVID-19 related declines in procedure rates. Declines were experienced across all products, with the exception of thoracic stent grafts and the VenaSeal vein closure system. Growth in thoracic stent grafts is a result of continued momentum from the launch of the Valiant Navion thoracic stent graft system. Additionally, net sales of the division continue to be impacted by declines in drug-coated balloons due to uncertainty around Paclitaxel in the market.

In addition to the general impacts of COVID-19 on our Company as described in the Executive Level Overview, looking ahead, we expect our Cardiac and Vascular Group could be affected by the following:

- Given the uncertain progression of COVID-19 around the world, it is not possible to accurately predict the timing of a broad resumption of deferrable medical procedures overall as the speed of recovery may vary by therapy and geography. COVID-19 case volumes and potential resurgence will play a role. Therapies that might be considered more deferrable include AF Solutions, EndoVenous, and Diagnostics while more urgent therapies include Pacing, Aortic, Coronary, and Cardiac Surgery. Moderately deferrable procedures include

ICD's/CRT-D's, TAVR/Structural Heart, and Peripheral. Extracorporeal Life Support products, including ECMO machines and disposables within our Cardiac Surgery business, are in higher demand as a result of COVID-19.

- Acceptance and growth of the Cobalt and Crome portfolio of ICDs and CRT-Ds, both of which received CE Mark approval during the fourth quarter of fiscal year 2020.
- 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. Micra AV received U.S. FDA approval and CE Mark approval in January and April 2020, respectfully. Micra AV expands the Micra target population from 15 percent to 55 percent of pacemaker patients.
- 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.
- Acceptance and growth of the LINQ 2 cardiac monitor, which received approval in Europe during the fourth quarter of fiscal year 2020.
- Changes in the U.S. heart transplant guidelines as well as a competitor's product launch as it relates to our LVAD business.
- Continued acceptance and growth of the CRT-P quadripolar pacing system.
- Continued growth, adoption, and utilization of the TYRX Envelope for implantable devices driven by the favorable results of the WRAP-IT clinical study. In the fourth quarter of fiscal year 2020, we received 12 month shelf life extension for our TYRX Envelope product.
- Continued acceptance of Care Management Services and post-acute care services becoming even more critical in bundled payment models for different interventions or therapies.
- Continued acceptance and growth of the self-expanding CoreValve Evolut transcatheter aortic valve replacement platform into intermediate risk indication globally and 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 percent more U.S. centers to offer the therapy to patients.
- Continued expansion and training of field support to increase coverage in the U.S. centers performing transcatheter aortic valve replacement procedures.
- 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 Evolut Pro Plus TAVR valve which launched late in the second quarter of fiscal year 2020.
- Continued acceptance and growth from the VenaSeal vein closure system in the U.S. 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.
- Ongoing impact of Paclitaxel safety concerns affecting the drug-coated balloon market.

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, surgical stapling devices, vessel sealing instruments, wound closure, electrosurgery products, hernia mechanical devices, mesh implants, advanced ablation, interventional lung, ventilators, capnography, airway products, sensors, renal care products, and patient monitoring products. The Minimally Invasive Therapies Group's net sales for fiscal year 2020 were $8.4 billion, a decrease of 1 percent as compared to fiscal year 2019. Currency had an unfavorable impact on net sales of $142 million for fiscal year 2020. The Minimally Invasive Therapies Group's net sales decline for fiscal year 2020, as compared to fiscal year 2019, reflected the impact of COVID-19 in the fourth quarter of fiscal year 2020, specifically impacted by deferrable procedure volumes. The net sales decline was partially offset by growth in Respiratory and Patient Monitoring as demand in Ventilators and Airways grew globally. Prior to the pandemic, net sales performance for fiscal year 2020 was attributable to growth in both Surgical Innovations and Respiratory, Gastrointestinal, & Renal divisions.

The graphs below illustrate percent of Minimally Invasive Therapies Group net sales by division for fiscal years 2020 and 2019:

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Surgical Innovations (SI) net sales for fiscal year 2020 were $5.5 billion, a decrease of 4 percent as compared to fiscal year 2019. Surgical Innovations net sales declines were experienced across all product lines and were driven by the impact of COVID-19 in the fourth quarter of fiscal year 2020. Surgical Innovations was impacted significantly from the decline in surgical volumes, particularly Bariatric, Colorectal, Gynecological Health, Hernia, and Thoracic. Aside from the declines due to the pandemic, net sales performance for fiscal year 2020 was strong in Advanced Stapling and Advanced Energy, led by the LigaSure Exact Dissector and L-Hook Laparoscopic Sealer/Divider, Sonicision curved jaw cordless ultrasonic dissection system, Valleylab FT10 energy platform, and Endo GIA and EEA circular stapler platforms with Tri-Staple technology.

Respiratory, Gastrointestinal, & Renal (RGR) net sales for fiscal year 2020 were $2.8 billion, an increase of 4 percent as compared to fiscal year 2019. Respiratory, Gastrointestinal, & Renal net sales growth was due in part to increased demand during the fourth quarter for ventilators and airways products due to COVID-19. The net sales growth was driven by strength in Respiratory and Patient Monitoring, including the Puritan Bennett ventilator portfolio, Nellcor pulse oximetry, and Microstream capnography monitoring products. Also driving growth for fiscal year 2020 was growth in Renal Care due to strong demand for Renal Access Catheters and Acute/Chronic Bellco consumables, as dialysis treatment continued throughout the pandemic.

In addition to the general impacts of COVID-19 on our Company as described in the Executive Level Overview, looking ahead we expect our Minimally Invasive Therapies Group could be affected by the following:

- Given the uncertain progression of COVID-19 around the world, it is not possible to accurately predict the timing of a broad resumption of deferrable medical procedures as the speed of recovery may vary by therapy and geography. COVID-19 case volumes and potential resurgence will play a role. Therapies that might be considered more deferrable include Surgical Innovations bariatric, hysterectomy, hernia, and GI while more urgent therapies include Surgical Innovations appendectomy, bowel obstruction, and trauma, Respiratory and Patient Monitoring, and Renal Care. Moderately deferrable procedures include Surgical Innovations CABG and oncology. Ventilators, pulse oximetry, capnography, and advanced parameter monitoring products within our Respiratory and Patient Monitoring business are in higher demand as a result of COVID-19.

- Continued acceptance and future growth of Open-to-MIS techniques and tools supported by our efforts to transition open surgery to MIS (minimally invasive surgery). 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 robotics platform.
- 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 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.
- 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 first half of calendar 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 Bennet 980 ventilator, Microstream Capnography, Nellcor pulse oximetry 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.
- The July 29, 2017 divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses. We 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.

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 fiscal year 2020 were $7.7 billion, a decrease of 6 percent as compared to fiscal year 2019. Currency had a negative impact on net sales for fiscal year 2020 of $71 million. The Restorative Therapies Group's net sales decline reflected the impact of COVID-19 in the fourth quarter of fiscal year 2020, specifically a decline in deferrable procedures, a reduction in capital equipment purchases, and reduced demand for certain of our products as hospital systems prioritized treatment of COVID-19 patients. Prior to the pandemic, net sales performance for fiscal year 2020 was driven by increases in Brain Therapies, Spine, and Specialty Therapies divisions, partially offset by modest declines in Pain Therapies.

The graphs below illustrate percent of Restorative Therapies Group net sales by division for fiscal years 2020 and 2019:

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Brain Therapies net sales for fiscal year 2020 were $2.9 billion, a decrease of 1 percent as compared to fiscal year 2019. Brain Therapies declines were driven by declines in Neurosurgery, partially offset by strength in Neurovascular. Neurovascular net sales growth was driven by continued strength in our Ischemic stroke products and modest growth in Hemorrhagic stroke products. Hemorrhagic stroke saw continued growth in flow diversion products, particularly with the Pipeline Flex flow diversion system, partially offset by fourth quarter declines due to procedural deferrals caused by COVID-19. Ischemic stroke 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 declines were impacted by delays in capital equipment sales during the fourth quarter due to COVID-19, particularly with the Mazor X robotic guidance systems, StealthStation S8 surgical navigation systems, and O-Arm Imaging Systems. These declines were partially offset by strength in sales across all of these systems throughout fiscal year 2020 prior to COVID-19.

Spine net sales for fiscal year 2020 were $2.5 billion, a decrease of 6 percent as compared to fiscal year 2019. The declines were experienced across all product lines, and were primarily driven by the impact of COVID-19. The 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, was particularly impacted by the reduction in capital equipment purchases as a result of the pandemic. Net sales declines in Core Spine were driven by procedural deferrals as a result of the pandemic. Changing customer buying patterns also drove net sales declines within Biologics as COVID-19 drove a reduction in certain customer purchases in the fourth quarter of fiscal year 2020, as compared to the corresponding period in the prior fiscal year. Prior to the pandemic's impact, sales for fiscal year 2020 were driven by the Surgical Synergy strategy for spinal implants with enabling technologies, and new product penetration from recently launched Core Spine products, including the Infinity OCT System, T2 Stratosphere, and Prestige LP cervical disc system. Finally, Core Spine net sales also benefited from the acquisition of Titan Spine in the first quarter of fiscal year 2020.

Specialty Therapies net sales for fiscal year 2020 were $1.2 billion, a decrease of 9 percent as compared to fiscal year 2019. Net sales declines were primarily caused by deferral of procedures across both ENT and Pelvic Health as a result of COVID-19. Prior to the pandemic's impact, fiscal year 2020 sales were driven by capital equipment sales of the StealthStation ENT surgical navigation system, intraoperative NIM nerve monitoring system, and powered ENT instruments.

Pain Therapies net sales for fiscal year 2020 were $1.1 billion, a decrease of 14 percent as compared to fiscal year 2019. The decrease in net sales was primarily driven by the continued overall slowdown in the U.S. spinal cord stimulation market, as well as fourth quarter procedural deferrals and changes in customer buying patterns resulting from COVID-19.

In addition to the general impacts of COVID-19 on our Company as described in the Executive Level Overview, looking ahead we expect our Restorative Therapies Group could be affected by the following:

- Given the uncertain progression of COVID-19 around the world, it is not possible to accurately predict the timing of a broad resumption of deferrable medical procedures as the speed of recovery may vary by therapy and geography. COVID-19 case volumes and potential resurgence will play a role. The Restorative Therapies Group therapies tend to be used in procedures that are more deferrable. Therapies that might be considered more deferrable include Spine, Pain Therapies, Pelvic Health, and ENT while more urgent therapies include Spine trauma and Neurovascular ischemic stroke. Moderately deferrable procedures include Brain Modulation and Neurovascular hemorrhagic stroke. In addition, COVID-19 may continue to result in delayed evaluation and purchases for certain capital equipment including the Neurosurgery business which has a high mix of capital sales.
- 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, as well as acceptance of the Stealth Autoguide cranial robotic guidance platform.
- Acceptance and future growth of our Percept PC deep brain stimulation (DBS) device with Brainsense technology.
- Continued acceptance of our devices for the treatment of Parkinson's Disease, epilepsy and other movement disorders.
- 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.
- 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 acceptance and growth of our Specialty Therapies, including our InterStim therapy with InterStim II and InterStim Micro neurostimulators 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.
- Market acceptance and continued global adoption of our Intellis spinal cord stimulator, DTM (differential target multiplexed) proprietary waveform, 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.

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 fiscal year 2020 were $2.4 billion, a decrease of 1 percent as compared to fiscal year 2019. Currency had an unfavorable impact on net sales for fiscal year 2020 of $42 million. The Diabetes Group's net sales declines for fiscal year 2020 were primarily attributable to the insulin pump business, particularly with competitive pressure in the U.S. and new patient start delays from physician office closings in the fourth quarter of fiscal year 2020 associated with COVID-19. These declines were partially offset by growth in international markets resulting from sustained strong consumer demand for the MiniMed 670G, as well as the higher sensor attachment and utilization associated with the global adoption of sensor-augmented insulin pump systems. We also launched our Next Tech Pathway program during the third quarter of fiscal year 2020 to ensure eligible patients have access to upcoming product innovations.

In addition to the general impacts of COVID-19 on our Company as described in the Executive Level Overview, looking ahead we expect our Diabetes Group could be affected by the following:

- Given the uncertain progression of COVID-19 around the world, it is not possible to accurately predict the timing of a broad resumption of deferrable medical procedures as the speed of recovery may vary by therapy and geography. COVID-19 case volumes and potential resurgence will play a role. Therapies that might be considered more deferrable include new insulin pump starts while more urgent therapies include diabetes supplies and consumables including continuous glucose sensors and infusion sets.
- Continued 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. As of the end of fiscal year 2020, approximately 249,000 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 and South American countries. The global adoption of sensor-augmented insulin pump systems has resulted in strong sensor attachment rates.
- Changes in medical reimbursement policies and programs, along with additional payor coverage of the MiniMed 670G system.
- Our ability to execute ongoing strategies to develop, gain regulatory approval, commercialize, and gain customer acceptance of new products, including our MiniMed 780G advanced hybrid closed loop system, as well as our Personalized Closed Loop system that was granted "Breakthrough Device" designation by the U.S. FDA. 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 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 in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

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, 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 19 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Income Tax Reserves We establish reserves when, despite our belief that our tax return positions are fully supportable, certain positions may be challenged, and 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 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 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.

ACQUISITIONS AND DIVESTITURES

Information regarding acquisitions and divestitures is included in Notes 3 and 4, respectively, to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

NEW ACCOUNTING PRONOUNCEMENTS

Information regarding new accounting pronouncements is included in Note 1 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

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 (dollar amounts in millions):

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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 was $9.4 billion and $9.2 billion during fiscal years 2020 and 2019, respectively. The increase in cost of products sold as a percentage of net sales from fiscal year 2020, as compared to fiscal year 2019, was largely due to increased expenses as a result of COVID-19, including expanded manufacturing facility cleaning, increased protective equipment, bonuses for our factory employees, and higher freight and obsolescence charges, as well as negative impact from mix, as products in higher demand carried lower margin. Additionally, the increase was driven by increased restructuring and associated costs and increased duty, driven in part by increased China tariffs on inbound products. Cost of products sold for fiscal year 2020 includes $155 million of restructuring and associated costs, as compared to $91 million for fiscal year 2019.

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 was $2.3 billion during fiscal years 2020 and 2019.

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, restructuring, and divestiture-related expenses.

Selling, general, and administrative expense was $10.1 billion and $10.4 billion during fiscal years 2020 and 2019, respectively. The increase in selling, general, and administrative expense as a percentage of sales from fiscal year 2019 to 2020 was primarily due to the deleveraging experienced in the fourth quarter of fiscal year 2020 as a result of COVID-19. The increase in selling, general, and administrative expense as a percentage of sales is also attributable to the increase in restructuring and associated costs. Selling, general, and administrative expense in fiscal year 2020 includes $168 million of restructuring and associated costs, as compared to $118 million in fiscal year 2019. These increases were partially offset by savings from our Enterprise Excellence program and cost containment measures and decreased variable compensation costs.

The following is a summary of other costs and expenses:

(in millions)	Fiscal Year 2020	Fiscal Year 2019
Amortization of intangible assets	$ 1,756	$ 1,764
Restructuring charges, net	118	198
Certain litigation charges	313	166
Other operating expense, net	71	258
Other non-operating income, net	(356)	(373)
Interest expense	1,092	1,444

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 $1.8 billion during fiscal years 2020 and 2019.

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.

During fiscal year 2020, we recognized charges of $462 million, partially offset by accrual adjustments of $21 million related to certain employees identified for termination finding other positions within Medtronic. For fiscal year 2020, charges included $130 million recognized within *restructuring charges, net* in the consolidated statements of income, primarily comprised of employee termination benefits. For fiscal year 2020, 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 $149 million recognized within *cost of products sold* and $165 million recognized within *selling, general and administrative expense* in the consolidated statements of income. For fiscal year 2020, *cost of products sold* also included $6 million of fixed asset write-downs and *selling, general, and administrative expense* included $3 million of fixed asset write-downs.

During fiscal year 2019, we recognized charges of $424 million. For fiscal year 2019, charges included $198 million recognized within *restructuring charges, net* in the consolidated statements of income, primarily comprised of employee termination benefits. For fiscal year 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 $91 million recognized within *cost of products sold* and $101 million recognized within *selling, general and administrative expense* in the consolidated statements of income. For fiscal year 2019, *selling, general and administrative expense* also included $17 million of fixed asset write-downs.

For additional information, see Note 5 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Certain Litigation Charges We classify litigation charges and gains related to significant legal matters as certain litigation charges. During fiscal years 2020 and 2019, we recognized $313 million, and $166 million, respectively, of certain litigation charges related to probable and estimable damages for significant legal matters.

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 fair value of contingent consideration, TSA income, a commitment to the Medtronic Foundation, charges associated with business exits, and IPR&D charges. Other operating expense, net was $71 million and $258 million during fiscal years 2020 and 2019, respectively.

The decrease in other operating expense, net from fiscal year 2019 to 2020 was primarily driven by our remeasurement and hedging programs, which, combined, resulted in a gain of $295 million for fiscal year 2020 as compared to $87 million for fiscal year 2019. Also contributing to the change was a charge of $80 million recognized in fiscal year 2020 related to our commitment to the Medtronic Foundation and charges of $52 million related to business exits during fiscal year 2020 as compared to $149 million during fiscal year 2019. There were no charges in fiscal year 2019 related to our commitment to the Medtronic Foundation.

Other Non-Operating Income, Net Other non-operating income, net includes the non-service components of net periodic pension and postretirement benefit cost, investment gains and losses, and interest income. Other non-operating income, net was $356 million and $373 million during fiscal years 2020 and 2019, respectively.

The change in other non-operating income, net from fiscal year 2019 to 2020 was primarily attributable to losses on minority investments, partially offset by increased interest income and income from the non-service components of net periodic pension and postretirement benefit costs. Losses on minority investments were $19 million for fiscal year 2020 as compared to gains on minority investments of $62 million for fiscal year 2019. Interest income was $300 million and $267 million for fiscal years 2020 and 2019, respectively, and charges related to the non-service components of net periodic pension and postretirement benefits were $75 million and $45 million for fiscal years 2020 and 2019, 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. Interest expense was $1.1 billion for fiscal year 2020 and $1.4 billion for fiscal year 2019. The decrease in interest expense from fiscal year 2019 to 2020 was the result of a decrease in the weighted-average interest rate of outstanding debt obligations due to debt issuance and tender transactions in the fourth quarter of fiscal year 2019 and first quarter of fiscal year 2020. Interest expense for fiscal year 2020 includes $413 million of charges recognized in connection with the tender and early redemption of senior notes, as compared to $485 million for fiscal year 2019. Refer to the "Debt and Capital" section of this Management's Discussion and Analysis for additional information on the debt issuances, tenders, and early redemptions.

INCOME TAXES

(in millions)	Fiscal Year 2020	Fiscal Year 2019
Income tax (benefit) provision	$ (751)	$ 547
Income before income taxes	4,055	5,197
Effective tax rate	(18.5)%	10.5 %
Non-GAAP income tax (benefit) provision	$ 1,038	$ 1,116
Non-GAAP income before income taxes	7,261	8,224
Non-GAAP Nominal Tax Rate	14.3 %	13.6 %
Difference between the effective tax rate and Non-GAAP Nominal Tax Rate	32.8 %	3.1 %

Many of the countries we operate in have statutory tax rates lower than our blended U.S. statutory rate, thereby resulting in an overall effective tax rate less than the U.S. statutory rate of 21.0 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 43.75 percent. Our earnings in Puerto Rico are subject to certain tax incentive grants which provide for tax rates lower than

the country's statutory tax rates. Unless our tax incentive grants are extended, they will expire between fiscal years 2021 and 2030. The tax incentive grants, which expired during fiscal year 2020, did not have a material impact on our financial results. See Note 14 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K for additional information.

Our effective tax rate for fiscal year 2020 was (18.5) percent, as compared to 10.5 percent in fiscal year 2019. The decrease in the effective tax rate was primarily due to the impacts from certain tax adjustments, the impact from investment losses, and year-over-year changes in operational results by jurisdiction.

Our Non-GAAP Nominal Tax Rate for fiscal year 2020 was 14.3 percent, as compared to 13.6 percent in fiscal year 2019. The increase in our Non-GAAP Nominal Tax Rate for fiscal year 2020 as compared to fiscal year 2019 was primarily due to the year-over-year changes in operational results by jurisdiction.

During fiscal year 2020, we recognized $138 million of operational tax benefits. The operational tax benefits included a $63 million benefit from excess tax benefits associated with stock-based compensation and a $75 million net benefit associated with the resolution of certain income tax audits, finalization of certain tax returns, changes to uncertain tax position reserves, and changes to certain deferred income tax balances.

During fiscal year 2019, we recognized $134 million of operational tax benefits. The operational tax benefits included a $50 million benefit from excess tax benefits associated with stock-based compensation and an $84 million net benefit associated with the resolution of certain income tax audits, finalization of certain tax returns, changes to uncertain tax position reserves, and changes to certain deferred income tax balances.

An increase in our Non-GAAP Nominal Tax Rate of one percent would result in an additional income tax provision for fiscal years 2020 and 2019 of approximately $73 million and $82 million, respectively.

Certain Tax Adjustments

During fiscal year 2020, certain tax adjustments of $1.2 billion, recognized in *income tax (benefit) provision* in the consolidated statement of income, included the following:

- A net benefit of $63 million related to the finalization of certain state tax impacts from U.S. Tax Reform, and the issuance of certain final U.S. Treasury 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 $252 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.

- A benefit of $658 million related to the release of a valuation allowance previously recorded against certain net operating losses. Luxembourg enacted tax legislation during the year which required the company to reassess the realizability of certain net operating losses. The Company evaluated both the positive and negative evidence and released valuation allowance equal to the expected benefit from the utilization of certain net operating losses in connection with a planned intercompany sale of intellectual property.

- A net benefit of $269 million associated with the intercompany sale of intellectual property and the establishment of a deferred tax asset.

During fiscal year 2019, certain tax adjustments of $40 million, recognized in *income tax (benefit) provision* in the consolidated statement of income, included the following:

- A net benefit of $30 million associated with the finalization of the transition tax liability and the Tax Act impact to deferred tax assets, liabilities, and valuation allowances.

- 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 under the Tax Act and the current year sale of U.S. manufactured inventory held as of April 27, 2018.
- A benefit of $32 million related to intercompany legal entity restructuring.
- A net benefit of $20 million associated with the finalization of certain income tax aspects of the Divestiture.

Certain tax adjustments will affect the comparability of our operating results between periods. Therefore, we consider these Non-GAAP Adjustments. Refer to the "Executive Level Overview" section of this Management's Discussion and Analysis for further discussion of these adjustments.

LIQUIDITY AND CAPITAL RESOURCES

We are currently in a strong financial position. Despite the impact from COVID-19, we believe our balance sheet and liquidity provide us with flexibility, and our cash, cash equivalents, and current investments, as well as our credit facility and related commercial paper programs outlined below, will satisfy our foreseeable operating needs. We believe we have ample liquidity, with $10.9 billion of cash and investments as of April 24, 2020, and an undrawn $3.5 billion credit facility. Furthermore, we have no public debt maturing until March 2021. Given our strong financial position, we are continuing to focus on making capital allocation decisions to drive our long-term strategies.

Our liquidity and capital structure are 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:

	Fiscal Year	
(in millions)	2020	2019
Cash provided by (used in):		
Operating activities	$ 7,234	$ 7,007
Investing activities	(3,203)	(774)
Financing activities	(4,198)	(5,431)
Effect of exchange rate changes on cash and cash equivalents	(86)	(78)
Net change in cash and cash equivalents	$ (253)	$ 724

Operating Activities The $227 million increase in net cash provided was primarily driven by a decrease in cash paid for income taxes, interest, and certain litigation payments, partially offset by an increase in retirement benefit plan contributions, 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 the decrease in estimated federal tax payments, as well as a tax payment associated with the intercompany sale of intellectual property in the first quarter of fiscal year 2019, and a lower transition tax payment made in fiscal year 2020 as compared to fiscal year 2019. 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. Certain litigation payments decreased primarily due to the payment of previously accrued settlement amounts for the INFUSE litigation matter in fiscal year 2019. Cash paid to employees increased due to higher annual incentive plan payouts in fiscal year 2020 as compared to fiscal year 2019. COVID-19 did not have a significant impact on our cash collected from customers in the fourth quarter of fiscal year 2020 due to the timing of the pandemic within the quarter and our normal cash collection cycle lag. Looking forward, we anticipate a decrease in cash collected from customers in fiscal year 2021 due to the decrease in sales in the fourth quarter of fiscal year 2020 resulting from COVID-19, and potential ongoing impacts of the pandemic on sales.

For information on retirement benefit plan contributions, refer to Note 16 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K. Refer to the "Restructuring Charges, Net" section of this Management's Discussion and Analysis and Note 5 to the consolidated financial statements in "Item 8. Financial

Statements and Supplementary Data" in this Annual Report on Form 10-K for information on the Enterprise Excellence program.

Investing Activities The $2.4 billion increase in net cash used was primarily attributable to a decrease in net proceeds from purchases and sales of investments of $3.6 billion and an increase in cash paid for additions of property, plant, and equipment of $79 million, partially offset by a decrease in cash paid for acquisitions of $1.3 billion as compared to fiscal year 2019.

Financing Activities The $1.2 billion decrease in net cash used was primarily attributable to a decrease in net cash used for share repurchases of $1.6 billion and a net decrease in repayments of short-term borrowings of $696 million, partially offset by a decrease in the issuance of ordinary shares of $330 million as compared to fiscal year 2019. Financing cash flows were also impacted by the debt tenders and issuances in the first quarter of fiscal year 2020 and the fourth quarter of fiscal year 2019, as well as payment of notes at maturity in both periods. In the first quarter of fiscal year 2020, we issued $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. We also repaid $500 million of senior notes at maturity during the fourth quarter of fiscal year 2020. In the fourth quarter of fiscal year 2019, we issued $7.8 billion of Euro-denominated senior notes, offset by the tender of $6.4 billion of senior notes for $6.9 billion of total consideration. We also repaid $1.0 billion of senior notes at maturity during the fourth quarter of fiscal year 2019.

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:

	Fiscal Year	
(in millions)	**2020**	**2019**
Net cash provided by operating activities	$ 7,234	$ 7,007
Additions to property, plant, and equipment	(1,213)	(1,134)
Free cash flow	$ 6,021	$ 5,873

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 April 24, 2020 was $2.8 billion as compared to $838 million at April 26, 2019. Long-term debt at April 24, 2020 was $22.0 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 April 24, 2020 was $24.8 billion, as compared to $25.3 billion at April 26, 2019. The decrease in total debt was primarily driven by the payment of $500 million of five-year floating rate senior notes and 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.

In May 2020, subsequent to fiscal year 2020, we entered into an unsecured term loan agreement with Mizuho Bank, Ltd. for an aggregate principal amount of up to ¥300 billion, or approximately $2.8 billion, with a term of six months, which may be

extended for an additional six months at the Company's option. On May 13, 2020, Medtronic Luxco borrowed the entire amount of the term loan under the Loan Agreement. The proceeds of the loan will be used for general corporate purposes.

For additional information on debt issuance transactions and the cash tender offers and early redemption, refer to Note 7 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K. For additional information on the Euro-denominated debt designated as a net investment hedge, refer to Note 8 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

We maintain multicurrency commercial paper programs 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 April 24, 2020 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 2024. The Credit Facility provides backup funding for the commercial paper programs 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 April 24, 2020 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 S&P and 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 April 24, 2020.

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 fiscal years 2020 and 2019, we repurchased a total of 12 million and 31 million shares, respectively, under these programs at an average price of $106.22 and $91.43, respectively. At April 24, 2020, we had approximately $6.0 billion remaining under the share repurchase programs authorized by our Board of Directors. We temporarily halted repurchases of ordinary shares as a result of our reprioritization of capital deployment due to COVID-19, and made no share repurchases in March and April of fiscal year 2020. Looking forward, we expect to continue to deprioritize share repurchases in our capital allocation priorities.

For more information on credit arrangements, see Note 7 of the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Liquidity

Our liquidity sources at April 24, 2020 include $4.1 billion of cash and cash equivalents and $6.8 billion of current investments. Additionally, we maintain commercial paper programs (no commercial paper outstanding at April 24, 2020) and a Credit Facility. See discussion above regarding changes in our cash and cash equivalents, commercial paper programs, 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 fiscal year 2020, 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 April 24, 2020, we have $141 million of gross unrealized losses on our aggregate available-for-sale debt securities of $6.8 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. There were no significant other-than-temporary impairments at April 24, 2020 and April 26, 2019. 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. See Note 6 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K for additional information.

The following table is a summary of our Standard and Poor's Rating Services (S&P) and Moody's Investors Service (Moody's) long-term debt ratings and short-term debt ratings:

	Agency Rating [1]	
	April 24, 2020	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 is 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 April 24, 2020 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, Credit Facility, and related commercial paper programs.

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 19 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K 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 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 our cash, cash equivalents, and current investments, as well as our Credit Facility and related commercial paper programs, 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

In the normal course of business, we periodically enter into agreements that require us to indemnify customers or suppliers for specific risks, such as claims for injury or property damage arising as a result of our products or the negligence of our personnel or claims alleging that our products infringe third-party patents or other intellectual property. Our maximum exposure under these indemnification provisions is unable to be estimated, and we have not accrued any liabilities within our consolidated financial statements or included any indemnification provisions in the table below. Historically, we have not experienced significant losses on these types of indemnification agreements.

Presented below is a summary of our off-balance sheet contractual obligations and other minimum commercial commitments at April 24, 2020, as well as long-term contractual obligations reflected in the balance sheet at April 24, 2020.

	Maturity by Fiscal Year						
(in millions)	Total	2021	2022	2023	2024	2025	Thereafter
Contractual obligations related to off-balance sheet arrangements:							
Commitments to fund minority investments, milestone payments, and royalty obligations[1]	$ 325	$ 153	$ 91	$ 25	$ 24	$ 9	$ 23
Interest payments[2]	7,341	563	563	504	468	448	4,795
Other[3]	892	479	176	82	44	26	85
Contractual obligations related to off-balance sheet arrangements subtotal	$ 8,558	$ 1,195	$ 830	$ 611	$ 536	$ 483	$ 4,903
Contractual obligations reflected in the balance sheet:							
Debt obligations[4]	$ 24,916	$ 2,776	$ 1,594	$ 3,630	$ 746	$ 2,704	$ 13,466
Operating leases	1,034	218	175	144	118	102	277
Contingent consideration[5]	280	213	49	7	5	3	3
Tax obligations[6]	1,848	176	176	176	330	440	550
Contractual obligations reflected in the balance sheet subtotal[7]	28,078	3,383	1,994	3,957	1,199	3,249	14,296
Total contractual obligations	$ 36,636	$ 4,578	$ 2,824	$ 4,568	$ 1,735	$ 3,732	$ 19,199

(1) Includes commitments related to the funding of minority investments, estimated milestone payments, and royalty obligations. While it is not certain if and/or when payments will be made, the maturity dates included in the table reflect our best estimates.

(2) Includes the contractual interest payments on our outstanding debt and excludes the impacts of debt premium and discount amortization. See Note 7 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for additional information on our debt agreements.

(3) Includes inventory purchase commitments and research and development arrangements which are legally binding and specify minimum purchase quantities or spending amounts. These purchase commitments do not exceed our projected requirements and are in the normal course of business. Excludes open purchase orders with a remaining term of less than one year.

(4) Includes the current and non-current portion of our Senior Notes and bank borrowings. Excludes debt premium and discount, unamortized gains from terminated interest rate swap agreements, and commercial paper. See Notes 7 and 8 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for additional information on our debt agreements and interest rate swap agreements, respectively.

(5) Includes the fair value of our current and non-current portions of contingent consideration. While it is not certain if and/or when payments will be made, the maturity dates included in this table reflect our best estimates.

(6) Represents the tax obligations associated with the transition tax that resulted from U.S. Tax Reform. The transition tax will be paid over an eight-year period and will not accrue interest. See Note 14 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for further information.

(7) Excludes defined benefit plan obligations, guarantee obligations, uncertain tax positions, non-current tax liabilities, and litigation settlements for which we cannot make a reliable estimate of the period of cash settlement. For further information, see Notes 14, 16, and 19 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for further information.

SUPPLEMENTAL 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. Medtronic plc and Medtronic, Inc. each have provided a full and unconditional guarantee of the obligations of Medtronic Luxco under the Senior Notes (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 tables present summarized financial information for the fiscal year ended April 24, 2020 for the obligor groups of Medtronic and Medtronic Luxco Senior Notes, and CIFSA Senior Notes. The obligor group consists of the parent company guarantor, subsidiary issuer, and subsidiary guarantors for the applicable senior notes. The summarized financial information is presented after elimination of (i) intercompany transactions and balances among the guarantors and issuers and (ii) equity in earnings from and investments in any subsidiary that is a non-guarantor or issuer.

The summarized results of operations information for the fiscal year ended April 24, 2020 was as follows:

(in millions)	Medtronic & Medtronic Luxco Senior Notes [1]	CIFSA Senior Notes [2]
Net sales	$ 1,510	$ —
Operating profit (loss)	69	(63)
Loss before income taxes	(1,527)	(817)
Net loss attributable to Medtronic	(1,393)	(810)

The summarized balance sheet information for the fiscal year ended April 24, 2020 was as follows:

(in millions)	Medtronic & Medtronic Luxco Senior Notes [1]	CIFSA Senior Notes [2]
Total current assets[3]	$ 19,563	$ 49
Total noncurrent assets[4]	18,516	13,636
Total current liabilities[5]	41,263	16,180
Total noncurrent liabilities[6]	44,480	48,729
Noncontrolling interests	135	135

(1) The Medtronic Senior Notes and Medtronic Luxco Senior Notes obligor group consists of the following entities: Medtronic plc, Medtronic Luxco, and Medtronic, Inc. Please refer to the guarantee summary above for further details.

(2) The CIFSA Senior Notes obligor group consists of the following entities: Medtronic plc, Medtronic Luxco, CIFSA, and CIFSA Subsidiary Guarantors. Please refer to the guarantee summary above for further details.
(3) Includes receivables due from non-guarantor subsidiaries of $19.1 billion and $34 million for Medtronic & Medtronic Luxco Senior Notes, and CIFSA Senior Notes, respectively.
(4) Includes loans receivable due from non-guarantor subsidiaries of $13.7 billion and $13.6 billion for Medtronic & Medtronic Luxco Senior Notes, and CIFSA Senior Notes, respectively.
(5) Includes payables due to non-guarantor subsidiaries of $37.0 billion and $13.6 billion for Medtronic & Medtronic Luxco Senior Notes, and CIFSA Senior Notes, respectively.
(6) Includes loans payable due to non-guarantor subsidiaries of $21.7 billion and $36.6 billion for Medtronic & Medtronic Luxco Senior Notes, and CIFSA Senior Notes, respectively.

Item 7A. 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, as well as 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, Chinese Yuan, and others. 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 April 24, 2020 and April 26, 2019 was $11.9 billion and $11.1 billion, respectively. At April 24, 2020, these contracts were in a net unrealized gain position of $384 million. A sensitivity analysis of changes in the fair value of all currency exchange rate derivative contracts at April 24, 2020 and April 26, 2019 indicates that, if the U.S. dollar uniformly strengthened/ weakened by 10 percent against all currencies, it would have the following impact on the fair value of these contracts:

	Increase (decrease)	
(in millions)	**2020**	**2019**
10% appreciation in the U.S. dollar	$ 750	$ 916
10% depreciation in the U.S. dollar	(750)	(916)

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 fiscal year ended 2020.

INTEREST RATE RISK

We are subject to interest rate risk on our 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 April 24, 2020 was comprised of debt predominately denominated in U.S. dollars and the Euro, 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, as compared to interest rates at April 24, 2020 and April 26, 2019, would have the following impact on the fair value of these instruments:

	Increase (decrease)	
(in millions)	**2020**	**2019**
10 basis point increase in interest rates	$ 34	$ 49
10 basis point decrease in interest rates	(34)	(49)

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 Management's Discussion and Analysis in "Item 7. Management’s

Discussion and Analysis of Financial Condition and Results of Operations" in this Annual Report on Form 10-K. For additional discussion of market risk, see Notes 6 and 8 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Medtronic plc

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Medtronic plc and its subsidiaries (the "Company") as of April 24, 2020 and April 26, 2019, and the related consolidated statements of income, comprehensive income, equity and cash flows for each of the three years in the period ended April 24, 2020, including the related notes and schedule of valuation and qualifying accounts for each of the three years in the period ended April 24, 2020 appearing under Item 15(a)(1) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of April 24, 2020, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of April 24, 2020 and April 26, 2019, and the results of its operations and its cash flows for each of the three years in the period ended April 24, 2020 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of April 24, 2020, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in fiscal year 2020.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Annual Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in

accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Litigation Contingencies

As described in Notes 1 and 19 to the consolidated financial statements, the Company's consolidated accrued litigation was approximately $0.5 billion as of April 24, 2020. The Company is involved in a number of legal actions involving product liability, intellectual property and commercial disputes, and shareholder related matters, which represents a significant portion of the total consolidated accrued litigation reserve. In some actions, the enforcement agencies or private claimants seek damages, as well as other civil or criminal remedies, that could require significant expenditures, result in lost revenues, or limit the Company's ability to conduct business in the applicable jurisdictions. Management records liabilities for loss contingencies related to legal actions when a loss is known or considered probable and the amount may be reasonably estimated. Determining the estimated loss or range of loss requires management to use significant judgment.

The principal considerations for our determination that performing procedures relating to litigation contingencies is a critical audit matter are there was significant judgment by management when assessing whether a loss is probable of being incurred and when determining whether a reasonable estimate of the loss or range of loss for each claim can be made. This, in turn, led to a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating audit evidence related to management's judgments, estimated loss or range of loss, and disclosures related to the litigation contingencies.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's evaluation of litigation claims, including controls over determining whether a loss is probable of being incurred and whether the amount of loss can be reasonably estimated, as well as financial statement disclosures. These procedures also included, among others, (i) evaluating the reasonableness of management's assessment regarding whether an unfavorable outcome is reasonably possible or probable and reasonably estimable, (ii) testing management's process to determine the estimate of the loss or range of loss, (iii) obtaining and evaluating letters of audit inquiry with internal and external legal counsel, and (iv) evaluating the sufficiency of the Company's litigation contingency disclosures.

Income Tax Reserves for Uncertain Tax Positions Related to Puerto Rico Manufacturing

As described in Notes 14 and 19 to the consolidated financial statements, management records reserves for uncertain tax positions related to unresolved matters with the Internal Revenue Service (IRS) and other

taxing authorities. A significant remaining unresolved issue with the IRS, for which management has recorded a reserve, 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. These reserves are subject to a high degree of

estimation and management judgment. Total reserves relating to uncertain tax positions as of April 24, 2020 were $1.862 billion, of which the Puerto Rico manufacturing reserves make up a significant portion.

The principal considerations for our determination that performing procedures relating to income tax reserves for uncertain tax positions related to Puerto Rico manufacturing is a critical audit matter are there was significant judgment by management when determining the reserves, including a high degree of estimation uncertainty relative to the unresolved matters involving one of the Company's key manufacturing sites. This in turn led to a high degree of auditor judgment, effort and subjectivity in performing procedures to evaluate the timely identification and accurate measurement of the reserves.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the identification and recognition of the reserves for uncertain tax positions, and controls addressing completeness of the uncertain tax positions, as well as controls over measurement of the reserve. These procedures also included, among others, evaluating management's process to determine the estimate, evaluating the reasonableness of the underlying assumptions in management's calculations to support the reserves recorded, including evaluating whether the methodology and assumptions used by the Company are consistent with the tax court's ruling and examined relevant documents related to the tax court case. Professionals with specialized skill and knowledge were used to assist in these procedures.

/s/ PricewaterhouseCoopers LLP
Minneapolis, Minnesota
June 19, 2020

We have served as the Company's auditor since 1963.

Medtronic plc
Consolidated Statements of Income

(in millions, except per share data)	Fiscal Year 2020	2019	2018
Net sales	$ 28,913	$ 30,557	$ 29,953
Costs and expenses:			
Cost of products sold	9,424	9,155	9,067
Research and development expense	2,331	2,330	2,256
Selling, general, and administrative expense	10,109	10,418	10,238
Amortization of intangible assets	1,756	1,764	1,823
Restructuring charges, net	118	198	30
Certain litigation charges	313	166	61
Gain on sale of businesses	—	—	(697)
Other operating expense, net	71	258	535
Operating profit	4,791	6,268	6,640
Other non-operating income, net	(356)	(373)	(181)
Interest expense	1,092	1,444	1,146
Income before income taxes	4,055	5,197	5,675
Income tax (benefit) provision	(751)	547	2,580
Net income	4,806	4,650	3,095
Net (income) loss attributable to noncontrolling interests	(17)	(19)	9
Net income attributable to Medtronic	$ 4,789	$ 4,631	$ 3,104
Basic earnings per share	$ 3.57	$ 3.44	$ 2.29
Diluted earnings per share	$ 3.54	$ 3.41	$ 2.27
Basic weighted average shares outstanding	1,340.7	1,346.4	1,356.7
Diluted weighted average shares outstanding	1,351.1	1,357.5	1,368.2

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

Medtronic plc
Consolidated Statements of Comprehensive Income

(in millions)	Fiscal Year 2020	2019	2018
Net income	$ 4,806	$ 4,650	$ 3,095
Other comprehensive income (loss), net of tax:			
Unrealized gain (loss) on investment securities	45	102	(103)
Translation adjustment	(829)	(1,375)	1,184
Net investment hedge	405	88	—
Net change in retirement obligations	(544)	(191)	167
Unrealized (loss) gain on cash flow hedges	72	401	(218)
Other comprehensive (loss) income	(851)	(975)	1,030
Comprehensive income including noncontrolling interests	3,955	3,675	4,125
Comprehensive (income) loss attributable to noncontrolling interests	(15)	(16)	9
Comprehensive income attributable to Medtronic	$ 3,940	$ 3,659	$ 4,134

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

Medtronic plc
Consolidated Balance Sheets

(in millions)	April 24, 2020	April 26, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 4,140	$ 4,393
Investments	6,808	5,455
Accounts receivable, less allowances of $208 and $190, respectively	4,645	6,222
Inventories, net	4,229	3,753
Other current assets	2,209	2,144
Total current assets	22,031	21,967
Property, plant, and equipment, net	4,828	4,675
Goodwill	39,841	39,959
Other intangible assets, net	19,063	20,560
Tax assets	2,832	1,519
Other assets	2,094	1,014
Total assets	$ 90,689	$ 89,694
LIABILITIES AND EQUITY		
Current liabilities:		
Current debt obligations	$ 2,776	$ 838
Accounts payable	1,996	1,953
Accrued compensation	2,099	2,189
Accrued income taxes	502	567
Other accrued expenses	2,993	2,925
Total current liabilities	10,366	8,472
Long-term debt	22,021	24,486
Accrued compensation and retirement benefits	1,910	1,651
Accrued income taxes	2,682	2,838
Deferred tax liabilities	1,174	1,278
Other liabilities	1,664	757
Total liabilities	39,817	39,482
Commitments and contingencies (Notes 3, 17, and 19)		
Shareholders' equity:		
Ordinary shares— par value $0.0001, 2.6 billion shares authorized, 1,341,074,724 and 1,340,697,595 shares issued and outstanding, respectively	—	—
Additional paid-in capital	26,165	26,532
Retained earnings	28,132	26,270
Accumulated other comprehensive loss	(3,560)	(2,711)
Total shareholders' equity	50,737	50,091
Noncontrolling interests	135	121
Total equity	50,872	50,212
Total liabilities and equity	$ 90,689	$ 89,694

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

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Medtronic plc
Consolidated Statements of Equity

(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 28, 2017	1,369	$ —	$ 29,551	$ 23,270	$ (2,613)	$ 50,208	$ 122	$ 50,330
Net income (loss)	—	—	—	3,104	—	3,104	(9)	3,095
Other comprehensive income	—	—	—	—	1,030	1,030	—	1,030
Dividends to shareholders ($1.84 per ordinary share)	—	—	—	(2,494)	—	(2,494)	—	(2,494)
Issuance of shares under stock purchase and award plans	10	—	329	—	—	329	—	329
Repurchase of ordinary shares	(25)	—	(2,097)	—	—	(2,097)	—	(2,097)
Stock-based compensation	—	—	344	—	—	344	—	344
Changes to noncontrolling ownership interests	—	—	—	—	—	—	(11)	(11)
Cumulative effect of change in accounting principle[1]	—	—		499	(203)	296	—	296
April 27, 2018	1,354	$ —	$ 28,127	$ 24,379	$ (1,786)	$ 50,720	$ 102	$ 50,822
Net income	—	—	—	4,631	—	4,631	19	4,650
Other comprehensive loss	—	—	—	—	(972)	(972)	(3)	(975)
Dividends to shareholders ($2.00 per ordinary share)	—	—	—	(2,693)	—	(2,693)	—	(2,693)
Issuance of shares under stock purchase and award plans	18	—	923	—	—	923	—	923
Repurchase of ordinary shares	(31)	—	(2,808)	—	—	(2,808)	—	(2,808)
Stock-based compensation	—	—	290	—	—	290	—	290
Changes to noncontrolling ownership interests	—	—	—	—	—	—	3	3
Cumulative effect of change in accounting principle[2]	—	—	—	(47)	47	—	—	—
April 26, 2019	1,341	$ —	$ 26,532	$ 26,270	$ (2,711)	$ 50,091	$ 121	$ 50,212
Net income	—	—	—	4,789	—	4,789	17	4,806
Other comprehensive loss	—	—	—	—	(849)	(849)	(2)	(851)
Dividends to shareholders ($2.16 per ordinary share)	—	—	—	(2,894)	—	(2,894)	—	(2,894)
Issuance of shares under stock purchase and award plans	12	—	564	—	—	564	—	564
Repurchase of ordinary shares	(12)	—	(1,228)	—	—	(1,228)	—	(1,228)
Stock-based compensation	—	—	297	—	—	297	—	297
Changes to noncontrolling ownership interests	—	—	—	—	—	—	(1)	(1)
Cumulative effect of								

(1) The cumulative effect of change in accounting principle in fiscal year 2018 resulted from the adoption of accounting guidance that requires the tax effect of intra-entity transactions, other than sales of inventory, to be recognized when the transaction occurs, and accounting guidance which permitted reclassification of stranded tax effects resulting from the enactment of comprehensive U.S. tax legislation from accumulated other comprehensive loss to retained earnings.

(2) The cumulative effect of change in accounting principle in 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.

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

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

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Medtronic plc
Consolidated Statements of Cash Flows

(in millions)	Fiscal Year 2020	2019	2018
Operating Activities:			
Net income	$ 4,806	$ 4,650	$ 3,095
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	2,663	2,659	2,644
Provision for doubtful accounts	99	78	52
Deferred income taxes	(1,315)	(304)	(919)
Stock-based compensation	297	290	344
Loss on debt extinguishment	406	457	38
Gain on sale of businesses	—	—	(697)
Investment loss	—	—	227
Other, net	217	257	73
Change in operating assets and liabilities, net of acquisitions and divestitures:			
Accounts receivable, net	1,291	(581)	(275)
Inventories, net	(577)	(274)	(192)
Accounts payable and accrued liabilities	(44)	399	65
Other operating assets and liabilities	(609)	(624)	229
Net cash provided by operating activities	7,234	7,007	4,684
Investing Activities:			
Acquisitions, net of cash acquired	(488)	(1,827)	(137)
Proceeds from sale of businesses	—	—	6,058
Additions to property, plant, and equipment	(1,213)	(1,134)	(1,068)
Purchases of investments	(11,039)	(2,532)	(3,200)
Sales and maturities of investments	9,574	4,683	4,227
Other investing activities, net	(37)	36	(22)
Net cash (used in) provided by investing activities	(3,203)	(774)	5,858
Financing Activities:			
Change in current debt obligations, net	(17)	(713)	(249)
Issuance of long-term debt	5,568	7,794	21
Payments on long-term debt	(6,110)	(7,948)	(7,370)
Dividends to shareholders	(2,894)	(2,693)	(2,494)
Issuance of ordinary shares	662	992	403
Repurchase of ordinary shares	(1,326)	(2,877)	(2,171)
Other financing activities	(81)	14	(94)
Net cash used in financing activities	(4,198)	(5,431)	(11,954)
Effect of exchange rate changes on cash and cash equivalents	(86)	(78)	114
Net change in cash and cash equivalents	(253)	724	(1,298)
Cash and cash equivalents at beginning of period	4,393	3,669	4,967
Cash and cash equivalents at end of period	$ 4,140	$ 4,393	$ 3,669
Supplemental Cash Flow Information			
Cash paid for:			
Income taxes	$ 878	$ 1,558	$ 2,542
Interest	643	973	1,147

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

Medtronic plc
Notes to Consolidated Financial Statements

1. Summary of Significant Accounting Policies

Nature of Operations Medtronic plc (Medtronic or the Company) 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. The Company provides innovative products and therapies to serve hospitals, physicians, clinicians, and patients. Medtronic was founded in 1949 and is headquartered in Dublin, Ireland.

Principles of Consolidation The 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 fully eliminated in consolidation. Certain reclassifications have been made to prior year financial statements to conform to classifications used in the current year.

Use of Estimates The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States (U.S.) (U.S. GAAP) requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Estimates are used when accounting for items such as income taxes, contingencies, intangible asset, and liability valuations. Actual results may or may not differ from those estimates.

COVID-19 is having, and will likely continue to have, an adverse effect on our business, results of operations, financial condition, and cash flows, and its future impacts remain highly uncertain and unpredictable. The Company has considered the disruptions caused by COVID-19, including lower than forecasted sales and customer demand and macroeconomic factors, that may impact its estimates. The Company has assessed the potential impact of the pandemic on certain accounting matters including, but not limited to, the allowance for doubtful accounts, inventory reserves, return reserves, the valuation of goodwill, intangible assets, other long-lived assets, investments and contingent consideration, as of April 24, 2020 and through the date of this report. While there was not a material impact to the Company’s consolidated financial statements as of and for the fiscal year ended April 24, 2020, changes in the Company’s assessment about the length and severity of the pandemic, as well as other factors, could result in actual results differing from estimates.

Fiscal Year-End The Company utilizes a 52/53-week fiscal year, ending the last Friday in April, for the presentation of its consolidated financial statements and related notes thereto at April 24, 2020 and April 26, 2019 and for each of the three fiscal years ended April 24, 2020 (fiscal year 2020), April 26, 2019 (fiscal year 2019), and April 27, 2018 (fiscal year 2018). Fiscal years 2020, 2019, 2018 were 52-week years. The Company's fiscal year 2021 is a 53-week year, with the extra week occurring during the first quarter, and will end on April 30, 2021.

Cash Equivalents The Company considers highly liquid investments with maturities of three months or less from the date of purchase to be cash equivalents. These investments are carried at cost, which approximates fair value.

Investments The Company invests in marketable debt and equity securities, investments that do not have readily determinable fair values, and investments accounted for under the equity method.

Marketable debt securities are classified and accounted for as available-for-sale. These investments are recorded at fair value in the consolidated balance sheets. The change in fair value for available-for-sale securities is recorded, net of taxes, as a component of *accumulated other comprehensive loss* on the consolidated balance sheets. The Company determines the appropriate classification of its investments in marketable debt securities at the time of purchase and reevaluates such determinations at each balance sheet date. The classification of marketable debt securities as current or long-term is based on the nature of the securities and the availability for use in current operations consistent with the Company's management of its capital structure and liquidity.

Certain of the Company's investments in marketable equity securities and other securities are long-term, strategic investments in companies that are in various stages of development and are included in *other assets* on the consolidated balance sheets. Marketable equity securities are recorded at fair value in the consolidated balance sheets. The change in fair value of marketable equity securities is recognized within *other non-operating income, net* in the consolidated statements of income. Investments without readily determinable fair values that do not qualify for the practical expedient to estimate fair value using the net asset value per share or its equivalent are accounted for at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or similar investments of the issuer. This election is made for each investment separately and is reassessed at each reporting period as to whether the investment continues to qualify for this election. At each reporting period, the Company makes a qualitative assessment considering impairment indicators to evaluate whether the investment is impaired. Equity securities accounted for under the equity method are initially recorded at the amount of the Company's investment and are adjusted each period for the Company's share of the

investee's income or loss and dividends paid. Securities accounted for under the equity method are reviewed quarterly for changes in circumstance or the occurrence of events that suggest other than temporary impairment has occurred.

Accounts Receivable and Allowance for Doubtful Accounts The Company grants credit to customers in the normal course of business and maintains an allowance for doubtful accounts for potential credit losses. When evaluating allowances for doubtful accounts, the Company considers various factors, including historical experience and customer-specific information. Uncollectible accounts are written-off against the allowance when it is deemed that a customer account is uncollectible.

Inventories Inventories are stated at the lower of cost or net realizable value, with cost determined on a first-in, first-out basis. The Company reduces the carrying value of inventories for items that are potentially excess, obsolete, or slow-moving based on changes in customer demand, technology developments, or other economic factors.

Property, Plant, and Equipment Property, plant, and equipment is stated at cost and depreciated over the useful lives of the assets using the straight-line method. Additions and improvements that extend the lives of the assets are capitalized, while expenditures for repairs and maintenance are expensed as incurred. The Company assesses property, plant, and equipment for impairment whenever events or changes in circumstances indicate that the carrying amount of property, plant, and equipment asset groupings may not be recoverable. The cost of interest that is incurred in connection with ongoing construction projects is capitalized using a weighted average interest rate. These costs are included in property, plant, and equipment and amortized over the useful life of the related asset. Upon retirement or disposal of property, plant, and equipment, the costs and related amounts of accumulated depreciation or amortization are eliminated from the asset and accumulated depreciation accounts. The difference, if any, between the net asset value and the proceeds, is recognized in earnings.

Goodwill and Intangible Assets Goodwill is the excess of the purchase price over the estimated fair value of net assets of acquired businesses. In accordance with U.S. GAAP, goodwill is not amortized. 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 the carrying amount may be impaired. Impairment testing for goodwill is performed at a 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. An impairment loss is recognized when the carrying amount of the reporting unit's net assets exceeds the estimated fair value of the reporting unit.

Intangible assets include patents, trademarks, tradenames, customer relationships, purchased technology, and in-process research and development (IPR&D). Intangible assets with a definite life are amortized on a straight-line basis with estimated useful lives typically ranging from three to 20 years. Amortization is recognized within *amortization of intangible assets* in the consolidated statements of income. Intangible assets with a definite life are tested for impairment whenever events or changes in circumstances indicate that the carrying amount of an intangible asset (asset group) may not be recoverable. When events or changes in circumstances indicate that the carrying amount 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.

Acquired IPR&D represents the fair value assigned to those research and development projects that were acquired in a business combination for which the related products have not received regulatory approval and have no alternative future use. IPR&D is capitalized at its fair value as an indefinite-lived intangible asset, and any development costs incurred after the acquisition are expensed as incurred. The fair value of IPR&D is determined by estimating the future cash flows of each project and discounting the net cash flows back to their present values. Upon achieving regulatory approval or commercial viability for the related product, the indefinite-lived intangible asset is accounted for as a definite-lived asset and is amortized on a straight-line basis over the estimated useful life. If the project is not

completed or is terminated or abandoned, the Company may have an impairment related to the IPR&D which is charged to expense. Indefinite-lived intangible assets are tested for impairment annually in the third quarter of the fiscal year and whenever events or changes in circumstances indicate that the carrying amount may be impaired. Impairment is calculated as the excess of the asset's carrying value over its fair value. Fair value is generally determined using a discounted future cash flow analysis. IPR&D acquired outside of a business combination is expensed immediately.

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. The Company records contingent consideration at fair value at the

date of acquisition based on the consideration expected to be transferred, estimated as the probability-weighted future cash flows, discounted back to present value. The fair value of contingent consideration is measured using projected payment dates, discount rates, probabilities of payment, and projected revenues (for revenue-based considerations). Projected revenues are based on the Company's most recent internal operational budgets and long-range strategic plans. The discount rate used is determined at the time of measurement in accordance with accepted valuation methodologies. Changes in projected revenues, probabilities of payment, discount rates, and projected payment dates may result in adjustments to the fair value measurements. Contingent consideration is remeasured each reporting period using Level 3 inputs, and the change in fair value, including accretion for the passage of time, is recognized as income or expense 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.

Self-Insurance The Company self-insures the majority of its insurable risks, including medical and dental costs, disability coverage, physical loss to property, business interruptions, workers' compensation, comprehensive general, and product liability. Insurance coverage is obtained for risks required to be insured by law or contract. The Company uses claims data and historical experience, as applicable, to estimate liabilities associated with the exposures that the Company has self-insured.

Retirement Benefit Plan Assumptions 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. See Note 16 for assumptions used in determining pension and post-retirement benefit costs and liabilities.

Derivatives The Company recognizes all derivative financial instruments in its consolidated financial statements at fair value in accordance with authoritative guidance on derivatives and hedging, and presents assets and liabilities associated with derivative financial instruments on a gross basis in the consolidated financial statements. For derivative instruments that are designated and qualify as hedging instruments, the hedging instrument must be designated, based upon the exposure being hedged, as a fair value hedge or a cash flow hedge. See Note 8 for more information on the Company's derivative instruments and hedging programs.

Fair Value Measurements The Company follows the authoritative guidance on fair value measurements and disclosures with respect to assets and liabilities that are measured at fair value on both a recurring and nonrecurring basis. Fair value is defined as the exit price, or the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. The authoritative guidance also establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs market participants would use in valuing the asset or liability, based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the factors market participants would use in valuing the asset or liability developed based upon the best information available in the circumstances. The categorization of financial assets and financial liabilities within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The hierarchy is broken down into three levels defined as follows:

- Level 1 - Inputs are quoted prices in active markets for identical assets or liabilities.
- Level 2 - Inputs include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, and inputs (other than quoted prices) that are observable for the asset or liability, either directly or indirectly.
- Level 3 - Inputs are unobservable for the asset or liability.

Financial assets that are classified as Level 1 securities include highly liquid government bonds within U.S. government and agency securities and marketable equity securities for which quoted market prices are available. In addition, the Company classifies currency forward contracts as Level 1 since they are valued using quoted market prices in active markets which have identical assets or liabilities.

The valuation for most fixed maturity securities are classified as Level 2. Financial assets that are classified as Level 2 include corporate debt securities, government and agency securities, other asset-backed securities, debt funds, and mortgage-backed securities whose value is determined using inputs that are observable in the market or may be derived principally from, or corroborated by, observable market data such as pricing for similar securities, recently executed transactions, cash flow models

with yield curves, and benchmark securities. In addition, interest rate swaps and total return swaps are included in Level 2 as the Company uses inputs other than quoted prices that are observable for the asset. The Level 2 derivative instruments are primarily valued using standard calculations and models that use readily observable market data as their basis.

Financial assets are considered Level 3 when their fair values are determined using pricing models, discounted cash flow methodologies, or similar techniques, and at least one significant model assumption or input is unobservable. Financial assets that are classified as Level 3 include certain investment securities for which there is limited market activity such that the determination of fair value requires significant judgment or estimation, certain corporate debt securities and auction rate securities. With the exception of auction rate securities, these securities are valued using third-party pricing sources that incorporate transaction details such as contractual terms, maturity, timing, and amount of expected future cash flows, as well as assumptions about liquidity and credit valuation adjustments by market participants. The fair value of auction rate securities is estimated by the Company using a discounted cash flow model, which incorporates significant unobservable inputs. The significant unobservable inputs used in the fair value measurement of the Company's auction rate securities are years to principal recovery and the illiquidity premium that is incorporated into the discount rate.

Certain investments for which the fair value is measured using the net asset value per share (or its equivalent) practical expedient are excluded from the fair value hierarchy. Financial assets for which the fair value is measured using the net asset value per share practical expedient include certain debt funds, equity and fixed income commingled trusts, and registered investment companies.

Revenue Recognition The Company sells its products through direct sales representatives and independent distributors. Additionally, a portion of the Company's revenue is generated from consignment inventory maintained at hospitals. The Company recognizes revenue when control is transferred to the customer. For products sold through direct sales representatives and independent distributors, control is transferred upon shipment or upon delivery, based on the contract terms and legal requirements. For consignment inventory, control is transferred when the product is used or implanted. Payment terms vary depending on the country of sale, type of customer, and type of product.

If a contract contains more than one performance obligation, the transaction price is allocated to each performance obligation based on relative standalone selling price. Shipping and handling is treated as a fulfillment activity rather than a promised service, and therefore, is not considered a performance obligation. Taxes assessed by a governmental authority that are both imposed on, and concurrent with, a specific revenue producing transaction and collected by the Company from customers (for example, sales, use, value added, and some excise taxes) are not included in revenue. For contracts that have an original duration of one year or less, the Company uses the practical expedient applicable to such contracts and does not adjust the transaction price for the time value of money.

The amount of revenue recognized reflects sales rebates and returns, which are estimated based on sales terms, historical experience, and trend analysis. In estimating rebates, the Company considers the lag time between the point of sale and the payment of the rebate claim, the stated rebate rates, and other relevant information. The Company records adjustments to rebates and returns reserves as increases or decreases of revenue.

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 primarily represents remote monitoring services and equipment maintenance, for which consideration is received at the same time as consideration for the device or equipment. Revenue related to remote monitoring services and equipment maintenance is recognized over the service period as time elapses.

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, primarily related to consumables for previously sold equipment as well as remote monitoring

services and equipment maintenance. For contracts that have an original duration of one year or less, the Company has elected the practical expedient applicable to such contracts and does not disclose the transaction price for remaining performance obligations at the end of each reporting period and when the Company expects to recognize this revenue.

Shipping and Handling Shipping and handling costs incurred to physically move product from the Company's premises to the customer's premises are recognized in *selling, general, and administrative expense* in the consolidated statements of income and were $347 million, $350 million, and $363 million in fiscal years 2020, 2019, and 2018, respectively. Other shipping and handling costs incurred to store, move, and prepare products for shipment are recognized in *cost of products sold* in the consolidated statements of income.

Research and Development Research and development costs are expensed when incurred. Research and development costs include costs of research, engineering, and technical activities to develop a new product or service or make significant improvement to an existing product or manufacturing process. Research and development costs also include pre-approval regulatory and clinical trial expenses.

Contingencies The Company records a liability in the consolidated financial statements for loss contingencies 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.

Income Taxes The Company has deferred taxes that arise as a result of the different treatment of transactions for U.S. GAAP and income tax accounting, known as temporary differences. The Company records the tax effect of these temporary differences as deferred tax assets and deferred tax liabilities. Deferred tax assets generally represent items that may be used as a tax deduction or credit in a tax return in future years for which the Company has already recognized the tax benefit in the consolidated statements of income. The Company establishes valuation allowances for deferred tax assets when the amount of expected future taxable income is not likely to support the use of the deduction or credit. Deferred tax liabilities generally represent tax expense for which payment has been deferred or expense has already been taken as a deduction on the Company's tax return but has not yet been recognized as an expense in the consolidated statements of income.

Other Operating Expense, Net Other operating expense, net primarily includes royalty income and expense, Transition Service Agreement income, currency remeasurement and derivative gains and losses, contributions to the Medtronic Foundation, Puerto Rico excise taxes, changes in the fair value of contingent consideration, charges associated with business exits, and IPR&D charges.

Other Non-Operating Income, Net Other non-operating income, net includes the non-service component of net periodic pension and post-retirement benefit cost, investment gains and losses, and interest income.

Currency Translation Assets and liabilities of non-U.S. dollar functional currency entities are translated to U.S. dollars at period-end exchange rates, and the currency impacts arising from the translation of the assets and liabilities are recorded as a cumulative translation adjustment, a component of *accumulated other comprehensive loss,* on the consolidated balance sheets. Elements of the consolidated statements of income are translated at the average monthly currency exchange rates in effect during the period. Currency transaction gains and losses are included in *other operating expense, net* in the consolidated statements of income.

Stock-Based Compensation The Company measures stock-based compensation expense at the grant date based on the fair value of the award and recognizes the compensation expense over the requisite service period, which is generally the vesting period. The amount of stock-based compensation expense recognized during a period is based on the portion of the awards that are expected to vest. The Company estimates pre-vesting forfeitures at the time of grant and revises the estimates in subsequent periods.

New Accounting Standards

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.

Not Yet Adopted

In June 2016, the FASB issued guidance which changes the methodology to be used to measure credit losses for certain financial instruments and financial assets, including trade receivables. The new methodology requires the recognition of an allowance that reflects the current estimate of credit losses expected to be incurred over the life of the financial asset. The new standard will be effective for the Company in the first quarter of fiscal year 2021. The Company does not expect the adoption of the guidance to have a material impact on the Company's consolidated financial statements.

2. 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 healthcare providers, distributors, and other institutions, including governmental healthcare programs and group purchasing organizations.

The table below illustrates net sales by segment and division for fiscal years 2020, 2019, and 2018:

	Net Sales by Fiscal Year[1]		
(in millions)	**2020**	**2019**	**2018**
Cardiac Rhythm & Heart Failure	$ 5,141	$ 5,849	$ 5,947
Coronary & Structural Heart	3,541	3,730	3,562
Aortic, Peripheral & Venous	1,786	1,926	1,845
Cardiac and Vascular Group	10,468	11,505	11,354
Surgical Innovations	5,513	5,753	5,537
Respiratory, Gastrointestinal, & Renal	2,839	2,725	3,179
Minimally Invasive Therapies Group	8,352	8,478	8,716
Brain Therapies	2,922	2,938	2,354
Spine	2,503	2,654	2,668
Specialty Therapies	1,193	1,307	1,556
Pain Therapies	1,107	1,284	1,165
Restorative Therapies Group	7,725	8,183	7,743
Diabetes Group	2,368	2,391	2,140
Total	$ 28,913	$ 30,557	$ 29,953

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

The table below includes net sales by market geography and segment for fiscal years 2020, 2019, and 2018:

	Net Sales by Fiscal Year[4]		
(in millions)	**2020**	**2019**	**2018**
U.S.[1]	$ 5,062	$ 5,750	$ 5,681
Non-U.S. Developed Markets[2]	3,519	3,767	3,790
Emerging Markets[3]	1,887	1,988	1,883
Cardiac and Vascular Group	10,468	11,505	11,354
U.S.[1]	3,532	3,630	3,804
Non-U.S. Developed Markets[2]	3,169	3,250	3,378
Emerging Markets[3]	1,651	1,598	1,534
Minimally Invasive Therapies Group	8,352	8,478	8,716
U.S.[1]	5,122	5,478	5,164
Non-U.S. Developed Markets[2]	1,659	1,759	1,720
Emerging Markets[3]	945	946	859
Restorative Therapies Group	7,725	8,183	7,743
U.S.[1]	1,204	1,336	1,226
Non-U.S. Developed Markets[2]	940	855	739
Emerging Markets[3]	224	200	175
Diabetes Group	2,368	2,391	2,140
U.S.[1]	14,919	16,194	15,875
Non-U.S. Developed Markets[2]	9,287	9,631	9,627
Emerging Markets[3]	4,707	4,732	4,451
Total	$ 28,913	$ 30,557	$ 29,953

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

At April 24, 2020, $706 million of rebates were classified as *other accrued expenses* and $321 million of rebates were classified as a reduction of *accounts receivable* in the consolidated balance sheet. 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. During fiscal year 2020, 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

Deferred revenue at April 24, 2020 and April 26, 2019 was $303 million and $315 million, respectively. At April 24, 2020 and April 26, 2019, $213 million and $211 million was included in *other accrued expenses*, respectively, and

$90 million and $104 million was included in *other liabilities*, respectively. During the fiscal year ended April 24, 2020, the Company recognized $220 million of revenue that was included in deferred revenue as of April 26, 2019.

At April 24, 2020, 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 next four years.

3. Acquisitions

The Company had acquisitions during fiscal years 2020 and 2019 that were accounted for as business combinations. The assets and liabilities of 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 acquisitions during fiscal years 2020 and 2019 was not significant, either individually or in the aggregate, to the consolidated results of the Company. 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 fiscal year 2020 was $612 million, consisting of $679 million of assets acquired and $67 million of liabilities assumed. Based upon preliminary valuations, assets acquired were primarily comprised of $236 million of technology-based intangible assets and $26 million of customer-related intangible assets with estimated useful lives ranging from 8 to 16 years, $333 million of goodwill, and $40 million of inventory. The goodwill is not deductible for tax purposes. The Company recognized $80 million of contingent consideration liabilities in connection with business combinations during fiscal year 2020, which are comprised of revenue and regulatory milestone-based payments. Purchase price allocation adjustments for fiscal year 2020 business combinations were not significant.

Fiscal Year 2019

Mazor Robotics

On December 18, 2018, the Company's Restorative Therapies Group acquired Mazor Robotics (Mazor), a pioneer in the field of robotic guidance systems. The acquisition of Mazor strengthened the Company's position as a global leader in enabling technologies for spine surgery. The Company offers a fully-integrated procedural solution for surgical planning, execution, and confirmation by combining the Company's spine implants, navigation, and intra-operative imaging technology with Mazor's robotic-assisted surgery systems. Total consideration for the transaction, net of cash acquired, was $1.6 billion, consisting of $1.3 billion of cash and $246 million of a previously-held equity investment in Mazor. Net assets acquired includes $383 million of technology-based intangible assets and $16 million of tradenames with estimated useful lives of 10 years. Goodwill was primarily attributable to pull-through revenue, future yet to be defined technologies, and an assembled workforce and was not deductible for tax purposes.

During fiscal year 2019, the Company recognized $51 million of costs incurred in connection with the acquisition of Mazor, including payouts for unvested stock options and investment banker and other transaction fees, which were recognized in *selling, general, and administrative expense* in the consolidated statements of income.

The Company made certain adjustments to the allocation of purchase price for the Mazor acquisition during the measurement period which closed in the third quarter of fiscal year 2020, primarily related to estimates for certain contingent liabilities and deferred taxes, which resulted in a net increase to goodwill of $105 million.

The fair values of the assets acquired and liabilities assumed were as follows:

(in millions)	Mazor Robotics
Cash and cash equivalents	$ 109
Investments	52
Accounts receivable	9
Inventory	5
Other current assets	1
Property, plant, and equipment	3
Goodwill	1,318
Other intangible assets	399
Tax assets	9
Total assets acquired	1,905
Current liabilities	210
Deferred tax liabilities	21
Total liabilities assumed	231
Net assets acquired	$ 1,674

Other Fiscal Year 2019 Acquisitions

The remaining acquisition date fair value of net assets acquired during fiscal year 2019 was $698 million, consisting of $763 million of assets acquired and $65 million of liabilities assumed. Assets acquired were primarily comprised of $313 million of goodwill, $171 million of in-process research and development, $161 million of technology-based intangible assets with estimated useful lives ranging from 4 to 15 years, and $40 million of customer-related intangible assets with estimated useful lives ranging from 10 to 13 years. The Company recognized $151 million of contingent consideration liabilities in connection with business combinations during fiscal year 2019. For fiscal year 2019, purchase price allocation adjustments were not significant.

Acquired In-Process Research & Development

IPR&D acquired outside of a business combination is expensed immediately. The Company did not acquire any IPR&D in connection with asset acquisitions during fiscal years 2020 and 2018. During fiscal year 2019, the Company acquired $38 million of IPR&D in connection with asset acquisitions, which was recognized in *other operating expense, net* in the consolidated statements of income.

Contingent Consideration

The fair value of contingent consideration at April 24, 2020 and April 26, 2019 was $280 million and $222 million, respectively. At April 24, 2020, $112 million was recorded in *other accrued expenses* and $168 million was recorded in *other liabilities* on the consolidated balance sheets. At April 26, 2019, $73 million was reflected in *other accrued expenses* and $149 million was reflected in *other liabilities* on the consolidated balance sheets.

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

(in millions)	Fiscal Year 2020	Fiscal Year 2019
Beginning Balance	$ 222	$ 173
Purchase price contingent consideration	125	151
Contingent consideration payments	(34)	(36)
Change in fair value of contingent consideration	(33)	(66)
Ending Balance	$ 280	$ 222

The recurring Level 3 fair value measurements of contingent consideration include the following significant unobservable inputs:

(in millions)	Fair Value at April 24, 2020	Valuation Technique	Unobservable Input	Range
			Discount rate	11.5% - 32.4%
Revenue-based payments	$ 101	Discounted cash flow	Probability of payment	40% - 100%
			Projected fiscal year of payment	2021 - 2027
			Discount rate	5.5%
Product development-based payments	$ 179	Discounted cash flow	Probability of payment	50% - 100%
			Projected fiscal year of payment	2021 - 2027

4. Divestiture

On July 29, 2017, the Company completed the sale of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses within the Minimally Invasive Therapies Group to Cardinal Health, Inc. (Cardinal). As a result of the transaction, the Company received proceeds of $6.1 billion, which was recorded in *proceeds from sale of businesses* in the consolidated statements of cash flows, and recognized a before-tax gain of $697 million, which was recognized within *gain on sale of businesses* in the consolidated statements of income. Among the product lines included in the divestiture were dental and animal health, chart paper, wound care, incontinence, electrodes, SharpSafety, thermometry, perinatal protection, blood collection, compression, and enteral feeding offerings. The divestiture also included 17 dedicated manufacturing sites.

In fiscal year 2018, the Company recognized expenses incurred in connection with the divestiture of $115 million, primarily comprised of professional services, including banker, legal, tax, and advisory fees, as well as $16 million of accelerated stock compensation expense related to the acceleration of the vesting period for employees that transferred with the divestiture. Expenses incurred in connection with the divestiture were recognized in *selling, general, and administrative expense* in the consolidated statements of income.

The divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses did not meet the criteria to be classified as discontinued operations, as such, the results of operations of these businesses are included within net income through the date of the divestiture.

There were no material divestitures or divestiture-related expenses during fiscal years 2020 or 2019.

5. Restructuring Charges

Enterprise Excellence

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 fiscal years 2020, 2019 and 2018, the Company recognized charges of $462 million, $424 million, and $96 million, respectively. During fiscal year 2020, charges were partially offset by accrual adjustments of $21 million related to certain employees identified for termination finding other positions within Medtronic. For fiscal years 2020, 2019 and 2018, charges included $155 million, $91 million, and $28 million, respectively, recognized within *cost of products sold* and $168 million,

$118 million, and $33 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 fiscal years 2020, 2019, and 2018:

(in millions)	Employee Termination Benefits	Associated Costs[1]	Asset Write-downs[2]	Other Costs	Total
April 28, 2017	$ —	$ —	$ —	$ —	$ —
Charges	35	61	—	—	96
Cash payments	(8)	(59)	—	—	(67)
April 27, 2018	27	2	—	—	29
Charges	192	193	17	22	424
Cash payments	(118)	(186)	—	(10)	(314)
Settled non-cash	—	—	(17)	—	(17)
April 26, 2019	101	9	—	12	122
Charges	129	300	24	9	462
Cash payments	(128)	(290)	—	(9)	(427)
Settled non-cash	—	—	(24)	—	(24)
Accrual adjustments	(13)	—	—	(8)	(21)
April 24, 2020	$ 89	$ 19	$ —	$ 4	$ 112

(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* and *selling, general, and administrative expense* in the consolidated statements of income.

Cost Synergies

The Cost Synergies program was related to administrative office optimization, manufacturing and supply chain infrastructure, and certain general and administrative savings achieved as part of the Covidien plc integration and was completed in the third quarter of fiscal year 2018. For fiscal year 2018, the Company recognized $107 million in charges, including $11 million in restructuring charges, net of $34 million of accrual adjustments, related to the Cost Synergies restructuring program. Accrual adjustments relate to certain employees identified for termination finding other positions within the Company, cancellations of employee terminations, and employee termination benefits being less than initially estimated. Cash outlays for the Cost Synergies program were substantially complete at the end of fiscal year 2019.

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.

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 April 24, 2020 and April 26, 2019:

	April 24, 2020					
	Valuation				Balance Sheet Classification	
(in millions)	Cost	Unrealized Gains	Unrealized Losses	Fair Value	Investments	Other Assets
Level 1:						
U.S. government and agency securities	$ 542	$ 47	$ —	$ 589	$ 589	$ —
Level 2:						
Corporate debt securities	4,285	66	(90)	4,261	4,261	—
U.S. government and agency securities	746	1	—	747	747	—
Mortgage-backed securities	705	20	(28)	697	697	—
Non-U.S. government and agency securities	34	—	—	34	34	—
Other asset-backed securities	499	1	(20)	480	480	—
Total Level 2	6,269	88	(138)	6,219	6,219	—
Level 3:						
Auction rate securities	36	—	(3)	33	—	33
Total available-for-sale debt securities	$ 6,847	$ 135	$ (141)	$ 6,841	$ 6,808	$ 33

	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 April 24, 2020 and April 26, 2019:

	April 24, 2020			
	Less than 12 months		More than 12 months	
(in millions)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Corporate debt securities	$ 1,368	$ (2)	$ 2,893	$ (88)
Mortgage-backed securities	35	(1)	663	(27)
Other asset-backed securities	17	—	463	(20)
Auction rate securities	33	(3)	—	—
Total	$ 1,453	$ (6)	$ 4,019	$ (135)

	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 fiscal years 2020 or 2019. 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.

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

(in millions)	April 24, 2020	April 26, 2019	April 27, 2018
Proceeds from sales	$ 9,559	$ 3,718	$ 3,309
Gross realized gains	25	18	27
Gross realized losses	(22)	(62)	(21)

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 April 24, 2020 and April 26, 2019, the credit loss portion of other-than temporary impairments on debt securities was not significant. No available-for-sale securities were sold for significantly less than carrying value during the fiscal years 2020 or 2019.

The April 24, 2020 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)	April 24, 2020
Due in one year or less	$ 2,190
Due after one year through five years	2,854
Due after five years through ten years	1,733
Due after ten years	64
Total debt securities	$ 6,841

Equity Securities, Equity Method Investments, and Other Investments

The Company commonly holds investments in equity securities with readily determinable fair values, equity investments without readily determinable fair values, investments accounted for under the equity method, and other investments. Equity securities with readily determinable fair values are included within Level 1 of the fair value hierarchy, as they are measured using quoted market prices. 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 April 24, 2020 and April 26, 2019, which are classified as *other assets* in the consolidated balance sheets:

(in millions)	April 24, 2020	April 26, 2019
Investments with readily determinable fair values (marketable equity securities)	$ 18	$ —
Investments without readily determinable fair values	391	308
Equity method and other investments	71	64
Total equity and other investments	$ 480	$ 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.

(in millions)	April 24, 2020	April 26, 2019	April 27, 2018
Proceeds from sales	$ 15	$ 964	$ 918
Gross gains	17	134	18
Gross losses	(30)	(30)	(4)
Recognized impairment losses	(4)	(45)	(231)

Net losses recognized during fiscal year 2020 were $13 million, comprised of $15 million unrealized gains and losses on equity securities and other investments still held at April 24, 2020, and $2 million realized gains recognized on equity securities and other investments sold during the fiscal year. Net gains recognized during fiscal year 2019 were

$104 million, comprised of $94 million net realized gains on equity and other investments sold during the period and $10 million of unrealized gains on equity and other investments still held at April 26, 2019. Gross gains and losses for fiscal year 2018 represent gains and losses on instruments sold during the period.

Impairment charges incurred on the Company's equity securities, equity method investments, and other investments during fiscal years 2020 and 2019 were not significant. During fiscal year 2018, the Company received bids from potential buyers and investors for some or all of its ownership in a portfolio of selected investments, which indicated that the fair values of certain of the underlying cost and equity method investments in the portfolio may be below the respective carrying values. The Company determined that the decline in the fair values was other-than-temporary given the uncertainty regarding the Company's intent to hold the investments for a period of time that would be sufficient to recover the carrying values. As a result, the Company recognized impairment charges of $227 million during fiscal year 2018, which were recognized in *other non-operating income, net* in the consolidated statements of income. The fair values of the investments were determined based on Level 3 inputs. The

carrying values of the investments prior to recognizing the impairment charges was $317 million. There were no other significant impairment charges recognized during fiscal year 2018.

7. Financing Arrangements

Current debt obligations consisted of the following:

(in millions)	April 24, 2020	April 26, 2019
Bank borrowings	$ 325	$ 332
0.000 percent two-year 2019 senior notes	1,631	—
Floating rate two-year 2019 senior notes	815	—
Floating rate five-year 2015 senior notes	—	500
Finance lease obligations	5	6
Current debt obligations	$ 2,776	$ 838

Bank Borrowings Outstanding bank borrowings at April 24, 2020 were short-term advances primarily to non-U.S. subsidiaries under credit agreements with various banks. Bank borrowings consist primarily of borrowings in Japanese Yen at an interest rate of 0.21%, and these borrowings are a natural hedge of currency and exchange rate risk.

Commercial Paper On January 26, 2015, Medtronic Global Holdings S.C.A. (Medtronic Luxco), an entity organized under the laws of Luxembourg, entered into various agreements pursuant to which Medtronic Luxco may issue United States Dollar-denominated unsecured commercial paper notes (the 2015 CP Program) on a private placement basis, and on January 31, 2020 Medtronic Luxco entered into various agreements pursuant to which Medtronic Luxco may issue Euro-denominated unsecured commercial paper notes (the 2020 CP Program) on a private placement basis. The Maximum aggregate amount outstanding at any time under the 2015 CP Program and the 2020 CP Program together may not exceed the equivalent of $3.5 billion. The Company and Medtronic, Inc. have guaranteed the obligations of Medtronic Luxco under the 2015 CP Program and the 2020 CP Program.

There was no commercial paper outstanding at April 24, 2020 and April 26, 2019. During fiscal years 2020 and 2019, the weighted average original maturity of the commercial paper outstanding was approximately 7 days and 27 days, respectively, and the weighted average interest rate was 2.31 percent and 2.12 percent, respectively. The issuance of commercial paper reduces the amount of credit available under the Company's existing credit facility, defined below.

Line of Credit On December 12, 2019, Medtronic Luxco, as borrower, entered into an amendment to its amended and restated credit agreement (Credit Facility), by and among Medtronic, Medtronic, Inc., Medtronic Luxco, the lenders from time to time party thereto, and Bank of America, N.A., as administrative agent and issuing bank, extending the maturity date of the Credit Facility to December 2024.

The Credit Facility provides for a $3.5 billion five-year unsecured revolving credit facility (Credit Facility). At each anniversary date of the Credit Facility, but not more than twice prior to the maturity date, the Company could also request a one-year extension of the maturity date. The Credit Facility provides the Company with the ability to increase its borrowing capacity by an additional $1.0 billion at any time during the term of the agreement. The Company and Medtronic, Inc. have guaranteed the obligations of the borrowers under the Credit Facility, and Medtronic Luxco will also guarantee the obligations of any designated borrower. The Credit Facility includes a multi-currency borrowing feature for certain specified foreign currencies. At April 24, 2020 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 Credit Facility also contains customary covenants, all of which the Company remained in compliance with at April 24, 2020.

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Long-term debt consisted of the following:

(in millions, except interest rates)	Maturity by Fiscal Year	April 24, 2020 Amount	April 24, 2020 Effective Interest Rate	April 26, 2019 Amount	April 26, 2019 Effective Interest Rate
0.000 percent two-year 2019 senior notes	2021	$ —	— %	$ 1,681	0.22 %
Floating rate two-year 2019 senior notes	2021	—	—	560	0.05
4.125 percent ten-year 2011 senior notes	2021	—	—	500	4.21
3.150 percent seven-year 2015 senior notes	2022	1,534	3.29	2,500	3.29
3.125 percent ten-year 2012 senior notes	2022	—	—	675	3.21
3.200 percent ten-year 2012 CIFSA senior notes	2023	650	2.72	650	2.72
0.375 percent four-year 2019 senior notes	2023	1,631	0.56	1,681	0.56
2.750 percent ten-year 2013 senior notes	2023	530	3.25	530	3.25
0.000 percent four-year 2019 senior notes	2023	815	0.09	—	—
2.950 percent ten-year 2013 CIFSA senior notes	2024	310	2.71	310	2.71
3.625 percent ten-year 2014 senior notes	2024	432	3.61	850	3.61
3.500 percent ten-year 2015 senior notes	2025	2,700	3.74	4,000	3.74
0.250 percent seven-year 2019 senior notes	2026	1,087	0.44	—	—
1.125 percent eight-year 2019 senior notes	2027	1,631	1.25	1,681	1.25
3.350 percent ten-year 2017 senior notes	2027	368	3.53	850	3.53
1.625 percent twelve-year 2019 senior notes	2031	1,087	1.75	1,121	1.75
1.000 percent thirteen-year 2019 senior notes	2032	1,087	1.06	—	—
4.375 percent twenty-year 2015 senior notes	2035	1,932	4.47	2,382	4.47
6.550 percent thirty-year 2007 CIFSA senior notes	2038	253	4.68	284	4.68
2.250 percent twenty-year 2019 senior notes	2039	1,087	2.34	1,121	2.34
6.500 percent thirty-year 2009 senior notes	2039	158	6.56	183	6.56
5.550 percent thirty-year 2010 senior notes	2040	224	5.58	306	5.58
1.500 percent twenty-year 2019 senior notes	2040	1,087	1.58	—	—
4.500 percent thirty-year 2012 senior notes	2042	105	4.54	129	4.54
4.000 percent thirty-year 2013 senior notes	2043	305	4.10	325	4.10
4.625 percent thirty-year 2014 senior notes	2044	127	4.67	177	4.67
4.625 percent thirty-year 2015 senior notes	2045	1,813	4.67	1,963	4.69
1.750 percent thirty-year 2019 senior notes	2050	1,087	1.87	—	—
Bank borrowings	2021 - 2022	55	2.11	83	1.94
Debt (discount) premium, net	2021 - 2050	(15)	—	29	—
Finance lease obligations	2021 - 2035	45	8.93	10	6.39
Interest rate swaps	N/A	—	—	9	—
Deferred financing costs	2021 - 2050	(104)	—	(104)	—
Long-term debt		$ 22,021		$ 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 April 24, 2020. The Company used the net proceeds from the sale of the Senior Notes primarily for general corporate purposes, which includes the repayment of other indebtedness of the Company.

In March 2019, Medtronic Luxco issued six tranches of Euro-denominated Senior Notes with an aggregate principal of €7.0 billion, with maturities ranging from fiscal year 2021 to fiscal year 2039, resulting in cash proceeds of approximately $7.8 billion, net of discounts and issuance costs. The issuance included €500 million of floating rate Senior Notes due in fiscal year 2021, €1.5 billion of 0.000 percent Senior Notes due in fiscal year 2021, €1.5 billion of 0.375 percent Senior Notes due in fiscal year 2023, €1.5 billion of 1.125 percent Senior Notes due in fiscal year 2027, €1.0 billion of 1.625 percent Senior Notes due in fiscal year 2031, and €1.0 billion of 2.250 percent Senior Notes due in fiscal year 2039. The Company used a portion of the net proceeds of the offering to fund the cash tender offer and early redemption of $6.4 billion of Medtronic Inc. and CIFSA senior notes for $6.9 billion of total consideration in March 2019. The Company recognized a loss on debt extinguishment of $485 million, which primarily included cash premiums and accelerated amortization of deferred financing costs and debt discounts and premiums. The loss on debt extinguishment was recognized in *interest expense* in the consolidated statements of income.

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 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, which primarily included cash premiums and accelerated amortization of deferred financing costs and debt discounts and premiums. The loss on debt extinguishment also includes a $16 million charge for the 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. Also in March 2020, the Company redeemed its floating rate five-year 2015 senior notes at maturity for $500 million.

At April 26, 2019, the Company had interest rate swap agreements designated as fair value hedges of certain underlying fixed-rate obligations, including the Company's $500 million 4.125 percent 2011 Senior Notes and $675 million 3.125 percent 2012 Senior Notes. Refer to Note 8 for additional information regarding the interest rate swap agreements. At April 24, 2020 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.

Contractual maturities of debt for the next five fiscal years and thereafter, excluding deferred financing costs and debt discount, net, are as follows:

(in millions)	
2021	$ 2,776
2022	1,594
2023	3,630
2024	746
2025	2,704
Thereafter	13,466
Total debt	24,916
Less: Current debt obligations	2,776
Long-term debt	$ 22,140

Subsequent to fiscal year 2020, on May 12, 2020, Medtronic Luxco entered into a Term Loan Agreement by and among Medtronic Luxco, Medtronic plc, Medtronic, Inc., and Mizuho Bank, Ltd. as administrative agent and as lender. The Loan Agreement provides an unsecured term loan in an aggregate principal amount of up to ¥300 billion, or approximately

$2.8 billion, with a term of six months, which may be extended for an additional six months at Medtronic Luxco's option. Borrowings under the Loan Agreement will bear interest at the TIBOR Rate (as defined in the Loan Agreement) plus a margin of 0.50% per annum. Medtronic plc and Medtronic, Inc. have guaranteed the obligations of Medtrconic Luxco under the Loan Agreement. On May 13, 2020, Medtronic Luxco borrowed the entire amount of the term loan under the Loan Agreement.

Financial Instruments Not Measured at Fair Value

At April 24, 2020, the estimated fair value of the Company's Senior Notes was $27.1 billion compared to a principal value of $24.5 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. Currencies of our derivative instruments include the Euro, Japanese Yen, Chinese Yuan, and others. 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 $11.9 billion and $11.1 billion at April 24, 2020 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 freestanding currency exchange rate contracts outstanding at April 24, 2020 and April 26, 2019 was $4.9 billion and $4.3 billion, respectively. 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 April 24, 2020 and April 26, 2019 was $181 million and $191 million, respectively. 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 fiscal years 2020, 2019, and 2018 were as follows:

		Fiscal Year		
(in millions)	**Classification**	**2020**	**2019**	**2018**
Currency exchange rate contracts	Other operating expense, net	$ (133)	$ (218)	$ 253
Total return swaps	Other operating expense, net	7	(18)	(27)
Total		$ (126)	$ (236)	$ 226

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 April 24, 2020 and April 26, 2019 was $7.0 billion and $6.8 billion, respectively, and will mature within the subsequent three-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 fiscal years 2020, 2019, or 2018.

The amount of the (gains) losses recognized in AOCI related to currency exchange rate contract derivative instruments designated as cash flow hedges for fiscal years 2020, 2019, and 2018 were as follows:

	Fiscal Year		
(in millions)	2020	2019	2018
Currency exchange rate contracts	$ (397)	$ (615)	$ 404

The amount of the (gains) losses recognized in the consolidated statements of income related to derivative instruments designated as cash flow hedges for fiscal years 2020, 2019, and 2018 were as follows:

	Fiscal Year		
	2020	2019	2018
(in millions)	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	$ 71	$ 258	$ 535
Currency exchange rate contracts designated as cash flow hedges:			
Amount of (gain) loss reclassified from AOCI into income	(335)	(108)	69

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 fiscal years 2020, 2019, and 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 April 24, 2020 and April 26, 2019, the Company had $266 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 $225 million of after-tax net unrealized gains at April 24, 2020 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 from terminated interest rate swap agreements are recognized in *long-term debt*, increasing the outstanding balances of the debt, and amortized as a reduction of *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 April 24, 2020, 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 fiscal year 2020. 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 fiscal years 2020, 2019, or 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	April 24, 2020	April 26, 2019	April 24, 2020	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 April 24, 2020, the Company had €12.0 billion, or $13.0 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 fiscal year 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 the 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 April 24, 2020 and April 26, 2019, the Company had $236 million in after-tax unrealized gains, and $169 million 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 April 24, 2020 to be recognized in the consolidated statements of income over the next 12 months.

The Company did not recognize any gains or losses during fiscal years 2020, 2019, or 2018 on instruments that no longer qualify as net investment hedges.

The amount and classifications of the (gains) losses 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:

(in millions)	Classification	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018
Net investment hedges	Other operating expense, net	$ (9)	$ (12)	$ —

The amount of the (gains) losses recognized in AOCI related to instruments designated as net investment hedges for fiscal year 2020, 2019, or 2018 were as follows:

(in millions)	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018
Net investment hedges	$ (405)	$ (88)	$ —

Balance Sheet Presentation

The following tables summarize the balance sheet classification and fair value of derivative instruments included in the consolidated balance sheets at April 24, 2020 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.

	April 24, 2020			
	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	$ 271	Other accrued expenses	$ 2
Currency exchange rate contracts	Other assets	103	Other liabilities	2
Total derivatives designated as hedging instruments		374		4
Derivatives not designated as hedging instruments				
Currency exchange rate contracts	Other current assets	25	Other accrued expenses	13
Total return swaps	Other current assets	—	Other accrued expenses	25
Cross-currency interest rate contracts	Other current assets	3	Other accrued expenses	—
Total derivatives not designated as hedging instruments		28		38
Total derivatives		$ 402		$ 42

	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:

	April 24, 2020		April 26, 2019	
(in millions)	Level 1	Level 2	Level 1	Level 2
Derivative assets	$ 399	$ 3	$ 335	$ 30
Derivative liabilities	17	25	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.

	April 24, 2020			
		Gross Amount Not Offset on the Balance Sheet		
(in millions)	Gross Amount of Recognized Assets (Liabilities)	Financial Instruments	Cash Collateral (Received) Posted	Net Amount
Derivative assets:				
Currency exchange rate contracts	$ 399	$ (17)	$ (48)	$ 334
Cross-currency interest rate contracts	3	—	—	3
	402	(17)	(48)	337
Derivative liabilities:				
Currency exchange rate contracts	(17)	17	—	—
Total return swaps	(25)	—	—	(25)
	(42)	17	—	(25)
Total	$ 360	$ —	$ (48)	$ 312

(in millions)	April 26, 2019			
		Gross Amount Not Offset on the Balance Sheet		
	Gross Amount of Recognized Assets (Liabilities)	Financial Instruments	Cash Collateral (Received) Posted	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

Concentrations of Credit Risk

Financial instruments, which potentially subject the Company to significant concentrations of credit risk, consist principally of interest-bearing investments, forward exchange derivative contracts, and trade accounts receivable. Global concentrations of credit risk with respect to trade accounts receivable are limited due to the large number of customers and their dispersion across many geographic areas. The Company monitors the creditworthiness of its customers to which it grants credit terms in the normal course of business.

The Company maintains cash and cash equivalents, investments, and certain other financial instruments (including currency exchange rate and interest rate derivative contracts) with various major financial institutions. The Company performs periodic evaluations of the relative credit standings of these financial institutions and limits the amount of credit exposure with any one institution. In addition, the Company has collateral credit agreements with its primary derivatives counterparties. Under these agreements, either party is required to post eligible collateral when the market value of transactions covered by the agreement exceeds specific thresholds, thus limiting credit exposure for both parties. At April 24, 2020 and April 26, 2019, the Company received net cash collateral of $48 million and $44 million, respectively, from its counterparties. The cash collateral received was recorded in *cash and cash equivalents*, with the offset recorded as an increase in *other accrued expenses* on the consolidated balance sheets.

9. Inventories

Inventory balances, net of reserves, were as follows:

(in millions)	April 24, 2020	April 26, 2019
Finished goods	$ 2,874	$ 2,476
Work-in-process	608	572
Raw materials	747	705
Total	$ 4,229	$ 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 27, 2018	$ 6,791	$ 21,155	$ 9,717	$ 1,880	$ 39,543
Goodwill as a result of acquisitions	165	83	1,238	24	1,510
Currency translation and other	(102)	(857)	(134)	(1)	(1,094)
April 26, 2019	6,854	20,381	10,821	1,903	39,959
Goodwill as a result of acquisitions	19	227	71	16	333
Purchase accounting adjustments	7	2	120	(5)	124
Currency translation and other	(49)	(434)	(92)	—	(575)
April 24, 2020	$ 6,831	$ 20,176	$ 10,920	$ 1,914	$ 39,841

The Company did not recognize any goodwill impairments during fiscal years 2020, 2019, or 2018.

Intangible Assets

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

	April 24, 2020		April 26, 2019	
(in millions)	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Definite-lived:				
Customer-related	$ 16,963	$ (5,065)	$ 16,944	$ (4,095)
Purchased technology and patents	10,742	(4,354)	11,405	(4,570)
Trademarks and tradenames	464	(232)	570	(324)
Other	75	(53)	85	(59)
Total	$ 28,244	$ (9,704)	$ 29,004	$ (9,048)
Indefinite-lived:				
IPR&D	$ 523	$ —	$ 604	$ —

During fiscal year 2020, the Company recognized $37 million of definite-lived intangible asset charges, including $33 million and $4 million recognized in connection with business exits in the Restorative Therapies Group and Cardiac and Vascular Group, respectively. During fiscal year 2019, the Company recognized $87 million of definite-lived intangible asset charges, including $61 million and $26 million recognized in connection with business exits in the Cardiac and Vascular Group and Restorative Therapies Group, respectively. The Company did not recognize any definite-lived intangible asset impairments during fiscal year 2018. Definite-lived intangible asset charges are recognized in *other operating expense, net* in the consolidated statements of income.

During fiscal year 2020, the Company recognized $35 million of indefinite-lived intangible asset charges, including $25 million relating to a partial impairment of an IPR&D project within the Restorative Therapies Group and $10 million in connection with the discontinuation of an IPR&D project within the Cardiac and Vascular Group. During fiscal year 2019, the Company recognized $30 million of indefinite-lived intangible asset charges, including $11 million in connection with a business exit in the Restorative Therapies Group, and $10 million and $9 million in connection with the discontinuation of certain IPR&D projects within the Minimally Invasive Therapies Group and Cardiac and Vascular Group, respectively. During fiscal year 2018, the Company recognized impairment losses on indefinite-lived intangibles of $68 million as a result of the discontinuation of certain IPR&D projects within the Restorative Therapies Group. Indefinite-lived intangible asset charges are recognized in *other operating expense, net* in the consolidated statements of income. 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 such clinical trials, delays or failures to obtain required market clearances, other failures to achieve a commercially viable product, or the discontinuation of certain projects, and as a result, may recognize impairment losses in the future.

Amortization

Intangible asset amortization expense was $1.8 billion for fiscal years 2020, 2019 and 2018. Estimated aggregate amortization expense by fiscal year based on the current carrying value and remaining estimated useful lives of definite-lived intangible assets at April 24, 2020, excluding any possible future amortization associated with acquired IPR&D which has not met technological feasibility, is as follows:

(in millions)	Amortization Expense
2021	$ 1,748
2022	1,706
2023	1,644
2024	1,615
2025	1,588

11. Property, Plant, and Equipment

Property, plant, and equipment balances and corresponding estimated useful lives were as follows:

(in millions)	April 24, 2020	April 26, 2019	Estimated Useful Lives (in years)
Equipment	$ 5,859	$ 5,519	Generally 2-7, up to 15
Computer software	2,131	1,842	Up to 5
Land and land improvements	175	181	Up to 20
Buildings and leasehold improvements	2,277	2,267	Up to 40
Construction in progress	1,202	1,111	—
Property, plant, and equipment	11,644	10,920	
Less: Accumulated depreciation	(6,816)	(6,245)	
Property, plant, and equipment, net	$ 4,828	$ 4,675	

Depreciation expense of $907 million, $895 million, and $821 million was recognized in fiscal years 2020, 2019, and 2018, respectively.

12. Shareholders' Equity

Share Capital Medtronic plc is authorized to issue 2.6 billion Ordinary Shares, $0.0001 par value; 40 thousand Euro Deferred Shares, €1.00 par value; 127.5 million Preferred Shares, $0.20 par value; and 500 thousand A Preferred Shares, $1.00 par value.

Euro Deferred Shares The authorized share capital of the Company includes 40 thousand Euro Deferred Shares, with a par value of €1.00 per share. At April 24, 2020, no Euro Deferred Shares were issued or outstanding.

Preferred Shares The authorized share capital of the Company includes 127.5 million of Preferred Shares, with a par value of $0.20 per share. At April 24, 2020, no Preferred Shares were issued or outstanding.

A Preferred Shares The authorized share capital of the Company includes 500 thousand A Preferred Shares, with a par value of $1.00 per share. At April 24, 2020, 1,872 A Preferred Shares were outstanding. The holders of A Preferred Shares are entitled to payment of dividends prior to any other class of shares in the Company equal to twice the dividend to be paid per Company ordinary share. On a return of assets, whether on liquidation or otherwise, the A Preferred Shares are entitled to repayment of the capital paid up thereon in priority to any repayment of capital to the holders of any other shares and the holders of the A Preferred Shares shall not be entitled to any further participation in the assets or profits of the Company. The holders of the A Preferred Shares are not entitled to receive notice of, nor to attend, speak, or vote at any general meeting of the Company.

Dividends The timing, declaration, and payment of future dividends to holders of the Company's ordinary and A Preferred shares falls within the discretion of the Company's Board of Directors and depends upon many factors, including the statutory requirements of Irish law, the Company's earnings and financial condition, the capital requirements of the Company's businesses, industry practice and any other factors the Board of Directors deems relevant.

Ordinary Share Repurchase Program Shares are repurchased from time to time to support the Company's stock-based compensation programs and to return capital to shareholders. During fiscal years 2020 and 2019, the Company

repurchased approximately 12 million and 31 million shares, respectively, at an average price of $106.22 and $91.43, respectively.

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. At April 24, 2020, the Company had used approximately $5.0 billion of the $11.0 billion authorized under the repurchase program, leaving approximately $6.0 billion available for future repurchases. The Company accounts for repurchases of ordinary shares using the par value method and shares repurchased are canceled.

13. Stock Purchase and Award Plans

The Medtronic, Inc. 2013 Stock Award and Incentive Plan was originally approved by the Company's shareholders in August 2013. In January 2015, the Company's Board of Directors approved an amendment to and assumption of the Medtronic, Inc.

2013 Stock Award and Incentive Plan, which created the Medtronic plc 2013 Stock Award and Incentive Plan (2013 Plan). In fiscal year 2020, the Company granted stock awards under the 2013 Plan. The 2013 Plan provides for the grant of non-qualified and incentive stock options, stock appreciation rights, restricted stock, restricted stock units, performance awards, and other stock and cash-based awards. At April 24, 2020, there were approximately 41 million shares available for future grants under the 2013 Plan.

Share Options Options are granted at the exercise price, which is equal to the closing price of the Company's ordinary shares on the grant date. The majority of the Company's options are non-qualified options with a 10-year life and a 4-year ratable vesting term.

Restricted Stock Restricted stock awards and restricted stock units (collectively referred to as restricted stock) are granted to officers and key employees. At April 24, 2020, the Company does not have any outstanding restricted stock awards. Beginning in fiscal year 2018, restricted stock units have a 4-year ratable vesting term. Restricted stock units issued prior to fiscal year 2018 cliff vest after four years. The expense recognized for restricted stock units is equal to the grant date fair value, which is equal to the closing stock price on the date of grant. Restricted stock units are expensed over the vesting period and are subject to forfeiture if employment terminates prior to the lapse of the restrictions. The Company also grants shares of performance-based restricted stock units that typically cliff vest after three years only if the Company has also achieved certain performance objectives. Performance awards are expensed over the performance period based on the probability of achieving the performance objectives. Restricted stock units are not considered issued or outstanding ordinary shares of the Company. Dividend equivalent units are accumulated on restricted stock units during the vesting period.

Employees Stock Purchase Plan The Medtronic plc Amended and Restated 2014 Employees Stock Purchase Plan (ESPP) allows participating employees to purchase the Company's ordinary shares at a discount through payroll deductions. The expense recognized for shares purchased under the Company's ESPP is equal to the 15 percent discount the employee receives at the end of the calendar quarter purchase period.

Employees may contribute between 2 percent and 10 percent of their wages or the statutory limit under the U.S. Internal Revenue Code toward the purchase of newly-issued ordinary shares of the Company at 85 percent of its market value at the end of the calendar quarter purchase period. Employees purchased 2 million shares at an average price of $86.34 per share in fiscal year 2020. At April 24, 2020, plan participants had approximately $14 million withheld to purchase the Company's ordinary shares at 85 percent of its market value on June 30, 2020, the last trading day before the end of the calendar quarter purchase period. At April 24, 2020, approximately 11 million ordinary shares were available for future purchase under the ESPP.

Stock Option Valuation Assumptions The Company uses the Black-Scholes option pricing model (Black-Scholes model) to determine the fair value of stock options at the grant date. The fair value of stock options under the Black-Scholes model requires management to make assumptions regarding projected employee stock option exercise behaviors, risk-free interest rates, volatility of the Company's stock price, and expected dividends.

The following table provides the weighted average fair value of options granted to employees and the related assumptions used in the Black-Scholes model:

	Fiscal Year		
	2020	2019	2018
Weighted average fair value of options granted	$ 15.49	$ 14.77	$ 13.71
Assumptions used:			
Expected life (years)[1]	6.1	6.1	6.2
Risk-free interest rate[2]	1.88 %	2.90 %	2.00 %
Volatility[3]	17.97 %	17.77 %	19.51 %
Dividend yield[4]	2.09 %	2.25 %	2.19 %

(1) The Company analyzes historical employee stock option exercise and termination data to estimate the expected life assumption. The Company calculates the expected life assumption using the midpoint scenario, which combines historical exercise data with hypothetical exercise data, as the Company believes this data currently represents the best estimate of the expected life of a new employee option.

(2) The rate is based on the grant date yield of a zero-coupon U.S. Treasury bond whose maturity period equals the expected term of the option.

(3) Expected volatility is based on a blend of historical volatility and an implied volatility of the Company's ordinary shares. Implied volatility is based on market traded options of the Company's ordinary shares.

(4) The dividend yield rate is calculated by dividing the Company's annual dividend, based on the most recent quarterly dividend rate, by the closing stock price on the grant date.

Stock-Based Compensation Expense The following table presents the components and classification of stock-based compensation expense recognized for stock options, restricted stock, and ESPP in fiscal years 2020, 2019, and 2018:

	Fiscal Year		
(in millions)	2020	2019	2018
Stock options	$ 61	$ 72	$ 132
Restricted stock	205	189	185
Employee stock purchase plan	31	29	27
Total stock-based compensation expense	$ 297	$ 290	$ 344
Cost of products sold	$ 28	$ 30	$ 44
Research and development expense	36	36	38
Selling, general, and administrative expense	233	224	262
Total stock-based compensation expense	297	290	344
Income tax benefits	(51)	(54)	(82)
Total stock-based compensation expense, net of tax	$ 246	$ 236	$ 262

Stock Options The following table summarizes all stock option activity, including activity from options assumed or issued as a result of acquisitions, during fiscal year 2020:

	Options (in thousands)	Wtd. Avg. Exercise Price	Wtd. Avg. Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Outstanding at April 26, 2019	31,677	$ 71.52		
Granted	4,349	103.26		
Exercised	(8,165)	62.49		
Expired/Forfeited	(793)	90.74		
Outstanding at April 24, 2020	27,068	78.70	5.9	$ 574
Expected to vest at April 24, 2020	8,742	94.12	8.4	60
Exercisable at April 24, 2020	17,878	70.70	4.5	512

The following table summarizes the total cash received from the issuance of new shares upon stock option award exercises, the total intrinsic value of options exercised, and the related tax benefit during fiscal years 2020, 2019, and 2018:

	Fiscal Year		
(in millions)	2020	2019	2018
Cash proceeds from options exercised	$ 484	$ 825	$ 250
Intrinsic value of options exercised	349	383	248
Tax benefit related to options exercised	75	78	75

Unrecognized compensation expense related to outstanding stock options at April 24, 2020 was $61 million and is expected to be recognized over a weighted average period of 2.5 years.

Restricted Stock The following table summarizes restricted stock activity, including activity from restricted stock assumed or issued as a result of acquisitions, during fiscal year 2020:

	Units (in thousands)	Wtd. Avg. Grant Price
Nonvested at April 26, 2019	7,996	$ 84.78
Granted	3,205	103.52
Vested	(2,910)	83.30
Forfeited	(666)	89.75
Nonvested at April 24, 2020	7,625	92.52

The following table summarizes the weighted-average grant date fair value of restricted stock granted, total fair value of restricted stock vested and related tax benefit during fiscal years 2020, 2019, and 2018:

	Fiscal Year		
(in millions, except per share data)	2020	2019	2018
Weighted-average grant-date fair value per restricted stock	$ 103.52	$ 88.78	$ 83.88
Fair value of restricted stock vested	242	174	160
Tax benefit related to restricted stock vested	62	45	63

Unrecognized compensation expense related to restricted stock as of April 24, 2020 was $353 million and is expected to be recognized over a weighted average period of 2.5 years.

14. Income Taxes

The income tax (benefit) provision is based on income before income taxes reported for financial statement purposes. The components of income before income taxes, based on tax jurisdiction, are as follows:

(in millions)	Fiscal Year 2020	2019	2018
U.S.	$ 466	$ 877	$ (958)
International	3,589	4,320	6,633
Income before income taxes	$ 4,055	$ 5,197	$ 5,675

The income tax (benefit) provision consists of the following:

	Fiscal Year		
(in millions)	2020	2019	2018
Current tax expense:			
U.S.	$ 151	$ 579	$ 2,899
International	375	406	796
Total current tax expense	526	985	3,695
Deferred tax expense (benefit):			
U.S.	(138)	(310)	45
International	(1,139)	(128)	(1,160)
Net deferred tax benefit	(1,277)	(438)	(1,115)
Income tax (benefit) provision	$ (751)	$ 547	$ 2,580

Tax assets (liabilities), shown before jurisdictional netting of deferred tax assets (liabilities), are comprised of the following:

(in millions)	April 24, 2020	April 26, 2019
Deferred tax assets:		
Net operating loss, capital loss, and credit carryforwards	$ 6,432	$ 6,574
Other accrued liabilities	390	389
Accrued compensation	285	315
Pension and post-retirement benefits	350	300
Stock-based compensation	136	162
Other	338	339
Inventory	191	194
Lease obligations	101	—
Federal and state benefit on uncertain tax positions	96	83
Interest limitation	236	111
Unrealized loss on available-for-sale securities and derivative financial instruments	—	17
Gross deferred tax assets	8,555	8,484
Valuation allowance	(5,482)	(6,300)
Total deferred tax assets	3,073	2,184
Deferred tax liabilities:		
Intangible assets	(1,017)	(1,614)
Realized loss on derivative financial instruments	(65)	(70)
Other	(110)	(152)
Right of use leases	(97)	—
Unrealized gain on available-for-sale securities and derivative financial instruments	(12)	—
Accumulated depreciation	(87)	(38)
Outside basis difference of subsidiaries	(77)	(119)
Total deferred tax liabilities	(1,465)	(1,993)
Prepaid income taxes	449	363
Income tax receivables	381	335
Tax assets, net	$ 2,438	$ 889
Reported as (after valuation allowance and jurisdictional netting):		
Other current assets	$ 780	$ 648
Tax assets	2,832	1,519
Deferred tax liabilities	(1,174)	(1,278)
Tax assets, net	$ 2,438	$ 889

No deferred taxes have been provided on the approximately $69.9 billion and $64.1 billion of undistributed earnings of the Company's subsidiaries at April 24, 2020 and April 26, 2019, respectively, since these earnings have been, and under current plans will continue to be, permanently reinvested in these subsidiaries. During fiscal year 2018, the Company removed its permanently reinvested assertion on the undistributed earnings subject to the transition tax of foreign subsidiaries with a U.S. parent. Due to the number of legal entities and jurisdictions involved, the complexity of the legal entity structure of the Company, and the complexity of the tax laws in the relevant jurisdictions, the Company believes it is not practicable to estimate, within any reasonable range, the amount of additional taxes which may be payable upon distribution of these undistributed earnings.

At April 24, 2020, the Company had approximately $25.1 billion of net operating loss carryforwards in certain non-U.S. jurisdictions, of which $22.1 billion have no expiration, and the remaining $3.0 billion will expire during fiscal years 2021 through 2040. Included in these net operating loss carryforwards are $17.5 billion of net operating losses related to a subsidiary

of the Company, substantially all of which were recorded in fiscal year 2008 as a result of the receipt of a favorable tax ruling from certain non-U.S. taxing authorities. The Company has recorded a full valuation allowance against these net operating losses, as management does not believe that it is more likely than not that these net operating losses will be utilized. Certain of the remaining non-U.S. net operating loss carryforwards of $7.6 billion have a valuation allowance recorded against the carryforwards, as management does not believe that it is more likely than not that these net operating losses will be utilized.

At April 24, 2020, the Company had $524 million of U.S. federal net operating loss carryforwards, of which $102 million have no expiration. The remaining loss carryforwards will expire during fiscal years 2021 through 2038. For U.S. state purposes, the Company had $1.4 billion of net operating loss carryforwards at April 24, 2020, which will expire during fiscal years 2021 through 2040.

At April 24, 2020, the Company also had $200 million of tax credits available to reduce future income taxes payable, of which $96 million have no expiration. The remaining credits will expire during fiscal years 2021 through 2040.

The Company has established valuation allowances of $5.5 billion and $6.3 billion at April 24, 2020 and April 26, 2019, respectively, primarily related to the uncertainty of the utilization of certain deferred tax assets which are primarily comprised of tax loss and credit carryforwards in various jurisdictions. The decrease in the valuation allowance during fiscal year 2020 is primarily related to the utilization of certain net operating losses in connection with a planned intercompany sale of intellectual property and the effects of currency fluctuations. These valuation allowances would result in a reduction to the income tax provision in the consolidated statements of income if they are ultimately not required.

The Company's effective income tax rate varied from the U.S. federal statutory tax rate as follows:

	Fiscal Year		
	2020	2019	2018
U.S. federal statutory tax rate	21.0 %	21.0 %	30.5 %
Increase (decrease) in tax rate resulting from:			
U.S. state taxes, net of federal tax benefit	0.5	0.9	0.8
Research and development credit	(2.1)	(1.2)	(0.8)
Puerto Rico Excise Tax	(1.5)	(1.6)	(1.1)
International	(10.0)	(10.7)	(18.9)
U.S. Tax Reform	—	0.2	43.0
Stock based compensation	(1.5)	(1.0)	(1.0)
Other, net	0.4	(0.5)	1.6
Interest on uncertain tax positions	1.3	0.9	1.4
Base Erosion Anti-Abuse Tax	2.6	0.1	—
Foreign Derived Intangible Income Benefit	(1.2)	(0.6)	—
Divestiture-related	—	(0.4)	(3.8)
Certain tax adjustments	(30.8)	(0.6)	(8.9)
U.S. tax on foreign earnings	2.8	4.0	2.7
Effective tax rate	(18.5)%	10.5 %	45.5 %

During fiscal year 2020, certain tax adjustments of $1.2 billion, recognized in *income tax (benefit) provision* in the consolidated statements of income, included the following:

- A net benefit of $63 million related to the finalization of certain state tax impacts from U.S. Tax Reform, and the issuance of certain final U.S. Treasury 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 $252 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.

- A benefit of $658 million related to the release of a valuation allowance previously recorded against certain net operating losses. Luxembourg enacted tax legislation during the year which required the Company to reassess the realizability of certain net operating losses. The Company evaluated both the positive and negative evidence and released valuation allowance equal to the expected benefit from the utilization of certain net operating losses in connection with a planned intercompany sale of intellectual property.

- A benefit of $269 million associated with the intercompany sale of intellectual property and the establishment of a deferred tax asset.

During fiscal year 2019, certain tax adjustments of $40 million, recognized in *income tax (benefit) provision* in the consolidated statements of income, included the following:

- A net benefit of $30 million associated with the finalization of the transition tax liability and the Tax Act impact to deferred tax assets, liabilities, and valuation allowances.

- 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 under the Tax Act and the current year sale of U.S. manufactured inventory held as of April 27, 2018.

- A benefit of $32 million related to intercompany legal entity restructuring.

- A net benefit of $20 million with the finalization of certain income tax aspects of the divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses.

During fiscal year 2018, certain tax adjustments of $1.9 billion, recognized in *income tax (benefit) provision* in the consolidated statements of income, included the following:

- A net charge of $2.4 billion associated with U.S. tax reform, inclusive of the transition tax, remeasurement of U.S. Federal deferred tax assets and liabilities, and the decrease in the U.S. statutory tax rate.

- A charge of $73 million associated with an internal reorganization of certain foreign subsidiaries.

- A net benefit of $579 million associated with the intercompany sale of intellectual property.

Currently, the Company’s operations in Puerto Rico, Singapore, Dominican Republic, Costa Rica, China, and Israel have various tax holidays and tax incentive grants. The tax reductions as compared to the local statutory rate favorably impacted earnings by $231 million, $437 million, and $446 million in fiscal years 2020, 2019, and 2018, respectively, and diluted earnings per share by $0.17, $0.32, and $0.33 in fiscal years 2020, 2019, and 2018, respectively. The tax holidays are conditional upon the Company meeting certain thresholds required under statutory law. The tax incentive grants, unless extended, will expire between fiscal years 2021 and 2030. The Company’s historical practice has been to renew, extend, or obtain new tax incentive grants upon expiration of existing tax incentive grants. If the Company is not able to renew, extend, or obtain new tax incentive grants, the expiration of existing tax incentive grants could have a material impact on the Company’s financial results in future periods. The tax incentive grants which expired during fiscal year 2020 did not have a material impact on the Company's consolidated financial statements.

The Company had $1.9 billion, $1.8 billion, and $1.7 billion of gross unrecognized tax benefits at April 24, 2020, April 26, 2019, and April 27, 2018, respectively. A reconciliation of the beginning and ending amount of unrecognized tax benefits for fiscal years 2020, 2019, and 2018 is as follows:

	Fiscal Year		
(in millions)	**2020**	**2019**	**2018**
Gross unrecognized tax benefits at beginning of fiscal year	$ 1,836	$ 1,727	$ 1,896
Gross increases:			
Prior year tax positions	12	34	13
Current year tax positions	55	109	63
Gross decreases:			
Prior year tax positions	(9)	(14)	(120)
Settlements	(5)	—	(80)
Statute of limitation lapses	(27)	(20)	(45)
Gross unrecognized tax benefits at end of fiscal year	1,862	1,836	1,727
Cash advance paid to taxing authorities	(859)	(859)	(859)
Gross unrecognized tax benefits at end of fiscal year, net of cash advance	$ 1,003	$ 977	$ 868

If all of the Company's unrecognized tax benefits at April 24, 2020, April 26, 2019, and April 27, 2018 were recognized, $1.8 billion, $1.8 billion, and $1.7 billion would impact the Company's effective tax rate, respectively. Although the Company believes that it has adequately provided for liabilities resulting from tax assessments by taxing authorities, positions taken by these tax authorities could have a material impact on the Company's effective tax rate in future periods. The Company has recorded gross unrecognized tax benefits, net of cash advance, of $911 million as a noncurrent liability. The Company estimates that within the next 12 months it is reasonably possible that its uncertain tax positions excluding interest, could decrease by as much as $115 million, net as a result of the resolution of tax matters with the IRS and other taxing authorities as well as statute of limitation lapses.

The Company recognizes interest and penalties related to income tax matters in *income tax (benefit) provision* in the consolidated statements of income and records the liability in the current or noncurrent *accrued income taxes* in the consolidated balance sheets, as appropriate. The Company had $225 million, $172 million, and $128 million of accrued gross interest and penalties at April 24, 2020, April 26, 2019, and April 27, 2018, respectively. During fiscal years 2020, 2019, and 2018, the Company recognized gross interest expense of approximately $53 million, $48 million, and $84 million, respectively, in *income tax (benefit) provision* in the consolidated statements of income.

During fiscal year 2018, the Company made a $1.1 billion advance payment to the IRS in connection with certain tax matters for fiscal years 2005 through 2014. This payment was comprised of $859 million of tax and $285 million of interest.

The Company's reserves for uncertain tax positions related to unresolved matters with the IRS and other taxing authorities. These reserves are subject to a high degree of estimation and management judgment. Resolution of these significant unresolved matters, or positions taken by the IRS or other tax authorities during future tax audits, could have a material impact on the Company's financial results in future periods. The Company continues to believe that its reserves for uncertain tax positions are appropriate and that it has meritorious defenses for its tax filings and will vigorously defend them during the audit process, appellate process, and through litigation in courts, as necessary.

The major tax jurisdictions where the Company conducts business which remain subject to examination are as follows:

Jurisdiction	Earliest Year Open
United States - federal and state	2005
Australia	2016
Brazil	2015
Canada	2012
China	2009
Costa Rica	2016
Dominican Republic	2017
Germany	2014
India	2002
Ireland	2012
Israel	2010
Italy	2005
Japan	2017
Korea	2017
Luxembourg	2014
Mexico	2007
Puerto Rico	2011
Singapore	2013
Switzerland	2012
United Kingdom	2016

See Note 19 for additional information regarding the status of current tax audits and proceedings.

15. 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 the 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 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:

	Fiscal Year		
(in millions, except per share data)	**2020**	**2019**	**2018**
Numerator:			
Net income attributable to ordinary shareholders	$ 4,789	$ 4,631	$ 3,104
Denominator:			
Basic – weighted average shares outstanding	1,340.7	1,346.4	1,356.7
Effect of dilutive securities:			
Employee stock options	7.2	7.6	7.9
Employee restricted stock units	2.8	3.2	3.3
Other	0.4	0.3	0.3
Diluted – weighted average shares outstanding	1,351.1	1,357.5	1,368.2
Basic earnings per share	$ 3.57	$ 3.44	$ 2.29
Diluted earnings per share	$ 3.54	$ 3.41	$ 2.27

The calculation of weighted average diluted shares outstanding excludes options to purchase approximately 4 million, 7 million, and 10 million ordinary shares in fiscal years 2020, 2019, and 2018, respectively, because their effect would have been anti-dilutive on the Company's earnings per share.

16. 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 expense related to these plans was $467 million, $539 million, and $552 million in fiscal years 2020, 2019, and 2018, respectively.

In the U.S., the Company maintains a qualified pension plan designed to provide guaranteed minimum retirement benefits to all eligible U.S. employees. Pension coverage for non-U.S. employees is provided, to the extent deemed appropriate, through separate plans. In addition to the benefits provided under the qualified pension plan, retirement benefits associated with wages in excess of the IRS allowable limits are provided to certain employees under a non-qualified plan. U.S. and Puerto Rico employees are also eligible to receive a medical benefit component, in addition to normal retirement benefits, through the Company's post-retirement benefits.

At April 24, 2020 and April 26, 2019, the net underfunded status of the Company's benefit plans was $1.4 billion and $1.1 billion, respectively.

As of April 24, 2020, the Company announced the freezing of U.S. pension benefits beginning in 2027. Employees will continue to earn benefits as required by the plan until April 30, 2027, after which date benefits will no longer be earned and employees will earn benefits under a new defined contribution structure. The Company recognized curtailment benefits of $94 million in fiscal year 2020 as a result of this change.

Defined Benefit Pension Plans The change in benefit obligation and funded status of the Company's U.S. and Non-U.S. pension benefits are as follows:

	U.S. Pension Benefits		Non-U.S. Pension Benefits	
	Fiscal Year		Fiscal Year	
(in millions)	2020	2019	2020	2019
Accumulated benefit obligation at end of year:	$ 3,440	$ 3,121	$ 1,785	$ 1,621
Change in projected benefit obligation:				
Projected benefit obligation at beginning of year	$ 3,404	$ 3,202	$ 1,832	$ 1,791
Service cost	106	109	59	59
Interest cost	126	129	28	30
Employee contributions	—	—	11	12
Plan curtailments and settlements	(94)	—	(2)	(5)
Actuarial loss	300	54	180	119
Benefits paid	(111)	(100)	(55)	(49)
Currency exchange rate changes and other	(8)	10	(29)	(125)
Projected benefit obligation at end of year	$ 3,723	$ 3,404	$ 2,024	$ 1,832
Change in plan assets:				
Fair value of plan assets at beginning of year	$ 2,728	$ 2,661	$ 1,409	$ 1,404
Actual return on plan assets	(72)	64	2	62
Employer contributions	444	93	54	78
Employee contributions	—	—	11	12
Plan settlements	—	—	(2)	(3)
Benefits paid	(111)	(100)	(55)	(49)
Currency exchange rate changes and other	(7)	10	(15)	(95)
Fair value of plan assets at end of year	$ 2,982	$ 2,728	$ 1,404	$ 1,409
Funded status at end of year:				
Fair value of plan assets	$ 2,982	$ 2,728	$ 1,404	$ 1,409
Benefit obligations	3,723	3,404	2,024	1,832
Underfunded status of the plans	(741)	(676)	(620)	(423)
Recognized liability	$ (741)	$ (676)	$ (620)	$ (423)
Amounts recognized on the consolidated balance sheets consist of:				
Non-current assets	$ —	$ —	$ 7	$ 31
Current liabilities	(17)	(18)	(6)	(8)
Non-current liabilities	(724)	(658)	(621)	(446)
Recognized liability	$ (741)	$ (676)	$ (620)	$ (423)
Amounts recognized in accumulated other comprehensive loss:				
Prior service cost (benefit)	$ 1	$ 2	$ 7	$ (7)
Net actuarial loss	1,662	1,216	663	452
Ending balance	$ 1,663	$ 1,218	$ 670	$ 445

In certain countries outside the U.S., fully funding pension plans is not a common practice, as funding provides no income tax benefit. Consequently, certain pension plans were partially funded at April 24, 2020 and April 26, 2019. U.S. and non-U.S. plans with accumulated benefit obligations in excess of plan assets consist of the following:

	Fiscal Year	
(in millions)	2020	2019
Accumulated benefit obligation	$ 5,105	$ 4,683
Projected benefit obligation	5,252	4,822
Plan assets at fair value	4,074	3,829

Plans with projected benefit obligations in excess of plan assets consist of the following:

	Fiscal Year	
(in millions)	2020	2019
Projected benefit obligation	$ 5,700	$ 4,963
Plan assets at fair value	4,331	3,833

The net periodic benefit cost of the plans include the following components:

	U.S. Pension Benefits			Non-U.S. Pension Benefits		
	Fiscal Year			Fiscal Year		
(in millions)	2020	2019	2018	2020	2019	2018
Service cost	$ 106	$ 109	$ 116	$ 59	$ 59	$ 67
Interest cost	126	129	117	28	30	28
Expected return on plan assets	(225)	(215)	(205)	(58)	(57)	(53)
Amortization of prior service cost	1	1	1	(1)	(1)	—
Amortization of net actuarial loss	56	76	82	14	12	18
Settlement loss (gain)	—	—	16	—	(2)	—
Net periodic benefit cost	$ 64	$ 100	$ 127	$ 42	$ 41	$ 60

The other changes in plan assets and projected benefit obligations recognized in *accumulated other comprehensive loss* for fiscal year 2020 are as follows:

(in millions)	U.S. Pension Benefits	Non-U.S. Pension Benefits
Net actuarial gain	$ 596	$ 236
Prior service credit	(94)	—
Amortization of prior service cost	(1)	1
Amortization of net actuarial loss	(56)	(14)
Effect of exchange rates	—	(11)
Total recognized in accumulated other comprehensive loss	$ 445	$ 212
Total recognized in net periodic benefit cost and accumulated other comprehensive loss	$ 509	$ 254

The estimated net actuarial loss that will be amortized from *accumulated other comprehensive loss* into net periodic benefit cost, before tax, in fiscal year 2021 for U.S. and non-U.S. pension benefits is expected to be $70 million and $23 million, respectively.

The actuarial assumptions are as follows:

	U.S. Pension Benefits			Non-U.S. Pension Benefits		
	Fiscal Year			Fiscal Year		
	2020	2019	2018	2020	2019	2018
Critical assumptions – projected benefit obligation:						
Discount rate	3.10% - 3.70%	3.90% - 4.20%	4.20% - 4.35%	0.30% - 13.30%	0.40% - 13.90%	0.70% - 11.00%
Rate of compensation increase	3.90 %	3.90 %	3.90 %	2.91 %	2.87 %	2.88 %
Critical assumptions – net periodic benefit cost:						
Discount rate – benefit obligation	3.90% - 4.30%	4.20% - 4.30%	4.00% - 4.30%	0.40% - 13.90%	0.50% - 11.00%	0.45% - 11.40%
Discount rate – service cost	3.70% - 4.00%	4.10% - 4.40%	3.70% - 4.45%	0.40% - 13.90%	0.50% - 11.00%	0.20% - 11.40%
Discount rate – interest cost	3.50% - 4.30%	4.00% - 4.10%	3.45% - 3.80%	0.40% - 13.90%	0.50% - 11.00%	0.45% - 11.40%
Expected return on plan assets	7.90 %	7.90 %	7.90 %	4.19 %	4.23 %	4.20 %
Rate of compensation increase	3.90 %	3.90 %	3.90 %	2.87 %	2.88 %	2.89 %

The Company utilizes a full yield curve approach methodology to estimate the service and interest cost components of net periodic pension cost and net periodic post-retirement benefit cost for the Company's pension and other post-retirement benefits. The full yield curve approach applies specific spot rates along the yield curve to their underlying projected cash flows in estimation of the cost components. The current yield curves represent high quality, long-term fixed income instruments.

The expected long-term rate of return on plan assets assumptions are determined using a building block approach, considering historical averages and real returns of each asset class. In certain countries, where historical returns are not meaningful, consideration is given to local market expectations of long-term returns.

Retirement Benefit Plan Investment Strategy The Company sponsors trusts that hold the assets for U.S. pension plans and other U.S. post-retirement benefit plans, primarily retiree medical benefits. For investment purposes, the legacy Medtronic U.S. pension and other U.S. post-retirement benefit plans are managed in an identical way, as their objectives are similar.

The Company has a Qualified Plan Committee (the Plan Committee) that sets investment guidelines for U.S. pension plans and other U.S. post-retirement benefit plans with the assistance of external consultants. These guidelines are established based on market conditions, risk tolerance, funding requirements, and expected benefit payments. The Plan Committee also oversees the investment allocation process, selects the investment managers, and monitors asset performance. As pension liabilities are long-term in nature, the Company employs a long-term total return approach to maximize the long-term rate of return on plan assets for a prudent level of risk. An annual analysis on the risk versus the return of the investment portfolio is conducted to justify the expected long-term rate of return assumption.

The investment portfolios contain a diversified allocation of investment categories, including equities, fixed income securities, hedge funds, and private equity. Securities are also diversified in terms of domestic and international, short- and long-term, growth and value styles, large cap and small cap stocks, and active and passive management.

Outside the U.S., pension plan assets are typically managed by decentralized fiduciary committees. There is significant variation in policy asset allocation from country to country. Local regulations, funding rules, and financial and tax considerations are part of the funding and investment allocation process in each country. The weighted average target asset allocations at April 24, 2020 for the plans are 37% equity securities, 30% debt securities, and 33% other.

The plans did not hold any investments in the Company's ordinary shares at April 24, 2020 or April 26, 2019.

The Company's U.S. plans target asset allocations at April 24, 2020, compared to the U.S. plans actual asset allocations at April 24, 2020 and April 26, 2019 by asset category, are as follows:

U.S. Plans

	Target Allocation	Actual Allocation	
	April 24, 2020	April 24, 2020	April 26, 2019
Asset Category:			
Equity securities	49 %	39 %	50 %
Debt securities	32	27	34
Other	19	34	16
Total	100 %	100 %	100 %

Retirement Benefit Plan Asset Fair Values The following is a description of the valuation methodologies used for retirement benefit plan assets measured at fair value:

Short-term investments: Valued at the closing price reported in the active markets in which the individual security is traded.

U.S. government securities: Certain U.S. government securities are valued at the closing price reported in the active markets in which the individual security is traded. Other U.S. government securities are valued based on inputs other than quoted prices that are observable.

Corporate debt securities: Valued based on inputs other than quoted prices that are observable.

Equity commingled trusts: Comprised of investments in equity securities held in pooled investment vehicles. The valuations of equity commingled trusts are based on the respective net asset values which are determined by the fund daily at market close. The net asset values are calculated based on the valuation of the underlying assets which are determined using observable inputs. The net asset values are not publicly reported, and funds are valued at the net asset value practical expedient.

Fixed income commingled trusts: Comprised of investments in fixed income securities held in pooled investment vehicles. The valuations of fixed income commingled trusts are based on the respective net asset values which are determined by the fund daily at market close. The net asset values are calculated based on the valuation of the underlying assets which are determined using observable inputs. The net asset values are not publicly reported, and funds are valued at the net asset value practical expedient.

Partnership units: Valued based on the year-end net asset values of the underlying partnerships. The net asset values of the partnerships are based on the fair values of the underlying investments of the partnerships. Quoted market prices are used to value the underlying investments of the partnerships, where the partnerships consist of the investment pools which invest primarily in common stocks. Partnership units include partnerships, private equity investments, and real asset investments. Partnerships primarily include long/short equity and absolute return strategies. These investments may be redeemed monthly with notice periods ranging from 45 to 95 days. At April 24, 2020, there are no funds in the process of liquidation. Private equity investments consist of common stock and debt instruments of private companies. For private equity funds, the sum of the unfunded commitments at April 24, 2020 is $194 million, and the estimated liquidation period of these funds is expected to be one to 15 years. Real asset investments consist of commodities, derivatives, Real Estate Investment Trusts, and illiquid real estate holdings. These investments have redemption and liquidation periods ranging from 30 days to 10 years. At April 24, 2020,

there are no real estate investments in the process of liquidation. Valuation procedures are utilized to arrive at fair value if a quoted market price is not available for a partnership investment.

Registered investment companies: Valued at net asset values which are not publicly reported. The net asset values are calculated based on the valuation of the underlying assets. The underlying assets are valued at the quoted market prices of shares held by the plan at year-end in the active market on which the individual securities are traded.

Insurance contracts: Comprised of investments in collective (group) insurance contracts, consisting of individual insurance policies. The policyholder is the employer and each member is the owner/beneficiary of their individual insurance policy. These policies are a part of the insurance company's general portfolio and participate in the insurer's profit-sharing policy on an excess yield basis.

The methods described above may produce fair values that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Company believes its valuation methodologies are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

There were no transfers between Level 1, Level 2, or Level 3 during fiscal years 2020 or 2019.

The following tables provide information by level for the retirement benefit plan assets that are measured at fair value, as defined by U.S. GAAP. In accordance with authoritative guidance adopted in fiscal year 2017, certain investments for which the fair value is measured using the net asset value per share (or its equivalent) practical expedient are not presented within the fair value hierarchy. The fair value amounts presented for these investments are intended to permit reconciliation to the total fair value of plan assets at April 24, 2020 and April 26, 2019.

U.S. Pension Benefits

(in millions)	Fair Value at April 24, 2020	Fair Value Measurements Using Inputs Considered as			Investments Measured at Net Asset Value
		Level 1	Level 2	Level 3	
Short-term investments	$ 548	$ 548	$ —	$ —	$ —
Equity commingled trusts	1,204	—	—	—	1,204
Fixed income commingled trusts	605	—	—	—	605
Partnership units	625	—	—	625	—
	$ 2,982	$ 548	$ —	$ 625	$ 1,809

(in millions)	Fair Value at April 26, 2019	Fair Value Measurements Using Inputs Considered as			Investments Measured at Net Asset Value
		Level 1	Level 2	Level 3	
Short-term investments	$ 61	$ 61	$ —	$ —	$ —
U.S. government securities	228	228	—	—	—
Corporate debt securities	144	—	144	—	—
Equity commingled trusts	1,365	—	—	—	1,365
Fixed income commingled trusts	301	—	—	—	301
Partnership units	629	—	—	629	—
	$ 2,728	$ 289	$ 144	$ 629	$ 1,666

The following tables provide a reconciliation of the beginning and ending balances of U.S. pension benefit assets measured at fair value that used significant unobservable inputs (Level 3):

(in millions)
April 26, 2019
Total unrealized gains
Purchases and sales, net
April 24, 2020

(in millions)
April 27, 2018
Total realized losses
Total unrealized gains
Purchases and sales, net
April 26, 2019

Non-U.S. Pension Benefits

(in millions)	Fair Value at April 24, 2020	Fair Value Measurements Using Inputs Considered as Level 1	Level 2	Level 3	Investments Measured at Net Asset Value
Registered investment companies	$ 1,361	$ —	$ —	$ —	$ 1,361
Insurance contracts	43	—	—	43	—
	$ 1,404	$ —	$ —	$ 43	$ 1,361

(in millions)	Fair Value at April 26, 2019	Fair Value Measurements Using Inputs Considered as Level 1	Level 2	Level 3	Investments Measured at Net Asset Value
Registered investment companies	$ 1,368	$ —	$ —	$ —	$ 1,368
Insurance contracts	41	—	—	41	—
	$ 1,409	$ —	$ —	$ 41	$ 1,368

The following tables provide a reconciliation of the beginning and ending balances of non-U.S. pension benefit assets measured at fair value that used significant unobservable inputs (Level 3):

(in millions)	Insurance Contracts
April 26, 2019	$ 41
Total unrealized gains	2
Purchases and sales, net	1
Currency exchange rate changes	(1)
April 24, 2020	$ 43

(in millions)	Insurance Contracts
April 27, 2018	$ 42
Total unrealized gains	1
Purchases and sales, net	1
Currency exchange rate changes	(3)
April 26, 2019	$ 41

Retirement Benefit Plan Funding It is the Company's policy to fund retirement costs within the limits of allowable tax deductions. During fiscal year 2020, the Company made discretionary contributions of approximately $444 million to the U.S. pension plan. Internationally, the Company contributed approximately $54 million for pension benefits during fiscal year 2020. The Company anticipates that it will make contributions of $17 million and $63

million to its U.S. pension benefit plans and non-U.S. pension benefit plans, respectively, in fiscal year 2021. Based on the guidelines under the U.S. Employee Retirement Income Security Act of 1974 and the various guidelines which govern the plans outside the U.S., the majority of anticipated fiscal year 2021 contributions will be discretionary. The Company believes that pension assets, returns on invested pension assets, and Company contributions will be able to meet its pension and other post-retirement obligations in the future.

Retiree benefit payments, which reflect expected future service, are anticipated to be paid as follows:

(in millions)	Gross Payments	
Fiscal Year	U.S. Pension Benefits	Non-U.S. Pension Benefits
2021	$ 122	$ 51
2022	132	50
2023	143	56
2024	153	56
2025	165	60
2026 – 2030	999	340
Total	$ 1,714	$ 613

Post-retirement Benefit Plans The net periodic benefit cost associated with the Company's post-retirement benefit plans was income of $15 million, $17 million, and $9 million in fiscal years 2020, 2019, and 2018, respectively. The Company's projected benefit obligation for all post-retirement benefit plans was $339 million and $323 million at April 24, 2020 and April 26, 2019, respectively. The Company's fair value of plan assets for all post-retirement benefit plans was $296 million and $297 million at April 24, 2020 and April 26, 2019, respectively. The post-retirement benefit plan assets at both April 24, 2020 and April 26, 2019 primarily comprised of equity commingled trusts, consistent with the U.S. retirement benefit plan assets outlined in the fair value leveling tables above.

Defined Contribution Savings Plans The Company has defined contribution savings plans that cover substantially all U.S. employees and certain non-U.S. employees. The general purpose of these plans is to provide additional financial security during retirement by providing employees with an incentive to make regular savings. Company contributions to the plans are based on employee contributions and Company performance. Expense recognized under these plans was $376 million, $415 million, and $374 million in fiscal years 2020, 2019, and 2018, respectively.

Effective May 1, 2005, the Company froze participation in the original defined benefit pension plan in the U.S. and implemented two new plans: an additional defined benefit pension plan, the Personal Pension Account (PPA), and a new defined contribution plan, the Personal Investment Account (PIA). Employees in the U.S. hired on or after May 1, 2005 but before January 1, 2016 had the option to participate in either the PPA or the PIA. Participants in the PPA receive an annual allocation of their salary and bonus on which they will receive an annual guaranteed rate of return, which is based on the ten-year Treasury bond rate. Participants in the PIA also receive an annual allocation of their salary and bonus; however, they are allowed to determine how to invest their funds among identified fund alternatives. The cost associated with the PPA is included in U.S. Pension Benefits in the tables presented earlier. The defined contribution cost associated with the PIA was approximately $52 million, $54 million, and $56 million in fiscal years 2020, 2019, and 2018, respectively.

Effective January 1, 2016, the Company froze participation in the existing defined benefit (PPA) and contribution (PIA) pension plans in the U.S. and implemented a new form of benefit under the existing defined contribution plan for legacy Covidien employees and employees in the U.S. hired on or after January 1, 2016. Participants in the Medtronic Core Contribution (MCC) also receive an annual allocation of their salary and bonus and are allowed to determine how to invest their funds among identified fund alternatives. The defined contribution cost associated with the MCC was approximately $66 million, $58 million, and $49 million and in fiscal years 2020, 2019, and 2018, respectively.

17. 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 fiscal year 2020 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 were not material to the consolidated financial statements at April 24, 2020 or for fiscal year 2020. 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.

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 April 24, 2020:

(in millions)	Balance Sheet Classification	April 24, 2020
Right-of-use assets	Other assets	$ 927
Current liability	Other accrued expenses	171
Non-current liability	Other liabilities	774

The following table summarizes the weighted-average remaining lease term and weighted-average discount rate for the Company's operating leases at April 24, 2020:

	April 24, 2020
Weighted-average remaining lease term	7.2 years
Weighted-average discount rate	3.0%

The following table summarizes the components of total operating lease cost for fiscal year 2020:

(in millions)	Fiscal Year 2020
Operating lease cost	$ 223
Short-term lease cost	46
Total operating lease cost	$ 269

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 fiscal year 2020:

(in millions)	Fiscal Year 2020
Cash paid for amounts included in the measurement of operating lease liabilities	$ 221
Right-of-use assets obtained in exchange for operating lease liabilities	174

The following table summarizes the maturities of the Company's operating leases at April 24, 2020:

(in millions) Fiscal Year	Operating Leases
2021	$ 218
2022	175
2023	144
2024	118
2025	102
Thereafter	277
Total expected lease payments	1,034
Less: Imputed interest	(89)
Total lease liability	$ 945

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 April 24, 2020 or for fiscal year 2020.

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

Rent expense for all operating leases was $305 million, and $319 million in fiscal years 2019, and 2018, respectively.

18. 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 28, 2017	$ (69)	$ (1,195)	$ (257)	$ (1,129)	$ 37	$ (2,613)
Other comprehensive (loss) income before reclassifications	(95)	1,218	—	100	(272)	951
Reclassifications	(8)	(34)	—	67	54	79
Other comprehensive (loss) income	(103)	1,184	—	167	(218)	1,030
Cumulative effect of change in accounting principle[1]	(22)	—	—	(155)	(26)	(203)
April 27, 2018	(194)	(11)	(257)	(1,117)	(207)	(1,786)
Other comprehensive income (loss) before reclassifications	67	(1,372)	88	(266)	457	(1,026)
Reclassifications	35	—	—	75	(56)	54
Other comprehensive income (loss)	102	(1,372)	88	(191)	401	(972)
Cumulative effect of change in accounting principle[2]	47	—	—	—	—	47
April 26, 2019	(45)	(1,383)	(169)	(1,308)	194	(2,711)
Other comprehensive income (loss) before reclassifications	43	(827)	405	(596)	309	(666)
Reclassifications	2	—	—	52	(237)	(183)
Other comprehensive income (loss)	45	(827)	405	(544)	72	(849)
April 24, 2020	$ —	$ (2,210)	$ 236	$ (1,852)	$ 266	$ (3,560)

(1) The cumulative effect of change in accounting principle in fiscal year 2018 related to the Company's adoption of accounting guidance which permitted reclassification from AOCI to retained earnings for stranded tax effects resulting from the Tax Act.

(2) The cumulative effect of change in accounting principle in 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.

The income tax on gains and losses on investment securities in other comprehensive income before reclassifications during fiscal years 2020, 2019, and 2018 was a benefit of $13 million, a benefit of $5 million, and an expense of $26 million, respectively. During fiscal years 2020, 2019, and 2018, realized gains and losses on investment securities reclassified from AOCI were reduced by income taxes of $3 million, $3 million, and $4 million, respectively. When realized, gains and losses on investment securities reclassified from AOCI are recognized within *other non-operating income, net*. Refer to Note 6 for additional information.

During fiscal years 2020 and 2019, there was a $9 million and $7 million income tax benefit on cumulative translation adjustments. During 2018, taxes were not provided on cumulative translation adjustments as substantially all translation adjustments related to earnings that were intended to be indefinitely reinvested outside of the U.S.

During fiscal years 2020, 2019, and 2018, there were no tax impacts on net investment hedges. Refer to Note 8 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. The income tax on the net change in retirement obligations in other

comprehensive income before reclassifications during fiscal years 2020, 2019, and 2018 was a benefit of $159 million, a benefit of $63 million, and an expense of $14 million, respectively. During fiscal years 2020, 2019, and 2018, the gains and losses on defined benefit and pension items reclassified from AOCI were reduced by income taxes of $12 million, $19 million, and $27 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 16 for additional information.

The income tax on unrealized gains and losses on cash flow hedges in other comprehensive income before reclassifications during fiscal years 2020, 2019, and 2018 was an expense of $88 million, an expense of $158 million, and a benefit of $132 million, respectively. During fiscal years 2020, 2019, and 2018, gains and losses on cash flow hedges reclassified from AOCI were reduced by income taxes of $80 million, $24 million, and $22 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 for additional information.

19. 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, 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 fiscal years 2020, 2019, and 2018, the Company recognized $313 million, $166 million, and $61 million, respectively, of certain litigation charges. At both April 24, 2020 and April 26, 2019, accrued litigation was approximately $0.5 billion. 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 16,200 claimants have asserted or may assert claims involving products manufactured by Covidien's subsidiaries. As of June 3, 2020, the Company had reached agreements to settle

approximately 15,900 of these claims. The Company's accrued expenses for this matter are included within accrued litigation as discussed above.

Hernia Mesh Litigation

During fiscal year 2020, plaintiffs filed lawsuits against certain subsidiaries of the Company in U.S. state and federal courts alleging personal injury from hernia mesh products sold by those subsidiaries. The majority of the pending cases are in Massachusetts state court, and a motion for consolidation of those cases was filed during the fourth quarter of fiscal year 2020. Certain plaintiffs law firms have advised the Company that they may file additional cases in the future. The pending lawsuits relate to hernia mesh products that have not been subject to recalls, withdrawals or other adverse regulatory action. The Company has not recorded an expense related to damages in connection with these matters 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.

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. In April of 2020, the District Court issued an order and opinion denying the plaintiffs' motion for class certification. 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. The U.S. Tax Court scheduled for April of 2020 was postponed due to the challenges of COVID-19. The new trial date has not been re-scheduled.

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. The statute of limitations for Covidien's 2016 U.S. federal income tax return lapsed during the third quarter of fiscal year 2020.

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.

See Note 14 for additional discussion of income taxes.

Guarantees

As a result of the acquisition of Covidien, the Company had 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 covered certain income tax liabilities for periods prior to and including the spin-off. Medtronic's share of the income tax liabilities for these periods was 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 were 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. The parties terminated the Tax Sharing Agreement during the fourth quarter of fiscal year 2020.

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.

20. Quarterly Financial Data (unaudited)

The table below summarizes select unaudited quarterly financial data for fiscal years 2020 and 2019:

	Fiscal Year 2020				Fiscal Year 2019			
(in millions, except per share data)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Net sales	$ 7,493	$ 7,706	$ 7,717	$ 5,998	$ 7,384	$ 7,481	$ 7,546	$ 8,146
Gross profit	5,127	5,312	5,317	3,734	5,180	5,278	5,281	5,663
Net income	877	1,371	1,919	640	1,077	1,120	1,271	1,182
Net income attributable to Medtronic	864	1,364	1,915	646	1,075	1,115	1,269	1,172
Basic earnings per share	0.64	1.02	1.43	0.48	0.79	0.83	0.95	0.87
Diluted earnings per share	0.64	1.01	1.42	0.48	0.79	0.82	0.94	0.87

The data in the schedule above has been intentionally rounded to the nearest million, and therefore, the quarterly amounts may not sum to the fiscal year-to-date amounts.

21. Segment and Geographic Information

The Company's organizational structure is based upon four principal operating and reportable segments: the Cardiac and Vascular Group, the Minimally Invasive Therapies Group, the Restorative Therapies Group, and the Diabetes Group. The Company's management has chosen to organize the entity based upon therapy solutions provided by each segment. The four principal segments are strategic businesses that are managed separately, as each one develops and manufactures products and provides services oriented toward targeted therapy solutions.

The primary products and services from which the Cardiac and Vascular Group segment derives its revenues include products for the diagnosis, treatment, and management of cardiac rhythm disorders and cardiovascular disease, as well as services to diagnose, treat, and manage heart- and vascular-related disorders and diseases.

The primary products and services from which the Minimally Invasive Therapies Group segment derives its revenues include those focused on diseases of the respiratory system, gastrointestinal tract, renal system, lungs, pelvic region, kidneys, obesity, and other preventable complications.

The primary products and services from which the Restorative Therapies Group segment derives its revenues include those focused on neurostimulation therapies and drug delivery systems for the treatment of chronic pain, as well as various areas of the spine and brain, along with pelvic health and conditions of the ear, nose, and throat.

The primary products from which the Diabetes Group segment derives its revenues include those focused on diabetes management, including insulin pumps, continuous glucose monitoring systems, and insulin pump consumables.

Segment disclosures are on a performance basis, consistent with internal management reporting. Net sales of the Company's 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 the performance of the segments and allocates resources based on net sales and 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 disclosures for the prior periods to align with the current presentation.

The accounting policies of the segments are the same as those described in Note 1. 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.

Segment Operating Profit

(in millions)	Fiscal Year 2020	2019	2018
Cardiac and Vascular Group	$ 3,719	$ 4,532	$ 4,461
Minimally Invasive Therapies Group	3,044	3,262	3,346
Restorative Therapies Group	2,915	3,319	3,058
Diabetes Group	546	739	634
Segment operating profit	10,224	11,852	11,499
Interest expense	(1,092)	(1,444)	(1,146)
Other non-operating income, net	356	373	170
Amortization of intangible assets	(1,756)	(1,764)	(1,823)
Corporate	(1,239)	(1,291)	(1,211)
Centralized distribution costs	(1,420)	(1,689)	(1,936)
Restructuring and associated costs	(441)	(407)	(107)
Acquisition-related items	(66)	(88)	(132)
Certain litigation charges	(313)	(166)	(61)
IPR&D charges	(25)	(58)	(46)
Exit of businesses	(52)	(149)	—
Debt tender premium and other charges	7	28	—
Divestiture-related items	—	—	(115)
Medical device regulations	(48)	—	—
Contribution to Medtronic Foundation	(80)	—	(80)
Gain on sale of businesses	—	—	697
Hurricane Maria	—	—	(34)
Income before income taxes	$ 4,055	$ 5,197	$ 5,675

Total Assets and Depreciation Expense

(in millions)	Total Assets April 24, 2020	April 26, 2019	Depreciation Expense 2020	2019	2018
Cardiac and Vascular Group	$ 14,844	$ 15,453	$ 210	$ 194	$ 183
Minimally Invasive Therapies Group	39,666	41,186	194	206	217
Restorative Therapies Group	16,850	16,825	233	217	146
Diabetes Group	3,165	3,095	38	34	29
Segments	74,525	76,559	675	651	575
Corporate	16,164	13,135	232	244	246
Total	$ 90,689	$ 89,694	$ 907	$ 895	$ 821

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. Geographic property, plant, and equipment are attributed to the country based on the physical location of the assets.

The following table presents net sales for fiscal years 2020, 2019, and 2018, and property, plant, and equipment, net at April 24, 2020 and April 26, 2019 for the Company's country of domicile, countries with significant concentrations, and all other countries:

	Net sales			Property, plant, and equipment, net	
(in millions)	2020	2019	2018	April 24, 2020	April 26, 2019
Ireland	$ 85	$ 91	$ 85	$ 164	$ 156
United States	14,919	16,194	15,875	3,459	3,122
Rest of world	13,909	14,272	13,993	1,205	1,397
Total other countries, excluding Ireland	28,828	30,466	29,868	4,664	4,519
Total	$ 28,913	$ 30,557	$ 29,953	$ 4,828	$ 4,675

No single customer represented over 10 percent of the Company’s consolidated net sales in fiscal years 2020, 2019, or 2018.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

Not applicable.

Item 9A. Controls and Procedures

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 annual report, our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act) are effective.

Management's Annual Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company (as defined in Exchange Act Rule 13a-15(f)). Management conducted an evaluation of the effectiveness of internal control over financial reporting based on the framework in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, management concluded that the Company's internal control over financial reporting was effective at April 24, 2020. The effectiveness of the Company's internal control over financial reporting as of April 24, 2020 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in its report which is included in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Changes in Internal Control Over Financial Reporting

During the third quarter of fiscal year 2020, the Company deployed an enterprise resource planning (ERP) software program, SAP, to the Minimally Invasive Therapies Group in the U.S. and Canada. The internal controls were updated to reflect these changes. There have been no other 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 Annual Report on Form 10-K that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Part III of this Annual Report on Form 10-K incorporates information by reference from the Company's 2020 definitive proxy statement, which will be filed no later than 120 days after April 24, 2020.

Item 10. Directors, Executive Officers, and Corporate Governance

The sections entitled “Proposal 1 — Election of Directors — Directors and Nominees,” “Corporate Governance — Committees of the Board and Meetings,” and “Share Ownership Information — Section 16(a) Beneficial Ownership Reporting Compliance” in the Company's Proxy Statement for our 2020 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 24, 2020, are incorporated herein by reference.

Set forth below are the names and ages of our Section 16(b) executive officers of Medtronic, as well as information regarding their positions with Medtronic, their periods of service in these capacities, and their business experiences. There are no family relationships among any of the officers named, nor is there any arrangement or understanding pursuant to which any person was selected as an officer.

The following table shows the name, age, and position as of April 24, 2020 of each of our executive officers:

Name	Age	Position with the Company
Omar Ishrak	64	Executive Chairman and Chairman of the Board, Medtronic
Geoffrey S. Martha	50	Chief Executive Officer
Michael J. Coyle	58	Executive Vice President and Group President, Cardiac and Vascular Group
Richard Kuntz, M.D.	63	Senior Vice President and Chief Scientific and Clinical Officer
Bradley E. Lerman	63	Senior Vice President, General Counsel and Corporate Secretary of the Company
Karen L. Parkhill	54	Executive Vice President and Chief Financial Officer
Carol A. Surface	54	Senior Vice President and Chief Human Resources Officer
Robert ten Hoedt	59	Executive Vice President and President, EMEA Region
Robert J. White	57	Executive Vice President and President, Minimally Invasive Therapies Group
John Liddicoat, M.D.	56	Executive Vice President and President, Americas Region
Sean Salmon	55	Executive Vice President and Group President, Diabetes Group
Brett Wall	55	Executive Vice President and President, Restorative Therapies Group

Omar Ishrak, age 64, is Chairman of the Board of Directors and, effective April 27, 2020, Executive Chairman of Medtronic. Prior to that, Mr. Ishrak served as Chief Executive Officer of the Company beginning in January 2015 and of Medtronic, Inc., since June 2011. Mr. Ishrak served as President and Chief Executive Officer of GE Healthcare Systems, a division of GE, from 2009 to 2011. Prior to that, Mr. Ishrak was President and Chief Executive Officer of GE Healthcare Clinical Systems from 2005 to 2008 and President and Chief Executive Officer of GE Healthcare Ultrasound and BMD from 1995 to 2004. Mr. Ishrak is also the independent Chairman of the Board of Directors of Intel Corporation.

Geoffrey S. Martha, age 50, is the Chief Executive Officer of Medtronic, a role he assumed on April 27, 2020. He served as President of Medtronic from November 2019 through April 2020 and joined the Board of Directors in November 2019. Prior to that, Mr. Martha served as Executive Vice President and President, Restorative Therapies Group, a role he held since August 2015. Mr. Martha previously served as Senior Vice President of Strategy and Business Development of the Company beginning in January 2015 and of Medtronic, Inc. beginning in August 2011. Prior to that, he served as Managing Director of Business Development at GE Healthcare from April 2007 to July 2011; General Manager for GE Capital Technology Finance Services from November 2003 to March 2007; Senior Vice President, Business Development for GE Capital Vendor Financial Services from February 2002 to October 2003; General Manager for GE Capital Colonial Pacific Leasing from February 2001 to January 2002; and Vice President, Business Development for Potomac Federal, the GE Capital federal financing investment bank from May 1998 to January 2001.

Michael J. Coyle, age 58, has been Executive Vice President and Group President, Cardiac and Vascular Group of the Company since January 2015 and of Medtronic, Inc. since December 2009. Prior to that, he served as President of the Cardiac Rhythm Management division at St. Jude from 2001 to 2007, and prior positions included serving St. Jude as President of the company's Daig Catheter division and numerous leadership positions at Eli Lilly & Company. Mr. Coyle is also a current member of the Board of Directors of Haemonetics Corporation.

Richard Kuntz, M.D., age 63, has been Senior Vice President and Chief Scientific and Clinical Officer of the Company since January 2015 and of Medtronic, Inc. since August 2009. Prior to that, he was Senior Vice President and President, Neuromodulation from October 2005 to August 2009; and prior to that, he was an interventional cardiologist and Chief of the Division of Clinical Biometrics at Brigham and Women's Hospital and Associate Professor of Medicine and Chief Scientific Officer of the Harvard Clinical Research Institute.

Bradley E. Lerman, age 63, has been Senior Vice President, General Counsel and Corporate Secretary of the Company since January 2015 and of Medtronic, Inc. since May 2014. Prior to that, he was Executive Vice President, General Counsel and Corporate Secretary at Federal National Mortgage Association (Fannie Mae) from October 2012 to May 2014; Senior Vice President and Chief Litigation Counsel at Pfizer, Inc. from January 2009 to September 2012; Partner at Winston & Strawn from August 1998 to January 2009; partner at Kirkland & Ellis from March 1996 to July 1998; Associate Independent Counsel from October 1994 to March 1996; and Assistant U.S. Attorney in the Northern District of Illinois from February 1986 to September 1994. Mr. Lerman is also a current member of the Board of Directors of McKesson Corporation.

Karen L. Parkhill, age 54, joined the Company as Executive Vice President and Chief Financial Officer in June 2016. From 2011 to 2016, Ms. Parkhill served as Vice Chairman and Chief Financial Officer of Comerica Incorporated. Ms. Parkhill was a member of Comerica's Management Executive Committee and the Comerica Bank Board of Directors. Prior to joining Comerica, Ms. Parkhill worked for J.P. Morgan Chase & Co. in various capacities from 1992 to 2011, including serving as Chief Financial Officer of the Commercial Banking business from 2007 to 2011. Ms. Parkhill is also a current member of the Board of Directors for American Express.

Carol A. Surface, age 54, has been Senior Vice President and Chief Human Resources Officer of the Company since January 2015 and of Medtronic, Inc. since September 2013. Prior to that, she was the Executive Vice President and Chief Human Resources Officer at Best Buy Co., Inc. from March 2010 to September 2013, and held a series of HR leadership roles at PepsiCo Inc., from May 2000 to March 2010.

Robert ten Hoedt, age 59, has been Executive Vice President and President, EMEA of the Company since January 2015 and of Medtronic, Inc. since May 2014. Prior to that, he was Senior Vice President and President, EMEA and Canada from 2009 to 2014; Vice President CardioVascular Europe and Central Asia from 2006 to 2009; Vice President and General Manager, Vitatron from 1999 to 2006; Gastro-Uro leader from 1994 to 1999; and Marketing Manager, Neurological from 1991 to 1994.

Robert J. White, age 57, has been Executive Vice President and President, Minimally Invasive Therapies Group of the Company since December 2017. Prior to that, he was Senior Vice President and President, Asia Pacific from January 2015 to December 2017. He had served as President, Emerging Markets, President, Respiratory and Monitoring Solutions and Vice President and General Manager of Patient Monitoring at Covidien. He also held various leadership positions at GE Healthcare and IBM. Mr. White is also a current member of the Board of Directors of Smith & Nephew plc.

John Liddicoat, M.D., age 56, was named Executive Vice President and President, Americas Region in September 2018. Dr. Liddicoat joined Medtronic in 2006 as Vice President of Atrial Fibrillation Technologies. In December of 2006, Dr. Liddicoat was named Vice President and General Manager of the Structural Heart Disease Business. Beginning in August 2014, Dr. Liddicoat served as Senior Vice President and President, Cardiac Rhythm and Heart Failure (CRHF) Division.

Sean Salmon, age 55, has been Executive Vice President and Group President, Diabetes Group of the company since October 2019. Mr. Salmon previously served as Senior Vice President and President of Coronary and Structural Heart Business within the Cardiac and Vascular Group of the Company beginning in July 2014. Mr. Salmon is a seasoned leader who has been with Medtronic since 2004 and spent the past 16 years in increasingly senior levels of management. Prior to joining Medtronic, Mr. Salmon worked at CR Bard and Johnson & Johnson.

Brett Wall, age 55, has been Executive Vice President and President of Medtronic's Restorative Therapies Group since November 2019. Mr. Wall previously served as Senior Vice President and President of the Brain Therapies division of Medtronic, which is part of the Company's Restorative Therapies Group beginning in March 2016. Prior to that, Mr. Wall served as SVP and President of Medtronic's Neurovascular business. Prior to joining Medtronic, he

served as Covidien's SVP and President of Neurovascular as well as Senior Vice President and President of the International Vascular Therapies business for Covidien. Mr. Wall also served as Senior Vice President and President, International at ev3, Inc. From 2000 to 2008, Brett held various marketing and sales positions with ev3, Inc. and Micro Therapeutics, Inc. Mr. Wall has also worked at Boston Scientific as Director of Marketing, Cardiovascular, Asia Pacifica and Marketing Manager, Japan, from September 1995 to September 2000.

Item 11. Executive Compensation

The sections entitled “Corporate Governance — Director Compensation,” “Corporate Governance — Committees of the Board and Meetings,” “Compensation Discussion and Analysis,” and “Executive Compensation” in Medtronic's Proxy Statement for the Company's 2020 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 24, 2020, are incorporated herein by reference. The section entitled “Compensation Committee Report” in Medtronic's Proxy Statement for the Company's 2020 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 24, 2020, is furnished herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters

The sections entitled “Share Ownership Information – Significant Shareholders,” “Share Ownership Information – Beneficial Ownership of Management,” and “Executive Compensation — Equity Compensation Plan Information” in Medtronic's Proxy Statement for the Company's 2020 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 24, 2020, are incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The sections entitled “Corporate Governance — Director Independence” and “Corporate Governance — Related Party Transactions and Other Matters” in Medtronic's Proxy Statement for the Company's 2020 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 24, 2020, are incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The sections entitled “Corporate Governance — Committees of the Board and Meetings” and “Audit and Non-Audit Fees” in Medtronic's Proxy Statement for the Company's 2020 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 24, 2020, are incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) 1. Financial Statement Schedules

Schedule II. Valuation and Qualifying Accounts — years ended April 24, 2020, April 26, 2019, and April 27, 2018.

MEDTRONIC PLC AND SUBSIDIARIES
SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS
(in millions)

		Additions		Deductions	
	Balance at Beginning of Fiscal Year	Charges to Income	Charges to Other Accounts	Other Changes (Debit) Credit	Balance at End of Fiscal Year
Allowance for doubtful accounts:					
Fiscal year ended April 24, 2020	$ 190	$ 99	$ —	$ (81) (a)	$ 208
Fiscal year ended April 26, 2019	193	78	—	(81) (a)	190
Fiscal year ended April 27, 2018	155	52	—	(14) (a)	193
Inventory reserve:					
Fiscal year ended April 24, 2020	$ 521	$ 282	$ —	$ (259) (b)	$ 544
Fiscal year ended April 26, 2019	452	224	—	(155) (b)	521
Fiscal year ended April 27, 2018	443	170	—	(161) (b)	452
Deferred tax valuation allowance:					
Fiscal year ended April 24, 2020	$ 6,300	$ 119	$ (6) (c)	$ (744) (d)	$ 5,482
				(187) (e)	
Fiscal year ended April 26, 2019	7,166	378	(11) (c)	(770) (d)	6,300
				(463) (e)	
Fiscal year ended April 27, 2018	6,311	434	21 (c)	(171) (d)	7,166
				571 (e)	

(a) Primarily consists of uncollectible accounts written off, less recoveries.

(b) Primarily reflects utilization of the inventory reserve.

(c) Reflects the impact from acquisitions and amounts recognized in accumulated other comprehensive income/loss.

(d) Primarily reflects carryover attribute utilization and expiration.

(e) Primarily reflects the effects of currency fluctuations.

All other schedules are omitted because they are not applicable or the required information is shown in the financial statements or notes thereto.

2. Exhibits

Exhibit No.	Description
3.1	Certificate of Incorporation of Medtronic plc (incorporated by reference to Exhibit 3.1 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
3.2	Amended and Restated Memorandum and Articles of Association of Medtronic plc (incorporated by reference to Exhibit 3.2 to Medtronic plc's Registration Statement on Form S-3, filed on February 6, 2017, File No. 333-215895).
4.1	Form of Indenture between Medtronic, Inc. and Wells Fargo Bank, National Association regarding 2009 offering (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Registration Statement on Form S-3, filed on March 9, 2009, File No. 333-157777).

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4.2	First Supplemental Indenture, dated March 12, 2009, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 12, 2009, File No. 001-07707).
4.3	Second Supplemental Indenture, dated March 16, 2010, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 16, 2010, File No. 001-07707).
4.4	Third Supplemental Indenture, dated March 15, 2011, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current report on Form 8-K, filed on March 16, 2011, File No. 001-07707).
4.5	Fourth Supplemental Indenture, dated March 19, 2012, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.2 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 20, 2012, File No. 001-07707).
4.6	Fifth Supplemental Indenture, dated March 26, 2013, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 26, 2013, File No. 001-07707).
4.7	Sixth Supplemental Indenture, dated February 27, 2014, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Form of Global Note thereof) (incorporated by reference to Exhibit 4.2 to Medtronic, Inc.'s Current Report on Form 8-K, filed on February 27, 2014, File No. 001-07707).
4.8	Seventh Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic plc, Medtronic, Inc., Medtronic Global Holdings S.C.A. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.2 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.9	Indenture, dated December 10, 2014, between Medtronic, Inc. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K filed with the Commission on December 10, 2014, File No. 001-07707).
4.10	First Supplemental Indenture, dated December 10, 2014, between Medtronic, Inc. and Wells Fargo Bank, National Association (including Form of Floating Rate Senior Notes due 2020, Form of 1.500% Senior Notes due 2018, Form of 2.500% Senior Notes due 2020, Form of 3.150% Senior Notes due 2022, Form of 3.500% Senior Notes due 2025, Form of 4.375% Senior Notes due 2035 and Form of 4.625% Senior Notes due 2045) (incorporated by reference to Exhibit 4.2 of Medtronic, Inc.'s Current Report on Form 8-K filed with the Commission on December 10, 2014, File No. 001-07707).
4.11	Second Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic plc and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.3 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.12	Third Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic Global Holdings S.C.A. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.4 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.13	Indenture, dated as of October 22, 2007, by and among Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1(a) to Covidien plc's Current Report on Form 8-K filed on October 22, 2007, File No. 001-33259).
4.14	Fourth Supplemental Indenture, dated as of October 22, 2007, by and among Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1(e) to Covidien plc's Current Report on Form 8-K filed on October 22, 2007, File No. 001-33259).
4.15	Fifth Supplemental Indenture, dated as of June 4, 2009, by and among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K12G3 filed on June 5, 2009, File No. 001-33259).

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4.16	Sixth Supplemental Indenture, dated as of June 28, 2010, among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K filed on June 28, 2010, File No. 001-33259).
4.17	Seventh Supplemental Indenture, dated as of May 30, 2012, among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K filed on May 30, 2012, File No. 001-33259).
4.18	Eighth Supplemental Indenture, dated as of May 16, 2013, among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K filed on May 16, 2013, File No. 001-33259).
4.19	Ninth Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Covidien public limited company, Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.5 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.20	Senior Indenture, dated as of March 28, 2017, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Medtronic, Inc., and Wells Fargo Bank, N.A. (incorporated by reference to Exhibit 4.1 to Medtronic plc's Current Report on Form 8-K, filed on March 28, 2017, File No. 001-36820).
4.21	First Supplemental Indenture, dated as of March 28, 2017, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Medtronic, Inc., and Wells Fargo Bank, N.A. (incorporated by reference to Exhibit 4.2 to Medtronic plc's Current Report on Form 8-K, filed on March 28, 2017, File No. 001-36820).
4.22	Second Supplemental Indenture, dated as of March 7, 2019, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Medtronic, Inc., Wells Fargo Bank, N.A., and Elavon Financial Services DAC, UK Branch (incorporated by reference to Exhibit 4.1 to Medtronic plc's Current Report on Form 8-K, filed on March 7, 2019, File No. 001-36820).
4.23	Third Supplemental Indenture, dated as of July 2, 2019, among Medtronic Global Holdings S.C.A., Medtronic, Inc. and Medtronic plc, Wells Fargo Bank, N.A., as trustee, and Elavon Financial Services DAC (incorporated by reference to Exhibit 4.1 to Medtronic plc' Current Report on Form 8-K, filed July 2, 2019, File No. 001-36820)
#4.24	Description of Registrant's Securities
10.1	Amended and Restated Credit Agreement, dated as of December 12, 2018, by and among Medtronic Global Holdings, SCA, certain subsidiaries named therein, Medtronic, Inc., Medtronic PLC, the lenders from time to time party thereto, and Bank of America, N.A. as Administration Agent (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K, filed on December 13, 2018, File No. 001-36820).
10.2	Amendment No. 1 and Extension Agreement to the Amended and Restated Credit Agreement, dated as of December 12, 2019, among Medtronic Global Holdings S.C.A., Medtronic, Inc., Medtronic PLC, the Lenders party thereto and Bank of America, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 10-Q, filed on February 28, 2020, File No. 001-36820).
10.3	Term Loan Agreement, dated as of May 12, 2020, among Medtronic Global Holdings S.C.A., Medtronic, Inc., Medtronic PLC, the Lenders party thereto and Mizuho Bank, LTD., as Administrative Agent (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K, filed on May 12, 2020, File No. 001-36820).
10.4	Tax Sharing Agreement, dated as of June 29, 2007, by and among Tyco International Ltd., Covidien Ltd. and Tyco Electronics Ltd. (incorporated by reference to Exhibit 10.1 to Covidien plc's Current Report on Form 8-K, filed on July 5, 2007, File No. 001-33259).
10.5	Form of Deed of Indemnification (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).

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10.6	Form of Indemnification Agreement (incorporated by reference to Exhibit 10.2 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
*10.7	Letter Agreement by and between Medtronic, Inc. and Omar Ishrak dated May 11, 2011 (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on May 11, 2011, File No. 001-07707).
*10.8	Change of Control Severance Plan - Section 16B Officers (as amended and restated as of January 26, 2015) (incorporated by reference to Exhibit 10.14 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.9	Amendment to Letter Agreement dated May 11, 2011 by and between Medtronic, Inc. and Omar Ishrak (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 29, 2011, filed September 7, 2011, File No. 001-07707).
*10.10	Amendment dated February 12, 2015 to the Letter Agreement by and between Medtronic, Inc. and Omar Ishrak dated May 11, 2011 (incorporated by reference to Exhibit 10.24 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.11	Letter Agreement by and between Medtronic, Inc. and Michael J. Coyle dated November 19, 2009 (incorporated by reference to Exhibit 10.55 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 27, 2012, filed on June 26, 2012, File No. 001-07707).
*10.12	Letter Agreement by and between Medtronic, Inc. and Carol Surface dated August 22, 2013 (incorporated by reference to Exhibit 10.44 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2014, filed on June 20, 2014, File No. 001-07707).
*10.13	Letter Agreement by and between Medtronic, Inc. and Bradley E. Lerman dated May 2, 2014 (incorporated by reference to Exhibit 10.4 of Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2014, filed on August 29, 2014, File No. 001-07707)
*10.14	Letter Agreement by and between Medtronic, Inc. and Karen Parkhill dated May 2, 2016 (incorporated by reference to Exhibit 10.1 to Medtronic, plc's Current Report on Form 8-K, filed on May 4, 2016, File No. 001-36820).
*10.15	Office of Chairman and Chief Executive Officer Letter Agreement (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-Q, filed on December 3, 2019, File No. 001-36820).
*10.16	Executive Chairman Offer Letter Agreement (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-Q, filed on December 3, 2019, File No. 001-36820).
*10.17	Form of Offer Letter Amendment (incorporated by reference to Exhibit 10.25 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.18	1998 Outside Director Stock Compensation Plan (as amended and restated effective as of January 1, 2008) (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 25, 2008, filed on, filed on March 4, 2008, File No. 001-07707).
*10.19	Amendment to the 1998 Outside Director Stock Compensation Plan (incorporated by reference to Exhibit 10.2 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.20	2003 Long-Term Incentive Plan (as amended and restated effective January 1, 2008) (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2008, filed on March 4, 2008, File No. 001-07707).
*10.21	Amendment to the 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.22	Form of Restricted Stock Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2005, filed on March 7, 2005, File No. 001-07707).
*10.23	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan (four year vesting) (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2005, filed on March 7, 2005, File No. 001-07707).

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*10.24	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan (immediate vesting) (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2005, filed on March 7, 2005, File No. 001-07707).
*10.25	Form of Restricted Stock Units Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.20 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 29, 2005, filed on June 29, 2005, File No. 001-07707).
*10.26	Form of Performance Share Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.21 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 29, 2005, filed on June 29, 2005, File No. 001-07707).
*10.27	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.23 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.28	Form of Restricted Stock Award Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.24 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.29	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.25 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.30	Form of Performance Award Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.26 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.31	Form of Restricted Stock Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 26, 2007, filed on December 4, 2007, File No. 001-07707).
*10.32	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 26, 2007, filed on December 4, 2007, File No. 001-07707).
*10.33	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.39 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2008, filed on June 24, 2008, File No. 001-07707).
*10.34	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.40 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2008, filed on June 24, 2008, File No. 001-07707).
*10.35	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.41 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2008, filed on June 24, 2008, File No. 001-07707).
*10.36	Israeli Amendment to the 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 25, 2008, filed on March 4, 2008, File No. 001-07707).
*10.37	2008 Stock Award and Incentive Plan (as amended and restated effective August 27, 2009) (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 30, 2009, filed on December 9, 2009, File No. 001-07707).
*10.38	Amendment to the 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.39	Form of Restricted Stock Unit Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.40	Form of Restricted Stock Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.41	Form of Restricted Stock Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).

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*10.42	Form of Restricted Stock Unit Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.43	Form of Non-Qualified Stock Option Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.6 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.44	Terms of Non-Employee Director Compensation under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.42 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 27, 2012, filed on June 26, 2012, File No. 001-07707).
*10.45	Form of Non-Employee Director Initial Option Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.46	Form of Non-Employee Director Annual Option Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.47	Form of Non-Employee Director Deferred Unit Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.48	Form of Non-Employee Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.65 to Medtronic plc's Annual Report on Form 10-K for the year ended April 24, 2015, filed on June 23, 2015, File No. 001-36820).
*10.49	Israeli Amendment to the Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.10 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.50	Form of Restricted Stock Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-K for the quarter ended July 28, 2017, filed on September 1, 2017, File No. 001-36820).
*10.51	Medtronic plc Amended and Restated 2013 Stock Award and Incentive Plan (as amended and restated generally effective December 8, 2017) (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K, filed on December 12, 2017, File No. 001-36820).
*10.52	Form of Non-qualified Stock Option Agreement Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.50 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820).
*10.53	Form of Restricted Stock Unit Award Agreement Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.51 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820).
*10.54	Form of Restricted Stock Award Agreement Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.52 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820)
*10.55	Form of Long Term Performance Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.53 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820).
*10.56	Form of Non-Qualified Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.31 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.57	Form of Non-Employee Director Deferred Unit Award Agreement under the 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.58	Form of Non-Qualified Stock Option Agreement under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).

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*10.59	Form of Restricted Stock Unit Award Agreement (U.S. Employees) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.60	Form of Restricted Stock Unit Award Agreement (Non-U.S. Employees) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.61	Form of Restricted Stock Unit Award Agreement (Time-Based) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.62	Form of Restricted Stock Unit Award Agreement (Israeli-Employees) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.8 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.63	Form of Non-Qualified Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.48 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.64	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.49 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.65	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.50 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.66	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.51 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.67	Form of Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.53 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.68	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.54 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
#*10.69	Form of Restricted Stock Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan
#*10.70	Form of Non-Qualified Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan
*10.71	Medtronic plc 2014 Amended and Restated Employees Stock Purchase Plan (incorporated by reference to Exhibit 10.8 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.72	Medtronic plc Incentive Plan (as amended and restated effective January 26, 2015) (incorporated by reference to Exhibit 10.11 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.73	Medtronic plc Supplemental Executive Retirement Plan (as restated generally effective January 26, 2015) (incorporated by reference to Exhibit 10.15 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.74	Medtronic plc Savings and Investment Plan (as amended and restated generally effective January 26, 2015) (incorporated by reference to Exhibit 4.22 to Medtronic plc's Registration Statement on Form S-8 filed on January 28, 2015, File No. 333-201737).
*10.75	Medtronic plc Puerto Rico Employees' Savings and Investment Plan (as amended and restated generally effective January 26, 2015) (incorporated by reference to Exhibit 4.23 to Medtronic plc's Registration Statement on Form S-8 filed on January 28, 2015, File No. 333-201737).

*10.76	Medtronic plc Capital Accumulation Plan Deferral Program (as amended and restated generally effective January 26, 2015) (incorporated by reference to Exhibit 10.13 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.77	Capital Accumulation Plan Deferral Program (as amended and restated generally effective January 1, 2017) (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended October 28, 2016, filed on December 5, 2016, File No. 001-36820).
#21	List of Subsidiaries of Medtronic plc.
#22	List of Senior Notes, Issuers and Guarantors.
#23	Consent of Independent Registered Public Accounting Firm.
#24	Power of Attorney.
#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	XBRL Taxonomy Extension Schema Document
#101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
#101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
#101.LAB	XBRL Taxonomy Extension Label Linkbase Document
#101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
#104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

*Exhibits that are management contracts or compensatory plans or arrangements.
#Filed herewith

Item 16. Form 10-K Summary

Registrants may voluntarily include a summary of information required by Form 10-K under this Item 16. The Company has not elected to include such summary information.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

MEDTRONIC PUBLIC LIMITED COMPANY

Dated: June 19, 2020

By: /s/ Geoffrey S. Martha
Geoffrey S. Martha
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, the report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

MEDTRONIC PUBLIC LIMITED COMPANY

Dated: June 19, 2020

By: /s/ Geoffrey S. Martha
Geoffrey S. Martha
Chief Executive Officer
(Principal Executive Officer)

Dated: June 19, 2020

By: /s/ **Karen L. Parkhill**
Karen L. Parkhill
Executive Vice President and
Chief Financial Officer
(Principal Financial and Accounting Officer)

Directors

Richard H. Anderson*
Craig Arnold*
Scott C. Donnelly*
Andrea J. Goldsmith, PH.D.*
Randall J. Hogan,*
Omar Ishrak*
Michael O. Leavitt*
James T. Lenehan*
Geoffrey S. Martha
Elizabeth G. Nabel, M.D.*
Denise M. O'Leary*
Kendall J. Powell*

*Bradley E. Lerman, by signing his name hereto, does hereby sign this document on behalf of each of the above named directors of the registrant pursuant to powers of attorney duly executed by such persons.

Dated: June 19, 2020

By: /s/ Bradley E. Lerman
Bradley E. Lerman

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

FORM 10-K

☒ **Annual report pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934.**
For the fiscal year ended April 26, 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 No. 1-36820

mdtlogo2a83.jpg®

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

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

20 On Hatch, Lower Hatch Street
Dublin 2, Ireland
(Address of principal executive office)
+353 1 438-1700
(Registrant's telephone number)

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, Inc.
Floating Rate Notes due 2021	MDT/21	New York Stock Exchange, Inc.
0.000% Notes due 2021	MDT/21A	New York Stock Exchange, Inc.
0.375% Notes due 2023	MDT/23B	New York Stock Exchange, Inc.
1.125% Notes due 2027	MDT/27	New York Stock Exchange, Inc.
1.625% Notes due 2031	MDT/31	New York Stock Exchange, Inc.
2.250% Notes due 2039	MDT/39A	New York Stock Exchange, Inc.

Securities registered pursuant to section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act. Yes ☐ No ☒

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

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

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

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

Aggregate market value of voting and non-voting common equity of Medtronic plc held by non-affiliates of the registrant as of October 26, 2018, based on the closing price of $89.75 as reported on the New York Stock Exchange: approximately $120.8 billion. Number of Ordinary Shares outstanding on June 18, 2019: 1,341,156,703

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for its 2019 Annual General Meeting are incorporated by reference into Part III hereof.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, and other written reports of Medtronic public limited company, organized under the laws of Ireland (together with its consolidated subsidiaries, Medtronic, the Company, or we, us, or our), 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 Annual Report on Form 10-K, 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 Annual 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 United States (U.S.) Food and Drug Administration (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, results of operations and cash flows. These forward-looking statements speak only as of the date of this Annual Report on Form 10-K and are subject to a number of risks, uncertainties and assumptions described in the "Risk Factors" section and elsewhere in this 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 this 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 governmental regulations;
- quality problems;

- liquidity shortfalls;
- decreasing prices and pricing pressure;
- fluctuations in currency exchange rates;
- changes in applicable tax rates;
- 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.

PART I

Item 1. Business

OVERVIEW

Medtronic plc, headquartered in Dublin, Ireland, 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. Medtronic was founded in 1949 and today serves hospitals, physicians, clinicians, and patients in more than 150 countries worldwide. We remain committed to a mission written by our founder in 1960 that directs us “to contribute to human welfare by the application of biomedical engineering in the research, design, manufacture, and sale of products to alleviate pain, restore health, and extend life.”

With innovation and market leadership, we have pioneered advances in medical technology in all of our businesses. Our commitment to enhance our offerings by developing and acquiring new products, wrap-around programs, and solutions to meet the needs of a broader set of stakeholders is driven by the following primary strategies:

- Therapy Innovation: Delivering a strong launch cadence of meaningful therapies and procedures.
- Globalization: Addressing the inequity in health care access globally, primarily in emerging markets.
- Economic Value: Becoming a leader in value-based health care by offering new services and solutions to improve outcomes and efficiencies, lower costs by reducing hospitalizations, improve remote clinical management, and increase patient engagement.

Our primary customers include hospitals, clinics, third-party health care providers, distributors, and other institutions, including governmental health care programs and group purchasing organizations (GPOs).

Medtronic plc is the successor to Medtronic, Inc., a Minnesota corporation. Medtronic, Inc. and Covidien plc (Covidien) were combined under and became subsidiaries of Medtronic plc on January 26, 2015.

On July 29, 2017, we completed the divestiture of our Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses. Among the product lines included in the divestiture were the dental and animal health, chart paper, wound care, incontinence, electrodes, SharpSafety, thermometry, perinatal protection, blood collection, compression, and enteral feeding offerings. Prior to the divestiture, these businesses were included within the Minimally Invasive Therapies Group segment.

We have four operating and reportable segments that primarily develop, manufacture, distribute, and sell device-based medical therapies and services: the Cardiac and Vascular Group, the Minimally Invasive Therapies Group, the Restorative Therapies Group, and the Diabetes Group.

For more information regarding our segments, please see Note 21 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

CARDIAC AND VASCULAR GROUP

The Cardiac and Vascular Group is made up of the Cardiac Rhythm & Heart Failure, Coronary & Structural Heart, and Aortic, Peripheral & Venous (formerly Aortic & Peripheral Vascular) divisions. The primary medical specialists who use our Cardiac and Vascular products include electrophysiologists, implanting cardiologists, heart failure specialists, cardiovascular, cardiothoracic, and vascular surgeons, and interventional cardiologists and radiologists.

Cardiac Rhythm & Heart Failure

Our Cardiac Rhythm & Heart Failure division develops, manufactures, and markets products for the diagnosis, treatment, and management of heart rhythm disorders and heart failure. Our products include implantable devices, leads and delivery systems, products for the treatment of atrial fibrillation (AF), products designed to reduce surgical site infections, information systems for the management of patients with Cardiac Rhythm & Heart Failure devices,

ventricular assist systems, and an integrated health solutions business. Principal products and services offered include:

- Implantable cardiac pacemakers including the Azure MRI SureScan, Adapta, Advisa MRI SureScan, and Micra Transcatheter Pacing System, which is leadless and does not have a subcutaneous device pocket like a conventional pacemaker.

- Implantable cardioverter defibrillators (ICDs), including the Visia AF and Evera MRI SureScan, and defibrillator leads, including the Sprint Quattro Secure lead.

- Implantable cardiac resynchronization therapy devices (CRT-Ds and CRT-Ps) including the Claria/Amplia/Compia family of MRI Quad CRT-D SureScan systems and the Percepta/Serena/Solara family of MRI Quad CRT-P SureScan systems.

- AF ablation products including the Arctic Front Cardiac CryoAblation Catheter System, designed for pulmonary vein isolation in the treatment of patients with drug refractory paroxysmal AF.

- Insertable cardiac monitoring systems including the Reveal LINQ, which is used to record the heart's electrical activity before, during, and after transient symptoms such as syncope (i.e., fainting) and palpitations to assist in diagnosis.

- Mechanical circulatory support products including miniaturized implantable heart pumps, or ventricular assist devices, patient accessories and surgical tools to treat patients suffering from advanced heart failure.

- TYRX products including the Cardiac and Neuro Absorbable Antibacterial Envelopes, which are designed to stabilize electronic implantable devices and help prevent infection associated with implantable pacemakers, defibrillators, and spinal cord neurostimulators.

- Remote monitoring services and patient-centered software to enable efficient care coordination and specialized telehealth nurse support as well as services related to hospital operational efficiency.

Coronary & Structural Heart

Our Coronary & Structural Heart division includes therapies to treat coronary artery disease and heart valve disorders. Our products include coronary stents and related delivery systems, including a broad line of balloon angioplasty catheters, guide catheters, guide wires, diagnostic catheters, and accessories, as well as products for the repair and replacement of heart valves, perfusion systems, positioning and stabilization systems for beating heart revascularization surgery, and surgical ablation products. Principal products offered include:

- CoreValve family of aortic valves, including the CoreValve Evolut R and CoreValve Evolut PRO systems for transcatheter aortic valve replacement.

- Percutaneous Coronary Intervention stent products including our Resolute Onyx drug-eluting stent.

- Surgical valve replacement and repair products for damaged or diseased heart valves, including both tissue and mechanical valves, blood-handling products that form a circulatory support system to maintain and monitor blood circulation and coagulation status, oxygen supply, and body temperature during arrested heart surgery, and surgical ablation systems and positioning and stabilization technologies.

Aortic, Peripheral & Venous

Our Aortic, Peripheral & Venous division is comprised of a comprehensive line of products and therapies to treat aortic disease, such as aneurysms, dissections, and transections, as well as peripheral vascular disease, and venous disease. Our products include endovascular stent graft systems, peripheral drug coated balloons, stent and angioplasty systems, and carotid embolic protection systems for the treatment of vascular disease outside the heart, and products for superficial and deep venous disease. Principal products offered include:

-

Endovascular stent grafts and accessories including the Endurant II Stent Grant System for the treatment of abdominal aortic aneurysms, the Valiant Navion Thoracic Stent Grant System for thoracic endovascular aortic repair procedures, and the Heli-FX EndoAnchor System.

- Percutaneous angioplasty balloons including the IN.PACT family of drug-coated balloons, vascular stents, directional atherectomy products, and other procedure support tools.

- Products to treat superficial venous diseases in the lower extremities including the ClosureFast radiofrequency ablation system and the VenaSeal medical adhesive closure system.

MINIMALLY INVASIVE THERAPIES GROUP

The Minimally Invasive Therapies Group is made up of the Surgical Innovations and Respiratory, Gastrointestinal, & Renal divisions. Products and therapies of this group are used primarily by hospitals, physicians' offices, ambulatory care centers, and other alternate site healthcare providers. While less frequent, some products and therapies are also used in home settings.

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Surgical Innovations

Our Surgical Innovations division develops, manufactures, and markets advanced and general surgical products including surgical stapling devices, vessel sealing instruments, wound closure, electrosurgery products, hernia mechanical devices, mesh implants, and gynecology products and therapies to treat diseases and conditions that are typically, but not exclusively, addressed by surgeons. Principal products and services offered include:

- Advanced stapling and energy products, including the Tri-Staple technology platform for endoscopic stapling, including the Endo GIA reloads and reinforced reloads with Tri-Staple Technology and the Endo GIA ultra universal stapler, the Signia and iDrive powered stapling systems, the LigaSure vessel sealing system with nano-coating, and the Sonicision cordless ultrasonic dissection system.

- Electrosurgical hardware and instruments, including the Valleylab FT10 energy platform, and the Force TriVerse electrosurgical pencils.

- Products designed for the treatment of hernias, including the AbsorbaTack absorbable mesh fixation device for hernia repair, the Symbotex composite mesh for surgical laparoscopic and open ventral hernia repair, and Parietex ProGrip, a self-gripping, biocompatible solution for inguinal hernias.

Respiratory, Gastrointestinal, & Renal

Our Respiratory, Gastrointestinal, & Renal division develops, manufactures, and markets products in the emerging fields of minimally invasive gastrointestinal and hepatologic diagnostics and therapies, patient monitoring, respiratory interventions including airway management and ventilation therapies, and for the treatment of renal disease. Principal products and services offered include:

- Gastrointestinal and endoscopy products, including the PillCam COLON, the Emprint ablation system with Thermosphere Technology, the HET Bipolar System, the Cool-tip radiofrequency ablation system, the Barrx platform through ablation with the Barrx 360 Express catheter, and the Bravo calibration-free reflux testing system.

- Airway, ventilation, and inhalation therapies products, including the Puritan Bennett 980 ventilator, the Newport e360 and HT70 ventilators, the TaperGuard Evac tube, Shiley Endotracheal Tubes, Shiley Tracheostomy Tubes, McGRATH MAC video laryngoscopes, and DAR Filters.

- Products focused on patient monitoring, including the Capnostream 35 portable respiratory monitor with Microstream technology, the Nellcor Bedside SpO2 patient monitoring system, the INVOS cerebral/ somatic oximetry systems, the Bispectral Index (BIS) brain monitoring technology, and the INVOS Cerebral/Somatic Oximeter.

- Products providing solutions for the treatment of renal disease, including Palindrome, Mahurkar and Mahurkar Elite Dialysis Access Catheters for renal therapy, and other products designed for use in treatment of both acute and chronic renal failure conditions.

RESTORATIVE THERAPIES GROUP

The Restorative Therapies Group is made up of the Spine, Brain Therapies, Specialty Therapies, and Pain Therapies divisions. The primary medical specialists who use the products of this group include spinal surgeons, neurosurgeons, neurologists, pain management specialists, anesthesiologists, orthopedic surgeons, urologists, colorectal surgeons, urogynecologists, interventional radiologists, and ear, nose, and throat specialists.

Spine

Our Spine division develops, manufactures, and markets a comprehensive line of medical devices and implants used in the treatment of the spine and musculoskeletal system. Our Spine division also provides biologic solutions for the orthopedic and dental markets and, in concert with our Neurosurgery business, offers unique and highly differentiated imaging, navigation, power instruments, nerve monitoring, and Mazor robotic guidance systems used in robot assisted spine procedures. Principal products and services offered include:

- Products to treat a variety of conditions affecting the spine, including degenerative disc disease, spinal deformity, spinal tumors, fractures of the spine, and stenosis. These products include our CD HORIZON LEGACY and ELEVATE systems, and the CAPSTONE, CLYDESDALE, and ELEVATE interbody spacers.

- Products that facilitate less invasive thoracolumbar surgeries, including the CD HORIZON SOLERA VOYAGER and LONGITUDE Percutaneous Fixation Systems.

- Products to treat conditions in the cervical region of the spine, including the ZEVO and ATLANTIS VISION ELITE Anterior Cervical Plate Systems, the VERTEX SELECT Reconstruction System, the INFINITY OCT System, and PRESTIGE LP Cervical Artificial Discs.

- Biologic solutions products, including our INFUSE Bone Graft (InductOs in the European Union (E.U.)), which contains a recombinant human bone morphogenetic protein, rhBMP-2, for certain spinal, trauma, and oral maxillofacial applications.

- Demineralized Bone Matrix products, including MagniFuse, GRAFTON/GRAFTON PLUS, and PROGENIX, and the MASTERGRAFT family of synthetic bone graft products - Matrix, Putty, and Granules.

Brain Therapies

Our Brain Therapies division develops, manufactures, and markets an integrated portfolio of devices and therapies for the treatment of neurological disorders and diseases, as well as surgical technologies designed to improve the precision and workflow of neuro procedures. Principal products and services offered include:

- Neurovascular products to treat diseases of the vasculature in and around the brain. This includes coils, neurovascular stent retrievers, and flow diversion products, as well as access and delivery products to support procedures. Products also include the Pipeline Flex Embolization Devices, endovascular treatments for large or giant wide-necked brain aneurysms, the portfolio of Solitaire revascularization devices for treatment of acute ischemic stroke, the Riptide Aspiration System and a portfolio of associated access catheters also for the treatment of acute ischemic stroke.

- Brain modulation products, including those for the treatment of the disabling symptoms of Parkinson's disease, essential tremor, refractory epilepsy, severe, treatment-resistant obsessive compulsive disorder (approved under a Humanitarian Device Exemption (HDE) in the U.S.), and chronic, intractable primary dystonia (approved under a HDE in the U.S.). Specifically, this includes our family of Activa Neurostimulators, including Activa SC (single-channel primary cell battery), Activa PC (dual channel primary cell battery), and Activa RC (dual channel rechargeable battery).

- Neurosurgery products, including platform technologies and implant therapies. Our StealthStation S8 Navigation System and O-arm Imaging System are both platforms used in cranial, spinal, sinus, and orthopedic procedures. Our Midas Rex Surgical Drills are used in cranial, spinal, ENT, and orthopedic procedures. Our CSF Management Portfolio is used in treating hydrocephalus and other conditions impacting the intracranial pressure, and our Visualase MRI-guided laser ablation is used in cranial procedures. Our Mazor X robotic guidance systems are used in robot-assisted spine procedures and combine the best-in-class robotics and navigation capability.

Specialty Therapies

Our Specialty Therapies division develops, manufactures, and markets products and therapies to treat diseases of the ear, nose and throat (ENT), help control the systems of overactive bladder, (non-obstructive) urinary retention, and chronic fecal incontinence. Additionally, our Specialty Therapies division includes products in the emerging field of transformative solutions surgical incision technology, as well as the haemostatic sealing of soft tissue and bone. Principal products and services offered include:

- Pelvic health and gastric therapies products, including InterStim, a neurostimulator, to help control the systems of overactive bladder, (non-obstructive) urinary retention, and chronic fecal incontinence. Our NURO System delivers Percutaneous Tibial Neuromodulation therapy to treat overactive bladder and associated symptoms of urinary urgency, urinary frequency, and urge incontinence. Our Enterra gastric neurostimulator is approved as a humanitarian device and is used for the treatment of chronic, intractable nausea and vomiting due to gastroparesis.

- ENT products, including the Straightshot M5 Microdebrider Handpiece, the IPC system, NIM Nerve Monitoring Systems, ENT Navigation System, as well as products for hearing restoration and obstructive sleep apnea.

- Transformative solutions products, including our PEAK Surgery System and Aquamantys System. Our PEAK Surgery System is a tissue dissection system that consists of the PEAK PlasmaBlade and PULSAR Generator and is cleared for use in a variety of settings, including plastic reconstructive surgery, general surgery, and certain conditions of ENT. Our Aquamantys System uses patented transcollation technology to provide haemostatic sealing of soft tissue and bone and is cleared for use in a variety of surgical procedures, including orthopedic surgery, spine, solid organ resection and thoracic procedures.

Pain Therapies

Our Pain Therapies division develops, manufactures, and markets spinal cord stimulation systems, implantable drug infusion systems for chronic pain, as well as interventional products. Principal products and services offered include:

- Spinal cord stimulation products, including rechargeable and non-rechargeable devices and a large selection of leads used to treat chronic back and/or limb pain. This includes the Intellis Spinal Cord Stimulation System, with AdaptiveStim and SureScan MRI Technology, the Evolve workflow algorithm, and Snapshot reporting. Products also include our RestoreSensor (rechargeable) SureScan MRI, with its proprietary AdaptiveStim technology.

- Implantable drug infusion systems, including our SynchroMed II Implantable Infusion System, that deliver small quantities of drug directly into the intrathecal space surrounding the spinal cord.

- Interventional products, including the Xpander II Balloon Kyphoplasty system, the Kyphon-V vertebroplasty system and the OsteoCool RF Tumor ablation system.

- The Accurian nerve ablation system, which conducts radio frequency ablation of nerve tissues.

DIABETES GROUP

The Diabetes Group develops, manufactures, and markets products and services for the management of Type 1 and Type 2 diabetes. The primary medical specialists who use and/or prescribe our Diabetes products are endocrinologists and primary care physicians. Principal products and services offered include:

- Insulin pumps, including the MiniMed 670G system, which is the world's first hybrid closed loop system. The system, powered by SmartGuard technology, mimics some of the functions of a healthy pancreas by providing two levels of automated insulin delivery to maximize Time in Range with reduced user input.

- Continuous glucose monitoring (CGM) systems, including the Guardian Connect smart CGM system and the iPro2 professional CGM, are products worn by patients capturing glucose data to reveal patterns and potential problems, such as hyperglycemic and hypoglycemic episodes.

- Therapy management software, including CareLink software for patients and for healthcare professionals, with advanced web technology to help patients and their health care providers control their diabetes and improve engagement.

OTHER FACTORS IMPACTING OUR OPERATIONS

Research and Development

The markets in which we participate are subject to rapid technological advances. Constant improvement of existing products and introduction of new products are necessary to maintain market leadership. Our research and development (R&D) efforts are directed toward maintaining or achieving technological leadership in each of the markets we serve in order to help ensure that patients using our devices and therapies receive the most advanced and

effective treatment possible. We remain committed to developing technological enhancements and new indications for existing products, and less invasive and new technologies for new and emerging markets to address unmet patient needs. That commitment leads to our initiation and participation in many clinical trials each fiscal year as the demand for clinical and economic evidence remains high. Furthermore, our development activities are intended to help reduce patient care costs and the length of hospital stays in the future. We have not engaged in significant customer or government-sponsored research.

Our R&D activities include improving existing products and therapies, expanding their indications and applications for use, and developing new therapies and procedures. We continue to focus on optimizing innovation, improving our R&D productivity, driving growth in emerging markets, clinical evidence generation, and assessing our R&D programs based on their ability to deliver economic value to our customers.

Intellectual Property

We rely on a combination of patents, trademarks, tradenames, copyrights, trade secrets, and non-disclosure and non-competition agreements to establish and protect our proprietary technology. In addition, we have entered into exclusive and non-exclusive licenses relating to a wide array of third-party technologies. In the aggregate, these intellectual property assets and licenses are of

material importance to our business; however, we believe that no single patent, technology, trademark, intellectual property asset or license is material in relation to any segment of our business or to our business as a whole.

We operate in an industry characterized by extensive patent litigation. Patent litigation may result in significant damage awards and injunctions that could prevent the manufacture and sale of affected products or result in significant royalty payments in order to continue selling the products. At any given time, we are involved as both a plaintiff and a defendant in a number of patent infringement actions, the outcomes of which may not be known for prolonged periods of time. For additional information, see Note 19 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Sales and Distribution

We sell most of our medical devices and therapies through direct sales representatives in the U.S. and a combination of direct sales representatives and independent distributors in markets outside the U.S. For certain portions of our business, we also sell through distributors in the U.S. Our medical supplies products are used primarily in hospitals, surgi-centers and alternate care facilities, such as home care and long-term care facilities, and are marketed to materials managers, GPOs and integrated delivery networks (IDNs) primarily through third-party distributors, although we also have direct sales representatives. We often negotiate with GPOs and IDNs, which enter into supply contracts for the benefit of their member facilities. Our four largest markets are the U.S., Western Europe, Japan, and China. Emerging markets are an area of increasing focus and opportunity, as we believe they remain under-penetrated.

Our marketing and sales strategy is focused on rapid, cost-effective delivery of high-quality products to a diverse group of customers worldwide. To achieve this objective, we organize our marketing and sales teams around physician specialties. This focus enables us to develop highly knowledgeable and dedicated sales representatives who are able to foster strong relationships with physicians and other customers and enhance our ability to cross-sell complementary products.

We are not dependent on any single customer for more than 10 percent of our total net sales.

Competition, Industry and Cost Containment

We compete in both the therapeutic and diagnostic medical markets in more than 150 countries throughout the world. These markets are characterized by rapid change resulting from technological advances and scientific discoveries. Our product lines face a mix of competitors ranging from large manufacturers with multiple business lines to small manufacturers offering a limited selection of products. In addition, we face competition from providers of other medical therapies, such as pharmaceutical companies.

Major shifts in industry market share have occurred in connection with product problems, physician advisories, safety alerts, and publications about our products, reflecting the importance of product quality, product efficacy and quality systems in the medical device industry. In the current environment of managed care, economically motivated customers, consolidation among health care providers, increased competition, and declining reimbursement rates, we have been increasingly required to compete on the basis of price. In order to continue to compete effectively, we must continue to create or acquire advanced technology, incorporate this technology into proprietary products, obtain regulatory approvals in a timely manner, maintain high-quality manufacturing processes, and successfully market these products.

Government and private sector initiatives to limit the growth of health care costs, including price regulation, competitive pricing, bidding and tender mechanics, coverage and payment policies, comparative effectiveness of therapies, technology assessments and managed-care arrangements are continuing in many countries where we do business, including the U.S. These changes put increased emphasis on the delivery of more cost-effective medical devices and therapies. Government programs, including Medicare and Medicaid, private health care insurance and managed-care plans have attempted to control costs by limiting the amount of reimbursement they will pay for particular procedures or treatments, tying reimbursement to outcomes, shifting to population health management, and other mechanisms. Hospitals, which purchase implants, are also seeking to reduce costs through a variety of mechanisms, including, for example, centralized purchasing, and in some cases, limiting the number of vendors that

may participate in the purchasing program. Hospitals are also aligning interests with physicians through employment and other arrangements, such as gainsharing, where a hospital agrees with physicians to share any realized cost savings resulting from changes in practice patterns such as device standardization. This has created an increasing level of price sensitivity among customers for our products.

Worldwide Operations

Our global operations are accompanied by certain financial and other risks. Relationships with customers and effective terms of sale vary by country. Exchange rate fluctuations may affect revenues, earnings, and cash flows from operations. We use operational and economic hedges, as well as derivative contracts, to manage the impact of currency exchange rate changes on earnings and

cash flow. See “Item 7A. Quantitative and Qualitative Disclosures About Market Risk” and Note 8 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Net sales and property, plant, and equipment attributable to significant geographic areas are presented in Note 21 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Production and Availability of Raw Materials

We manufacture products at manufacturing facilities located in various countries throughout the world. We purchase many of the components and raw materials used in manufacturing our products from numerous suppliers in various countries. Certain components and raw materials are available only from a sole supplier. We work closely with our suppliers to help ensure continuity of supply while maintaining high quality and reliability. Generally, we have been able to obtain adequate supplies of such raw materials and components. However, due to the U.S. FDA’s manufacturing requirements, we may not be able to quickly establish additional or replacement sources for certain components or materials if we experience a sudden or unexpected reduction or interruption in supply and are unable to develop alternative sources.

For additional information related to our manufacturing facilities refer to “Item 2. Properties” in this Annual Report on Form 10-K.

Quality Management and Product Liability

Our business success depends on the quality of our products, and we have global processes, procedures and programs, including our “Quality Begins with Me” program, that are intended to help us maintain the highest possible level of quality in all products. We operate in an industry susceptible to significant product liability claims. These claims may be brought by individuals seeking relief on their own behalf or purporting to represent a class.

Working Capital

Our goal is to carry sufficient levels of inventory to meet the product delivery needs of our customers. We also provide payment terms to customers in the normal course of business and rights to return product under warranty to meet the operational demands of our customers.

Employees

On April 26, 2019, we employed more than 90,000 full-time employees. Our employees are vital to our success. We believe we have been successful in attracting and retaining qualified personnel in a highly competitive labor market due to our competitive compensation and benefits and our rewarding work environment.

Seasonality

Worldwide sales do not reflect a significant degree of seasonality. However, the number of medical procedures incorporating Medtronic products is generally lower during summer months in the northern hemisphere due to summer vacation schedules, particularly in European countries.

Government Regulation

Our operations and products are subject to extensive regulation by numerous government agencies, including the U.S. FDA, European regulatory authorities such as the Medicines and Healthcare Products Regulatory Agency in the United Kingdom (U.K.) and the Federal Institute for Drugs and Medical Devices in Germany, the China Food and Drug Administration (CFDA), and other government agencies inside and outside the U.S. To varying degrees, each of these agencies requires us to comply with laws and regulations governing the development, testing,

manufacturing, labeling, marketing, distribution and post-marketing surveillance of our products. Our business is also affected by patient privacy laws and government payer cost containment initiatives, as well as environmental health and safety laws and regulations.

Product Approval and Monitoring

Many countries where we sell medical devices subject such medical devices and technologies to their own approval and other regulatory requirements regarding performance, safety, and quality of our products. Authorization to commercially distribute a new medical device in the U.S. is generally obtained in one of two ways. The first, known as pre-market notification or the 510(k) process, requires us to demonstrate that our new medical device is substantially equivalent to a legally marketed medical device. The second, more rigorous process, known as pre-market approval, requires us to independently demonstrate that a medical device is safe and effective for its intended use. This process is generally much more time-consuming and expensive than the 510(k) process.

In the European Union (E.U.), a single regulatory approval process exists, and conformity with the legal requirements is represented by the CE Mark. To obtain a CE Mark, defined products must meet minimum standards of performance, safety, and quality (i.e., the essential requirements), and then, according to their classification, comply with one or more of a selection of conformity assessment routes. The competent authorities of the E.U. countries separately regulate the clinical research for medical devices and the market surveillance of products once they are placed on the market. A new Medical Device Regulation was published by the E.U. in 2017 which will impose significant additional premarket and postmarket requirements. The regulation has a three-year implementation period to May 2020. After that time, medical devices marketed in the E.U. will require certification according to these new requirements, except that devices with valid CE certificates, issued pursuant to the Medical Device Directives before May 2020, can be placed on the market until May 2024.

The global regulatory environment is increasingly stringent and unpredictable. Several countries that did not have regulatory requirements for medical devices have established such requirements in recent years, and other countries have expanded, or plan to expand, their existing regulations. While harmonization of global regulations has been pursued, requirements continue to differ significantly among countries. We expect this global regulatory environment will continue to evolve, which could impact the cost, the time needed to approve, and ultimately, our ability to maintain existing approvals or obtain future approvals for our products. Regulations of the U.S. FDA and other regulatory agencies in and outside the U.S. impose extensive compliance and monitoring obligations on our business. These agencies review our design and manufacturing practices, labeling, record keeping, and manufacturers' required reports of adverse experiences and other information to identify potential problems with marketed medical devices. We are also subject to periodic inspections for compliance with applicable quality system regulations, which govern the methods used in, and the facilities and controls used for, the design, manufacture, packaging, and servicing of finished medical devices intended for human use. In addition, the U.S. FDA and other regulatory bodies, both in and outside the U.S. (including the Federal Trade Commission, the Office of the Inspector General of the Department of Health and Human Services, the U.S. Department of Justice, and various state Attorneys General), monitor the promotion and advertising of our products. Any adverse regulatory action, depending on its magnitude, may limit our ability to effectively market and sell our products, limit our ability to obtain future premarket approvals or result in a substantial modification to our business practices and operations. For additional information, see "Item 1A. Risk Factors" *We are subject to costly and complex laws and governmental regulations and any adverse regulatory action may materially adversely affect our financial condition and business operation*s.

In April 2015, we entered into a consent decree with the U.S. FDA relating to our Pain Therapies division's SynchroMed drug infusion system and the Neuromodulation quality system. The consent decree requires us to complete certain corrections and enhancements to the SynchroMed pump and the Neuromodulation quality system. The consent decree's limitations on our ability to manufacture and distribute the SynchroMed drug infusion system were lifted by the U.S. FDA in September 2017. Following the successful completion of the required third-party expert audits, and in coordination with the FDA, the consent decree will be vacated. The Company must undergo third-party audits and submit audit reports to the U.S. FDA through 2020.

In June 2016, TYRX received a Warning Letter from the U.S. FDA following an inspection at the TYRX facility in Monmouth Junction, New Jersey. The U.S. FDA completed its follow up inspection to the Warning Letter in March 2018 and issued a Form-483 with observations, although the U.S. FDA noted in its closing meeting that there had been significant improvements made since the prior inspection. We have completed the commitments under the Form-483 and have been communicating to the U.S. FDA on the progress. The next step will be to signal readiness for inspection, which will occur at the Medtronic Rice Creek facility in Minneapolis, now that the manufacturing operations at Monmouth Junction have ceased. In June 2014, HeartWare Inc. received a Warning Letter from the U.S. FDA following an inspection at the HeartWare facility in Miami Lakes, Florida. Medtronic acquired HeartWare in August 2016, and implemented corrective actions and process improvements to address the items in the Warning Letter. In July 2018, HeartWare received a Form-483 after a U.S. FDA inspection and is implementing additional corrective actions, primarily related to the Pioneer 2.0 Controller, in response to the observations. We have been communicating monthly with the U.S. FDA on the progress of the actions. In August 2018, we received two FDA Warning Letters, one issued to the CRHF facility in Mounds View, MN, and the other issued to the Juncos facility in Puerto Rico. The letters were limited to the Blackwell ICD and focused on the manufacturing and design processes for Blackwell. Medtronic has been working with the U.S. FDA on resolving the open items and continues to make steady progress on implementing corrective actions. After the actions are complete, the U.S. FDA will perform a reinspection in order to lift the Warning Letters.

Trade Regulations

The movement of products, services, and investment across borders subject us to extensive trade regulations. A variety of laws and regulations in the countries in which we transact business apply to the sale, shipment and provision of goods, services and technology across borders. These laws and regulations govern, among other things, our import, export and other business activities. We are also subject to the risk that these laws and regulations could change in a way that would expose us to additional costs, penalties or liabilities. Some governments also impose economic sanctions against certain countries, persons or entities. In addition to our need to comply with such regulations in connection with our direct activities, we also sell and provide goods, technology and services to agents, representatives and distributors who may export such items to customers and end-users. If we, or the third

parties through which we do business, are not in compliance with applicable import, export control or economic sanctions laws and regulations, we may be subject to civil or criminal enforcement action, and varying degrees of liability. Such actions may disrupt or delay sales of our products or services or result in restrictions on our distribution and sales of products or services that may materially impact our business.

Anti-Boycott Laws

Under U.S. laws and regulations, U.S. companies and their subsidiaries and affiliates outside the U.S. are prohibited from participating or agreeing to participate in unsanctioned foreign boycotts in connection with certain business activities, including the sale, purchase, transfer, shipping or financing of goods or services within the U.S. or between the U.S. and countries outside of the U.S. If we, or certain third parties through which we sell or provide goods or services, violate anti-boycott laws and regulations, we may be subject to civil or criminal enforcement action and varying degrees of liability.

Data Privacy and Security Laws and Regulations

As a business with a significant global footprint, compliance with evolving regulations and standards in data privacy and cybersecurity has resulted, and may continue to result, in increased costs, new compliance challenges, and the threat of increased regulatory enforcement activity. Our business relies on the secure electronic transmission, storage and hosting of sensitive information, including personal information, protected health information, financial information, intellectual property and other sensitive information related to our customers and workforce.

For example, in the U.S., the collection, maintenance, protection, use, transmission, disclosure and disposal of certain personal information and the security of medical devices are regulated at the U.S. federal and state, international and industry levels. U.S. federal and state laws protect the confidentiality of certain patient health information, including patient medical records, and restrict the use and disclosure of patient health information by health care providers. Privacy and Security Rules under the Health Insurance Portability and Accountability Act of 1996 (HIPAA), as amended, and the Health Information Technology for Economic and Clinical Health Act of 2009 (HITECH), govern the use, disclosure, and security of protected health information by "Covered Entities," (which are health care providers that submit electronic claims, health plans, and health care clearinghouses) and by their "Business Associates" (which is anyone that performs a service on behalf of a Covered Entity involving the use or disclosure of protected health information and is not a member of the Covered Entity's workforce). Rules under HIPAA and HITECH include specific security standards and breach notification requirements. The U.S. Department of Health and Human Services (HHS) (through the Office of Civil Rights) has direct enforcement authority against Covered Entities and Business Associates with regard to both the Security and Privacy Rules, including civil and criminal liability. With the exception of certain of its operations in its Diabetes and care management services businesses, Medtronic is generally not a Covered Entity. Medtronic also operates as a Business Associate to Covered Entities in a limited number of instances. There are comparable state laws governing the use and protection of personal health information by health care providers, and Medtronic may be subject to these laws in certain of its businesses.

In addition to the regulation of personal health information, a number of states have also adopted laws and regulations that may affect our privacy and data security practices for other kinds of personally identifiable information, such as state laws that govern the use, disclosure and protection of sensitive personal information, such as social security numbers, or that are designed to protect credit card account data. State consumer protection laws may also establish privacy and security standards for use and management of personally identifiable information, including information related to consumers and care providers.

Outside the U.S., we are impacted by the privacy and data security requirements at the international, national and regional level, and on an industry specific basis. We serve customers in more than 150 countries. Legal requirements in these countries relating to the collection, storage, handling and transfer of personal data and potentially intellectual property continue to evolve with increasingly strict enforcement regimes. More privacy and security laws and regulations are being adopted, and more are being enforced, with potential for significant financial penalties. In the E.U., stringent data protection and privacy rules which substantially impact the use of patient data across the healthcare industry became effective in May 2018. The E.U. General Data Protection Regulation (GDPR) applies uniformly across the E.U. and includes, among other things, a requirement for prompt notice of data breaches to data subjects and supervisory authorities in certain circumstances and significant fines for non-compliance. The GDPR

also requires companies processing personal data of individuals residing in the E.U. to comply with E.U. privacy and data protection rules.

Because the laws and regulations continue to expand, differ from jurisdiction to jurisdiction, and are subject to evolving (and at times inconsistent) governmental interpretation, compliance with these laws and regulations may require significant additional cost expenditures or changes in products or business that increase competition or reduce revenue. Noncompliance could result in the imposition of fines, penalties, or orders to stop noncompliant activities.

Regulations Governing Reimbursement

The delivery of our devices is subject to regulation by HHS and comparable state and non-U.S. agencies responsible for reimbursement and regulation of health care items and services. U.S. laws and regulations are imposed primarily in connection with federally-funded health care programs, such as the Medicare and Medicaid programs, as well as the government's interest in regulating the quality and cost of health care. Other governments also impose regulations in connection with their health care reimbursement programs and the delivery of health care items and services.

U.S. federal health care laws apply when we or customers submit claims for items or services that are reimbursed under federally-funded health care programs, including laws related to kickbacks, false claims, self-referrals and health care fraud. There are often similar state false claims, anti-kickback, and anti-self-referral and insurance laws that apply to state-funded Medicaid and other health care programs and private third-party payers. In some circumstances, insurance companies attempt to bring a private cause of action against a manufacturer for a pattern of causing false claims. In addition, as a manufacturer of U.S. FDA-approved devices reimbursable by federal healthcare programs, we are subject to the Physician Payments Sunshine Act, which requires us to annually report certain payments and other transfers of value we make to U.S.-licensed physicians or U.S. teaching hospitals. Any failure to comply with these laws and regulations could subject us or our officers and employees to criminal and civil financial penalties.

Implementation of further legislative or administrative reforms to reimbursement systems, or adverse decisions relating to our products by administrators of these systems in coverage or reimbursement, could significantly reduce reimbursement or result in the denial of coverage, which could have an impact on the acceptance of and demand for our products and the prices that our customers are willing to pay for them. Further, as a result of the Patient Protection and Affordable Care Act (the "ACA"), the U.S. is implementing value-based payment methodologies and seeking to create alternate payment models, such as bundled payments, to continue to drive improved value.

Environmental Health and Safety Laws

We are also subject to various environmental health and safety laws and regulations both within and outside the U.S. Like other companies in our industry, our manufacturing and other operations involve the use and transportation of substances regulated under environmental health and safety laws including those related to the transportation of hazardous materials.

Available Information

We maintain a website at www.medtronic.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (Exchange Act) are made available under the "About Medtronic - Investors" caption and "Financial Information - SEC Filings" subcaption of our website free of charge as soon as reasonably practicable after we electronically file them with, or furnish them to, the Securities and Exchange Commission (SEC).

Information relating to our corporate governance, including our Principles of Corporate Governance, Code of Conduct (including our Code of Ethics for Senior Financial Officers), Code of Business Conduct and Ethics for Members of the Board of Directors, and information concerning our executive officers, directors and Board committees (including committee charters) is available through our website at www.medtronic.com under the "About Medtronic - Corporate Governance" caption. Information relating to transactions in Medtronic securities by directors and officers is available through our website at www.medtronic.com under the "About Medtronic - Investors" caption and the "Financial Information - SEC Filings" subcaption.

The information listed above may also be obtained upon request from the Medtronic Investor Relations Department, 710 Medtronic Parkway, Minneapolis, MN 55432 USA.

Our website and the information contained on or connected to our website are not incorporated by reference into this Form 10-K.

The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers, including the Company, that file electronically with the SEC. The public may obtain any documents that we file with the SEC at http://www.sec.gov. We file annual reports, quarterly reports, proxy statements, and other documents with the SEC under the Exchange Act.

Item 1A. Risk Factors

Investing in our securities involves a variety of risks and uncertainties, known and unknown, including, among others, those discussed below. Each of the following risks should be carefully considered, together with all the other information included in this Annual Report on Form 10-K, including our consolidated financial statements and the related notes and in our other filings with the SEC. Furthermore, additional risks and uncertainty not presently known to us or that we currently believe to be immaterial may also adversely affect our business. Our business, financial condition, operating results, cash flow and prospects could be materially and adversely affected by any of these risks or uncertainties.

Risks Relating to the Company

We operate in a highly competitive industry and we may be unable to compete effectively.

We compete in both the therapeutic and diagnostic medical markets in more than 150 countries throughout the world. These markets are characterized by rapid change resulting from technological advances and scientific discoveries. In the product lines in which we compete, we face a range of competitors from large companies with multiple business lines to small, specialized manufacturers that offer a limited selection of niche products. Development by other companies of new or improved products, processes, technologies, or the introduction of reprocessed products or generic versions when our proprietary products lose their patent protection may make our existing or planned products less competitive. In addition, we face competition from providers of alternative medical therapies, such as pharmaceutical companies.

We believe our ability to compete depends upon many factors both within and beyond our control, including:

- product performance and reliability,
- product technology and innovation,
- product quality and safety,
- breadth of product lines,
- product support services,
- customer support,
- cost-effectiveness and price,
- reimbursement approval from health care insurance providers, and
- changes to the regulatory environment.

Competition may increase as additional companies enter our markets or modify their existing products to compete directly with ours. In addition, academic institutions, governmental agencies and other public and private research organizations also may conduct research, seek patent protection and establish collaborative arrangements for discovery, research, clinical development and marketing of products similar to ours. These companies and institutions compete with us in recruiting and retaining qualified scientific and management personnel, as well as in acquiring necessary product technologies. From time to time we have lost, and may in the future lose, market share in connection with product problems, physician advisories, safety alerts and publications about our products, which highlights the importance of product quality, product efficacy and quality systems to our business. In the current environment of managed care, consolidation among health care providers, increased competition, and declining reimbursement rates, we have been increasingly required to compete on the basis of price. Further, our continued growth and success depend on our ability to develop, acquire and market new and differentiated products, technologies and intellectual property, and as a result we also face competition for marketing, distribution, and collaborative development agreements, establishing relationships with academic and research institutions and licenses to intellectual property. In order to continue to compete effectively, we must continue to create, invest in or acquire advanced technology, incorporate this technology into our proprietary products, obtain regulatory approvals in a timely manner, and manufacture and successfully market our products. Given these factors, we cannot guarantee that we will be able to compete effectively or continue our level of success.

Reduction or interruption in supply or other manufacturing difficulties may adversely affect our manufacturing operations and related product sales.

The manufacture of our products requires the timely delivery of a sufficient amount of quality components and materials and is highly exacting and complex, due in part to strict regulatory requirements. We manufacture the majority of our products and procure important third-party services, such as sterilization services, at numerous facilities worldwide. We purchase many of the components, raw materials and services needed to manufacture these products from numerous suppliers in various countries. We have generally been able to obtain adequate supplies of such raw materials, components and services. However, for reasons of quality assurance, cost effectiveness, or

availability, certain components, raw materials and services needed to manufacture our products are obtained from a sole supplier. Although we work closely with our suppliers to try to ensure continuity of supply while maintaining high quality and reliability, the supply of these components, raw materials and services may be interrupted or insufficient. In addition, due to the stringent regulations and requirements of regulatory agencies, including the U.S. FDA, regarding the manufacture of our products, we may not be able to quickly establish additional or replacement sources. Furthermore, the prices of commodities and other materials used in our products, which are often volatile and outside of our control, could adversely impact our supply. We use resins, other petroleum-based materials and pulp as raw materials in some of our products, and the prices of oil and gas also significantly affect our costs for freight and utilities. A reduction or interruption in supply, and an inability to develop alternative sources for such supply, could adversely affect our ability to manufacture our products in a timely or cost-effective manner and could result in lost sales.

Other disruptions in the manufacturing process or product sales and fulfillment systems for any reason, including equipment malfunction, failure to follow specific protocols and procedures, supplier facility shut-downs, defective raw materials, natural

disasters such as hurricanes, tornadoes or wildfires, and other environmental factors, could lead to launch delays, product shortage, unanticipated costs, lost revenues and damage to our reputation. For example, in the past we have experienced a global information technology systems interruption that affected our customer ordering, distribution, and manufacturing processes. Furthermore, any failure to identify and address manufacturing problems prior to the release of products to our customers could result in quality or safety issues.

In addition, several of our key products are manufactured or sterilized at a particular facility, with limited alternate facilities. If an event occurs that results in damage to or closure of one or more of such facilities, such as the damage caused by Hurricane Maria in Puerto Rico in September 2017, we may be unable to manufacture or sterilize the relevant products at the previous levels or at all. Because of the time required to approve and license a manufacturing or sterilization facility, a third-party may not be available on a timely basis to replace production capacity in the event manufacturing or sterilization capacity is lost.

We are subject to costly and complex laws and governmental regulations and any adverse regulatory action may materially adversely affect our financial condition and business operations.

Our medical devices and technologies, as well as our business activities, are subject to a complex set of regulations and rigorous enforcement, including by the U.S. FDA, U.S. Department of Justice, Health and Human Services-Office of the Inspector General, and numerous other federal, state, and non-U.S. governmental authorities. To varying degrees, each of these agencies requires us to comply with laws and regulations governing the development, testing, manufacturing, labeling, marketing and distribution of our products. As a part of the regulatory process of obtaining marketing clearance for new products and new indications for existing products, we conduct and participate in numerous clinical trials with a variety of study designs, patient populations, and trial endpoints. Unfavorable or inconsistent clinical data from existing or future clinical trials or the market's or U.S. FDA's perception of this clinical data, may adversely impact our ability to obtain product approvals, our position in, and share of, the markets in which we participate, and our business, financial condition, results of operations and cash flows. We cannot guarantee that we will be able to obtain or maintain marketing clearance for our new products or enhancements or modifications to existing products, and the failure to maintain approvals or obtain approval or clearance could have a material adverse effect on our business, results of operations, financial condition and cash flows. Even if we are able to obtain approval or clearance, it may:

- take a significant amount of time,
- require the expenditure of substantial resources,
- involve stringent clinical and pre-clinical testing, as well as increased post-market surveillance,
- involve modifications, repairs or replacements of our products, and
- limit the proposed uses of our products.

Both before and after a product is commercially released, we have ongoing responsibilities under the U.S. FDA and other applicable non-U.S. government agency regulations. For instance, many of our facilities and procedures and those of our suppliers are also subject to periodic inspections by the U.S. FDA to determine compliance with applicable regulations. The results of these inspections can include inspectional observations on the U.S. FDA's Form-483, warning letters, or other forms of enforcement. If the U.S. FDA were to conclude that we are not in compliance with applicable laws or regulations, or that any of our medical products are ineffective or pose an unreasonable health risk, the U.S. FDA could ban such medical products, detain or seize adulterated or misbranded medical products, order a recall, repair, replacement, or refund of such products, refuse to grant pending pre-market approval applications or require certificates of non-U.S governments for exports, and/or require us to notify health professionals and others that the devices present unreasonable risks of substantial harm to the public health. The U.S. FDA and other non-U.S. government agencies may also assess civil or criminal penalties against us, our officers or employees and impose operating restrictions on a company-wide basis. The U.S. FDA may also recommend prosecution to the U.S. Department of Justice. Any adverse regulatory action, depending on its magnitude, may restrict us from effectively marketing and selling our products and limit our ability to obtain future pre-market clearances or approvals, and could result in a substantial modification to our business practices and operations. Furthermore, we occasionally receive subpoenas or other requests for information from state and federal governmental agencies, and while these investigations typically relate primarily to financial arrangements with health

care providers, regulatory compliance and product promotional practices, we cannot predict the timing, outcome or impact of any such investigations. Any adverse outcome in one or more of these investigations could include the commencement of civil and/or criminal proceedings, substantial fines, penalties, and/or administrative remedies, including exclusion from government reimbursement programs and/or entry into Corporate Integrity Agreements (CIAs) with governmental agencies. In addition, resolution of any of these matters could involve the imposition of additional, costly compliance obligations. These potential consequences, as well as any adverse outcome from government investigations, could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

In addition, the U.S. FDA has taken the position that device manufacturers are prohibited from promoting their products other than for the uses and indications set forth in the approved product labeling, and any failure to comply could subject us to significant civil or criminal exposure, administrative obligations and costs, and/or other potential penalties from, and/or agreements with, the federal government.

Governmental regulations outside the U.S. have, and may continue to, become increasingly stringent and common. In the European Union, for example, a new Medical Device Regulation was published in 2017 which, when it enters into full force in 2020, will include significant additional premarket and post-market requirements. Penalties for regulatory non-compliance could be severe, including fines and revocation or suspension of a company's business license, mandatory price reductions and criminal sanctions. Future laws and regulations may have a material adverse effect on us.

Our failure to comply with laws and regulations relating to reimbursement of health care goods and services may subject us to penalties and adversely impact our reputation, business, results of operations, financial condition and cash flows.

Our devices, products and therapies are purchased principally by hospitals or physicians that typically bill various third-party payers, such as governmental health care programs (e.g., Medicare, Medicaid and comparable non-U.S. programs), private insurance plans and managed care plans, for the healthcare services provided to their patients. The ability of our customers to obtain appropriate reimbursement for products and services from third-party payers is critical because it affects which products customers purchase and the prices they are willing to pay. As a result, our devices, products and therapies are subject to regulation regarding quality and cost by HHS, including the Centers for Medicare & Medicaid Services (CMS), as well as comparable state and non-U.S. agencies responsible for reimbursement and regulation of health care goods and services, including laws and regulations related to kickbacks, false claims, self-referrals and health care fraud. Many states have similar laws that apply to reimbursement by state Medicaid and other funded programs as well as in some cases to all payers. In certain circumstances, insurance companies attempt to bring a private cause of action against a manufacturer for causing false claims. In addition, as a manufacturer of U.S. FDA-approved devices reimbursable by federal healthcare programs, we are subject to the Physician Payments Sunshine Act, which requires us to annually report certain payments and other transfers of value we make to U.S.-licensed physicians or U.S. teaching hospitals. Any failure to comply with these laws and regulations could subject us or our officers and employees to criminal and civil financial penalties.

We are also subject to risks relating to changes in government and private medical reimbursement programs and policies, and changes in legal regulatory requirements in the U.S. and around the world. Implementation of further legislative or administrative reforms to these reimbursement systems, or adverse decisions relating to coverage of or reimbursement for our products by administrators of these systems, could have an impact on the acceptance of and demand for our products and the prices that our customers are willing to pay for them.

We are substantially dependent on patent and other proprietary rights and failing to protect such rights or to be successful in litigation related to our rights or the rights of others may result in our payment of significant monetary damages and/or royalty payments, negatively impact our ability to sell current or future products, or prohibit us from enforcing our patent and other proprietary rights against others.

We are substantially dependent on patent and other proprietary rights and rely on a combination of patents, trade secrets, and non-disclosure and non-competition agreements to protect our proprietary intellectual property. We also operate in an industry characterized by extensive patent litigation. Patent litigation can result in significant damage awards and injunctions that could prevent our manufacture and sale of affected products or require us to pay significant royalties in order to continue to manufacture or sell affected products. At any given time, we are generally involved as both a plaintiff and a defendant in a number of patent infringement actions, the outcomes of which may not be known for prolonged periods of time. While it is not possible to predict the outcome of patent litigation, it is possible that the results of such litigation could require us to pay significant monetary damages and/or royalty payments, negatively impact our ability to sell current or future products, or prohibit us from enforcing our patent and proprietary rights against others, any of which could have a material adverse impact on our business, results of operations, financial condition, and cash flows.

While we intend to defend against any threats to our intellectual property, our patents, trade secrets or other agreements may not adequately protect our intellectual property. Further, pending patent applications may not result in patents being issued to us, patents issued to or licensed by us may be challenged or circumvented by competitors and such patents may be found invalid, unenforceable or insufficiently broad to protect our technology or provide us with any competitive advantage. Third parties could obtain patents that may require us to negotiate licenses to conduct our business, and these licenses may not be available on reasonable terms or at all. We also rely on non-

disclosure and non-competition agreements with certain employees, consultants and other parties to protect, in part, trade secrets and other proprietary rights. We cannot be certain that these agreements will not be breached, that we will have adequate remedies for any breach, that others will not independently develop substantially equivalent proprietary information, or that third parties will not otherwise gain access to our trade secrets or proprietary knowledge.

In addition, the laws of certain countries in which we market some of our products do not protect our intellectual property rights to the same extent as the laws of the U.S., which could make it easier for competitors to capture market position in those countries. Competitors also may harm our sales by designing products that mirror the capabilities of our products or technology without infringing our intellectual property rights. If we are unable to protect our intellectual property in these countries, it could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

Quality problems and product liability claims could lead to recalls or safety alerts, reputational harm, adverse verdicts or costly settlements, and could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Quality is extremely important to us and our customers due to the serious and costly consequences of product failure, and our business exposes us to potential product liability risks that are inherent in the design, manufacture, and marketing of medical devices. In addition, many of our products are often used in intensive care settings with seriously ill patients and some of the medical devices we manufacture and sell are designed to be implanted in the human body for long periods of time or indefinitely. Component failures, manufacturing nonconformances, design defects, off-label use, or inadequate disclosure of product-related risks or product-related information with respect to our products, if they were to occur, could result in an unsafe condition or injury to, or death of, a patient. These problems could lead to recall of, or issuance of a safety alert relating to, our products, and could result in product liability claims and lawsuits, including class actions, which could ultimately result, in certain cases, in the removal from the body of such products and claims regarding costs associated therewith. Due to the strong name recognition of the Medtronic and Covidien brands, a material adverse event involving one of our products could result in reduced market acceptance and demand for all products within that brand, and could harm our reputation and ability to market products in the future.

Strong product quality is critical to the success of our goods and services. If we fall short of these standards and our products are the subject of recalls or safety alerts, our reputation could be damaged, we could lose customers and our revenue and results of operations could decline. Our success also can depend on our ability to manufacture to exact specification precision-engineered components, subassemblies and finished devices from multiple materials. If our components fail to meet these standards or fail to adapt to evolving standards, our reputation, competitive advantage and market share could be harmed. In certain situations, we may undertake a voluntary recall of products or temporarily shut down production lines based on performance relative to our own internal safety and quality monitoring and testing data.

Any of the foregoing problems, including future product liability claims or recalls, regardless of their ultimate outcome, could harm our reputation and have a material adverse effect on our business, results of operations, financial condition and cash flows.

Our research and development efforts rely upon investments and investment collaborations, and we cannot guarantee that any previous or future investments or investment collaborations will be successful.

Our mission is to provide a broad range of therapies to restore patients to fuller, healthier lives, which requires a wide variety of technologies, products and capabilities. The rapid pace of technological development in the medical industry and the specialized expertise required in different areas of medicine make it difficult for one company alone to develop a broad portfolio of technological solutions. In addition to internally generated growth through our research and development efforts, historically we have relied, and expect to continue to rely, upon investments and investment collaborations to provide us access to new technologies both in areas served by our existing businesses as well as in new areas.

We expect to make future investments where we believe that we can stimulate the development or acquisition of new technologies and products to further our strategic objectives and strengthen our existing businesses. Investments and investment collaborations in and with medical technology companies are inherently risky, and we cannot guarantee that any of our previous or future investments or investment collaborations will be successful or will not materially adversely affect our business, results of operations, financial condition and cash flows.

Health care policy changes may have a material adverse effect on us.

In response to perceived increases in health care costs in recent years, there have been and continue to be proposals by the federal government, state governments, regulators and third-party payers to control these costs and, more generally, to reform the health care system, including U.S. health care reform legislation. Certain of these proposals could, among other things, limit the prices we are able to charge for our products or the amounts of reimbursement available for our products and could limit the acceptance and availability of our products. The adoption of some or

all of these proposals could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Our insurance program may not be adequate to cover future losses.

We have elected to self-insure most of our insurable risks across the Company, and we made this decision based on cost and availability factors in the insurance marketplace. We manage and maintain a portion of our self-insured program through a wholly-owned captive insurance company. We continue to maintain a directors and officers liability insurance policy with third-party insurers that provides coverage for the directors and officers of the Company. We continue to monitor the insurance marketplace to evaluate the value of obtaining insurance coverage for other categories of losses in the future. Although we believe, based on historical loss trends, that our self-insurance program accruals and our existing insurance coverage will be adequate to cover future losses, historical trends may not be indicative of future losses. The absence of third-party insurance coverage for other categories of losses increases our exposure to unanticipated claims and these losses could have a material adverse impact on our business, results of operations, financial condition and cash flows.

If we experience decreasing prices for our goods and services and we are unable to reduce our expenses, there may be a material adverse effect on our business, results of operations, financial condition and cash flows.

We have experienced, and may continue to experience, decreasing prices for our goods and services due to pricing pressure from managed care organizations and other third-party payers on our customers, increased market power of our customers as the medical device industry consolidates and increased competition among medical engineering and manufacturing services providers. If the prices for our goods and services decrease and we are unable to reduce our expenses, our business, results of operations, financial condition and cash flows will be adversely affected.

We are subject to a variety of risks associated with global operations that could adversely affect our profitability and operating results.

We develop, manufacture, distribute and sell our products globally. Operations in countries outside of the U.S. are accompanied by certain risks. We intend to continue to expand our operations and to pursue growth opportunities outside the U.S., especially in emerging markets, which could expose us to additional and greater risks. Our profitability and global operations are, and will continue to be, subject to a number of risks and potential costs, including:

- fluctuations in currency exchange rates,
- healthcare reform legislation,
- the need to comply with different regulatory regimes worldwide that are subject to change and that could restrict our ability to manufacture and sell our products,
- local product preferences and product requirements,
- longer-term receivables than are typical in the U.S.,
- trade protection measures, tariffs and other border taxes, and import or export licensing requirements,
- less intellectual property protection in some countries outside the U.S. than exists in the U.S.,
- different labor regulations and workforce instability,
- political and economic instability,
- the expiration and non-renewal of foreign tax rulings and/or grants,
- potentially negative consequences from changes in or interpretations of tax laws, and
- economic instability and inflation, recession or interest rate fluctuations.

On June 23, 2016, the U.K. held a referendum in which voters approved an exit from the E.U., commonly referred to as “Brexit”. As a result of the referendum, the British government began negotiations with the E.U. on the terms of the U.K.’s future relationship with the E.U. Brexit was due to take place on March 29, 2019, however, the inability to agree on the exact terms of the future relationship have delayed Brexit and led to continued uncertainty about Brexit’s potential impacts on the Company. It is possible that as a result of Brexit there will be greater restrictions on imports and exports between the U.K. and E.U. countries and increased regulatory complexities that could adversely impact the Company. Similarly, from time to time proposals are made in the U.S. to significantly change existing trade agreements and relationships between the U.S. and other countries, although we cannot currently predict whether or how these changes will be implemented over time. Changes to global trade policy, including between the U.S. and other countries such as China and Mexico, may adversely affect our business, results of operations, financial condition and cash flows.

In addition, a significant amount of our trade receivables are with national health care systems in many countries. Repayment of these receivables is dependent upon the political and financial stability of those countries. In light of these global economic fluctuations, we continue to monitor the creditworthiness of customers. Failure to receive

payment of all or a significant portion of these receivables could adversely affect our business, results of operations, financial condition and cash flows.

Finally, changes in currency exchange rates may impact the reported value of our revenues, expenses, and cash flows. We cannot predict changes in currency exchange rates, the impact of exchange rate changes, nor the degree to which we will be able to manage the impact of currency exchange rate changes.

The failure to comply with anti-corruption laws could materially adversely affect our business and result in civil and/or criminal sanctions.

The U.S. Foreign Corrupt Practices Act (FCPA), the Irish Criminal Justice (Corruption Offences) Act 2018, and similar anti-corruption laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to government officials for the purpose of obtaining or retaining business. Because of the predominance of government-administered healthcare systems in many jurisdictions around the world, many of our customer relationships outside of the U.S. are with governmental entities and are therefore potentially subject to such laws. We also participate in public-private partnerships and other commercial and policy arrangements with governments around the globe.

Global enforcement of anti-corruption laws has increased in recent years, with more frequent voluntary self-disclosures by companies, aggressive investigations and enforcement proceedings by U.S. and non-U.S. governmental agencies, and assessment of significant fines and penalties against companies and individuals. Our international operations create the risk of unauthorized payments or offers of payments by one of our employees, consultants, sales agents, or distributors. It is our policy to implement safeguards to educate our employees and agents on these legal requirements and prohibit improper practices. However, existing safeguards and any future improvements may not always be effective, and our employees, consultants, sales agents or distributors may engage in conduct for which we could be held responsible. In addition, the government may seek to hold us liable for FCPA violations committed by companies in which we invest or that we acquire. Any alleged or actual violations of these regulations may subject us to government scrutiny, criminal or civil sanctions and other liabilities, including exclusion from government contracting, and could disrupt our business, adversely affect our reputation and result in a material adverse effect on our business, results of operations, financial condition and cash flows.

Laws and regulations governing international business operations could adversely impact our business.

The U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC), and the Bureau of Industry and Security at the U.S. Department of Commerce (BIS), administer certain laws and regulations that restrict U.S. persons and, in some instances, non-U.S. persons, in conducting activities, transacting business with or making investments in certain countries, governments, entities and individuals subject to U.S. economic sanctions. Our international operations subject us to these laws and regulations, which are complex, restrict our business dealings with certain countries and individuals, and are constantly changing. Further restrictions may be enacted, amended, enforced or interpreted in a manner that materially impacts our operations.

From time to time, certain of our subsidiaries have limited business dealings in countries subject to comprehensive sanctions, including Iran, Sudan, Syria, Cuba and the region of Crimea. Certain of our subsidiaries sell medical devices, and may provide related services, to distributors and other purchasing bodies in such countries. These business dealings represent an insignificant amount of our consolidated revenues and income, but expose us to a heightened risk of violating applicable sanctions regulations. Violations of these regulations are punishable by civil penalties, including fines, denial of export privileges, injunctions, asset seizures, debarment from government contracts and revocations or restrictions of licenses, as well as criminal fines and imprisonment. We have established policies and procedures designed to assist with our compliance with such laws and regulations. However, there can be no assurance that our policies and procedures will prevent us from violating these regulations in every transaction in which we may engage, and such a violation could adversely affect our reputation, business, financial condition, results of operations and cash flows.

Consolidation in the health care industry could have an adverse effect on our revenues and results of operations.

Many health care industry companies, including health care systems, distributors, manufacturers, providers, and insurers, are consolidating or have formed strategic alliances. As the health care industry consolidates, competition to provide goods and services to industry participants will become more intense. Further, this consolidation creates larger enterprises with greater negotiating power, which they can use to negotiate price concessions. If we must reduce our prices because of industry consolidation, or if we lose customers as a result of consolidation, our business, financial condition, results of operations and cash flows could be adversely affected.

Health care industry cost-containment measures could result in reduced sales of our medical devices and medical device components.

Most of our customers, and the health care providers to whom our customers supply medical devices, rely on third-party payers, including government programs and private health insurance plans, to reimburse some or all of the cost of the procedures in which medical devices that incorporate components we manufacture or assemble are used. The continuing efforts of governmental authorities, insurance companies and other payers of health care costs to contain or reduce these costs could lead to patients being unable to obtain approval for payment from these third-party payers. If third-party payer payment approval cannot be obtained by patients, sales of finished medical devices that include our components may decline significantly and our customers may reduce or eliminate purchases of our components. The cost-containment measures that health care providers are instituting, both in the U.S. and outside of the U.S., could harm our ability to operate profitably. For example, managed care organizations have successfully

negotiated volume discounts for pharmaceuticals, and GPOs and IDNs have also concentrated purchasing decisions for some customers, which has led to downward pricing pressure for medical device companies, including us.

We are subject to environmental laws and regulations and the risk of environmental liabilities, violations and litigation.

We are subject to numerous U.S. federal, state, local and non-U.S. environmental, health and safety laws and regulations concerning, among other things, the health and safety of our employees, the generation, storage, use and transportation of hazardous materials, emissions or discharges of substances into the environment, investigation and remediation of hazardous substances or materials at various sites, chemical constituents in medical products and end-of-life disposal and take-back programs for medical devices. Our operations and those of certain third-party suppliers involve the use of substances subject to these laws and regulations,

primarily those used in manufacturing and sterilization processes. If we or our suppliers violate these environmental laws and regulations, facilities could be shut down and violators could be fined, criminally charged or otherwise sanctioned. Furthermore, environmental laws outside of the U.S. are becoming more stringent, resulting in increased costs and compliance burdens.

In addition, certain environmental laws assess liability on current or previous owners or operators of real property for the costs of investigation, removal or remediation of hazardous substances or materials at their properties or at properties which they have disposed of hazardous substances. In addition to cleanup actions brought by governmental authorities, private parties could bring personal injury or other claims due to the presence of, or exposure to, hazardous substances. The ultimate cost of site cleanup and timing of future cash outflows is difficult to predict, given the uncertainties regarding the extent of the required cleanup, the interpretation of applicable laws and regulations, and alternative cleanup methods.

The costs of complying with current or future environmental protection and health and safety laws and regulations, or liabilities arising from past or future releases of, or exposures to, hazardous substances, may exceed our estimates, or have a material adverse effect on our business, results of operations, financial condition, and cash flows.

The continuing development of many of our products depends upon us maintaining strong relationships with health care professionals.

If we fail to maintain our working relationships with health care professionals, many of our products may not be developed and marketed in line with the needs and expectations of the professionals who use and support our products, which could cause a decline in our earnings and profitability. The research, development, marketing and sales of many of our new and improved products depends on our maintaining working relationships with health care professionals. We rely on these professionals to provide us with considerable knowledge and experience regarding the development, marketing and sale of our products. Physicians assist us as researchers, marketing and product consultants, inventors and public speakers. If we are unable to maintain strong relationships with these professionals, the development and marketing of our products could suffer, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We rely on the proper function, security and availability of our information technology systems and data to operate our business, and a breach, cyber-attack or other disruption to these systems or data could materially and adversely affect our business, results of operations, financial condition, cash flows, reputation or competitive position.

We are increasingly dependent on sophisticated information technology systems to operate our business, including to process, transmit and store sensitive data, and many of our products and services include integrated software and information technology that collects data regarding patients or connects to our systems. Like other large multi-national corporations, we could experience, and in the past have experienced, attempted or actual interference with the integrity of, and interruptions in, our technology systems, as well as data breaches, such as cyber-attacks, malicious intrusions, breakdowns, interference with the integrity of our products and data or other significant disruptions. Furthermore, we rely on third-party vendors to supply and/or support certain aspects of our information technology systems. These third-party systems could also become vulnerable to cyber-attack, malicious intrusions, breakdowns, interference or other significant disruptions, and may contain defects in design or manufacture or other problems that could result in system disruption or compromise the information security of our own systems. In addition, we continue to grow in part through new business acquisitions and, as a result, may face risks associated with defects and vulnerabilities in their systems, or difficulties or other breakdowns or disruptions in connection with the integration of the acquisitions into our information technology systems.

Our worldwide operations mean that we are subject to laws and regulations, including data protection and cybersecurity laws and regulations, in many jurisdictions. The variety of U.S. and international privacy and cybersecurity laws and regulations impacting our operations are described in “Item 1. Business" - *Other Factors Impacting Our Operations - Data Privacy and Security Laws and Regulations*. For example, GDPR requires us to manage personal data in the E.U. and may impose fines of up to four percent of our global revenue in the event of certain violations. Furthermore, there has been a developing trend of civil lawsuits and class actions relating to breaches of consumer data held by large companies or incidents arising from other cyber-attacks. Any data security

breaches, cyber-attacks, malicious intrusions or significant disruptions could result in actions by regulatory bodies and/or civil litigation, any of which could materially and adversely affect our business, results of operations, financial condition, cash flows, reputation or competitive position.

In addition, our information technology systems require an ongoing commitment of significant resources to maintain, protect, and enhance existing systems and develop new systems to keep pace with continuing changes in information processing technology, evolving legal and regulatory standards, the increasing need to protect patient and customer information, changes in the techniques used to obtain unauthorized access to data and information systems, and the information technology needs associated with our changing products and services. There can be no assurance that our process of consolidating, protecting, upgrading and expanding our systems and capabilities, continuing to build security into the design of our products, and developing new systems to keep

pace with continuing changes in information processing technology will be successful or that additional systems issues will not arise in the future.

If our information technology systems, products or services or sensitive data are compromised, patients or employees could be exposed to financial or medical identity theft or suffer a loss of product functionality, and we could lose existing customers, have difficulty attracting new customers, have difficulty preventing, detecting, and controlling fraud, be exposed to the loss or misuse of confidential information, have disputes with customers, physicians, and other health care professionals, suffer regulatory sanctions or penalties under federal laws, state laws, or the laws of other jurisdictions, experience increases in operating expenses or an impairment in our ability to conduct our operations, incur expenses or lose revenues as a result of a data privacy breach, product failure, information technology outages or disruptions, or suffer other adverse consequences including lawsuits or other legal action and damage to our reputation.

Our substantial leverage and debt service obligations could adversely affect our business.

At April 26, 2019, we had approximately $0.8 billion of current debt obligations and $24.5 billion of long-term debt outstanding. We may also incur additional indebtedness in the future. Our substantial indebtedness could have adverse consequences, including:

- making it more difficult for us to satisfy our financial obligations,
- increasing our vulnerability to adverse economic, regulatory and industry conditions, and placing us at a disadvantage compared to our competitors that are less leveraged,
- limiting our ability to compete and our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate,
- limiting our ability to borrow additional funds for working capital, capital expenditures, acquisitions and general corporate or other purposes, and
- exposing us to greater interest rate risk since the interest rate on borrowings under our floating rate notes and revolving credit facility is variable.

Our debt service obligations require us to use a portion of our operating cash flow to pay interest and principal on indebtedness instead of for other corporate purposes, including funding future expansion of our business, acquisitions, and ongoing capital expenditures, which could impede our growth. If our operating cash flow and capital resources are insufficient to service our debt obligations, we may be forced to sell assets, seek additional equity or debt financing or restructure our debt, which could harm our long-term business prospects. Our failure to comply with the terms of our revolving credit facility and other indebtedness could result in an event of default which, if not cured or waived, could result in the acceleration of all of our debt.

Failure to integrate acquired businesses into our operations successfully could adversely affect our business.

As part of our strategy to develop and identify new products and technologies, we have made several significant acquisitions in recent years, and may make additional acquisitions in the future. Our integration of the operations of acquired businesses requires significant efforts, including the coordination of information technologies, research and development, sales and marketing, operations, manufacturing, and finance. These efforts result in additional expenses and involve significant amounts of management's time that cannot then be dedicated to other projects. Our failure to manage and coordinate the growth of acquired companies successfully could also have an adverse impact on our business. In addition, we cannot be certain that the businesses we acquire will become profitable or remain so. Factors that will affect the success of our acquisitions include:

- the presence or absence of adequate internal controls and/or significant fraud in the financial systems of acquired companies,
- our ability or inability to integrate information technology systems of acquired companies in a secure and reliable manner,
-

adverse developments arising out of investigations by governmental entities of the business practices of acquired companies, including potential FCPA liability,

- any decrease in customer loyalty and product orders caused by dissatisfaction with the combined companies' product lines and sales and marketing practices, including price increases,
- our ability to retain key employees, and
- the ability to achieve synergies among acquired companies, such as increasing sales of the integrated company's products, achieving cost savings, and effectively combining technologies to develop new products.

We also could experience negative effects on our business, financial condition, results of operations and cash flows from acquisition-related charges, amortization of intangible assets and asset impairment charges. These effects, individually or in the aggregate, could cause a deterioration of our credit rating and result in increased borrowing costs and interest expense.

Changes in tax laws or exposure to additional income tax liabilities could have a material impact on our business, results of operations, financial condition and cash flows.

We are subject to income taxes, as well as non-income based taxes, in the U.S., Ireland, and various other jurisdictions in which we operate. The tax laws in the U.S., Ireland and other countries in which we and our affiliates do business could change on a prospective or retroactive basis, and any such changes could materially adversely affect our business and our effective tax rate. For example, on December 22, 2017, the U.S. enacted comprehensive tax legislation, commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"), which resulted in a significant charge to tax expense during our fiscal year 2018 associated with the U.S. taxation of accumulated foreign earnings as well as the requirement to revalue U.S. deferred tax assets and liabilities resulting from the reduction in the U.S. corporate tax rate. The U.S. Treasury is expected to issue additional subsequent guidance and interpretation of the Tax Act. This guidance could have a material impact on our business, financial condition, results of operations, and cash flows. In addition, the government in Switzerland is currently considering tax reform legislation, the results of which could have a material impact on our business, financial condition, results of operations, and cash flows.

In 2013, the Organization for Economic Cooperation and Development (OECD) published an action plan called Base Erosion and Profit Shifting (BEPS) with a view to tackling perceived tax abuse and inconsistency between taxing authorities and their approach to International tax matters. The final BEPS Action report was published in October 2015 and subsequently many taxing authorities have adopted the guidelines provided within their local laws. The EU expanded upon these guidelines with Anti-Tax Avoidance Directives (ATAD 1 and 2) to be applied by all its member states by 2020. We continue to monitor any and all changes to local country legislation resulting from this guidance. One specific change is a requirement for increased disclosures of financial information on a local and global basis. This information could lead to disagreements between jurisdictions associated with the proper allocation of profits between such jurisdictions.

We are subject to ongoing tax audits in the various jurisdictions in which we operate. Tax authorities may disagree with certain positions we have taken and assess additional taxes. We regularly assess the likely outcomes of these audits in order to determine the appropriateness of our tax provision. However, there can be no assurance that we will accurately predict the outcomes of these audits, and the actual outcomes of these audits could have a material impact on our business, financial condition, results of operations, and cash flows.

We have recorded reserves for potential payments of tax to various tax authorities related to uncertain tax positions. However, the calculation of such tax liabilities involves the application of complex tax regulations in many jurisdictions. Therefore, any dispute with a tax authority may result in a payment that is significantly different from current estimates. If payment of these amounts ultimately proves to be less than the recorded amounts, the reversal of the liabilities generally would result in tax benefits being recognized in the period when we determine the liabilities are no longer necessary. If our estimate of tax liabilities proves to be less than the amount for which it is ultimately liable, we would incur additional charges, and such charges could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

The Medtronic, Inc. tax court proceeding outcome could have a material adverse impact on our financial condition.

In March 2009, the IRS issued its audit report for Medtronic Inc. for fiscal years 2005 and 2006. Medtronic, Inc. reached agreements 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 our key manufacturing sites. An adverse outcome in this matter could materially and adversely affect our business, financial condition, results of operations and cash flows. See Note 19 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Future potential changes to the U.S. tax laws could result in us being treated as a U.S. corporation for U.S. federal tax purposes, and the IRS may not agree with the conclusion that we should be treated as a foreign corporation for U.S federal income tax purposes.

Because Medtronic plc is organized under the laws of Ireland, we would generally be classified as a foreign corporation under the general rule that a corporation is considered tax resident in the jurisdiction of its organization

or incorporation for U.S. federal income tax purposes. Even so, the IRS may assert that we should be treated as a U.S. corporation (and, therefore, a U.S. tax resident) for U.S. federal income tax purposes pursuant to Section 7874 of the U.S. Internal Revenue Code of 1986, as amended (the Code).

Under Section 7874 of the Code, if Medtronic Inc.'s shareholders immediately prior to the Covidien transaction held 80% or more of the vote or value of our shares by reason of holding stock in Medtronic, Inc. immediately after the transaction (the ownership test), and our expanded affiliated group after the transaction did not have substantial business activities in Ireland relative to its worldwide activities (the substantial business activities test), we would have been treated as a U.S. corporation for U.S. federal income tax purposes. Based on the rules for determining share ownership under Section 7874 of the Code, Medtronic, Inc.'s

shareholders received approximately 70% of our ordinary shares (by both vote and value) by reason of holding stock in Medtronic, Inc. Therefore, under current law, Medtronic plc should not be treated as a U.S. corporation for U.S. federal income tax purposes. However, there is limited guidance regarding the application of Section 7874, including the application of the ownership test. If we were to be treated as a U.S. corporation for federal tax purposes, we could be subject to substantially greater U.S. tax liability than currently contemplated as a non-U.S. corporation.

Legislative or other governmental action relating to the denial of U.S. federal or state governmental contracts to U.S. companies that redomicile abroad could adversely affect our business.

Various U.S. federal and state legislative proposals that would deny governmental contracts to U.S. companies that move their corporate location abroad may affect us. We are unable to predict the likelihood that, or final form in which, any such proposed legislation might become law, the nature of the regulations that may be promulgated under any future legislative enactments, or the effect such enactments and increased regulatory scrutiny may have on our business.

Risks Relating to Our Jurisdiction of Incorporation

We are incorporated in Ireland, and Irish law differs from the laws in effect in the U.S. and may afford less protection to holders of our securities.

Our shareholders may have more difficulty protecting their interests than would shareholders of a corporation incorporated in a jurisdiction of the United States. It may not be possible to enforce court judgments obtained in the U.S. against us in Ireland based on the civil liability provisions of the U.S. federal or state securities laws. In addition, there is some uncertainty as to whether the courts of Ireland would recognize or enforce judgments of U.S. courts obtained against us or our directors or officers based on the civil liabilities provisions of the U.S. federal or state securities laws or hear actions against us or those persons based on those laws. We have been advised that the U.S. currently does not have a treaty with Ireland providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters. Therefore, a final judgment for the payment of money rendered by any U.S. federal or state court based on civil liability, whether or not based solely on U.S. federal or state securities laws, would not automatically be enforceable in Ireland.

As an Irish company, we are governed by the Irish Companies Act 2014, which differs in some material respects from laws generally applicable to U.S. corporations and shareholders, including, among others, differences relating to interested director and officer transactions and shareholder lawsuits. Likewise, the duties of directors and officers of an Irish company generally are owed to the company only. Shareholders of Irish companies generally do not have a personal right of action against directors or officers of the company and may exercise such rights of action on behalf of the company only in limited circumstances. Accordingly, holders of our securities may have more difficulty protecting their interests than would holders of securities of a corporation incorporated in the U.S.

As an Irish public limited company, certain capital structure decisions require shareholder approval, which may limit Medtronic's flexibility to manage its capital structure.

Under Irish law, our authorized share capital can be increased by an ordinary resolution of our shareholders and the directors may issue new ordinary or preferred shares up to a maximum amount equal to the authorized but unissued share capital, without shareholder approval, once authorized to do so by our articles of association or by an ordinary resolution of our shareholders. Additionally, subject to specified exceptions, Irish law grants statutory preemption rights to existing shareholders where shares are being issued for cash consideration but allows shareholders to disapply such statutory preemption rights either in our articles of association or by way of special resolution. Such disapplication can either be generally applicable or be in respect of a particular allotment of shares. Accordingly, our articles of association contain, as permitted by Irish company law, provisions authorizing the board to issue new shares, and to disapply statutory preemption rights. The authorization of the directors to issue shares and the disapplication of statutory preemption rights must both be renewed by the shareholders at least every five years, and our current authorizations are due to expire in January 2020. We anticipate seeking new authorizations at our 2019 Annual General Meeting and in subsequent years. We cannot provide any assurance that these authorizations will

always be approved, which could limit our ability to issue equity and thereby adversely affect the holders of our securities.

A transfer of our shares, other than ones effected by means of the transfer of book-entry interests in the Depository Trust Company, may be subject to Irish stamp duty.

Transfers of our shares effected by means of the transfer of book entry interests in the Depository Trust Company (DTC) will not be subject to Irish stamp duty. However, if a shareholder holds our shares directly rather than beneficially through DTC, any transfer of shares could be subject to Irish stamp duty (currently at the rate of 1% of the higher of the price paid or the market value of the shares acquired). Payment of Irish stamp duty is generally a legal obligation of the transferee. The potential for stamp duty could adversely affect the price of shares.

In certain limited circumstances, dividends we pay may be subject to Irish dividend withholding tax and dividends received by Irish residents and certain other shareholders may be subject to Irish income tax.

In certain limited circumstances, dividend withholding tax (currently at a rate of 20%) may arise in respect of dividends paid on our shares. A number of exemptions from dividend withholding tax exist such that shareholders resident in the U.S. and other specified countries that have a tax treaty with Ireland may be entitled to exemptions from dividend withholding tax.

Shareholders resident in the U.S. that hold their shares through DTC will not be subject to dividend withholding tax, provided the addresses of the beneficial owners of such shares in the records of the brokers holding such shares are recorded as being in the U.S. (and such brokers have further transmitted the relevant information to a qualifying intermediary appointed by us). However, other shareholders may be subject to dividend withholding tax, which could adversely affect the price of their shares.

Shareholders entitled to an exemption from Irish dividend withholding tax on dividends received from us will not be subject to Irish income tax in respect of those dividends unless they have some connection with Ireland other than their shareholding in our Company (for example, they are resident in Ireland). Shareholders who receive dividends subject to Irish dividend withholding tax generally have no further liability to Irish income tax on those dividends.

Our shares received by means of a gift or inheritance could be subject to Irish capital acquisitions tax.

Irish capital acquisitions tax (CAT) could apply to a gift or inheritance of our shares irrespective of the place of residence, ordinary residence or domicile of the parties. This is because our shares will be regarded as property situated in Ireland. The person who receives the gift or inheritance has primary liability for CAT. Gifts and inheritances passing between spouses are exempt from CAT. Children have a tax-free threshold which Irish Revenue typically updates annually in respect of taxable gifts or inheritances received from their parents.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Medtronic's principal executive office is located in Dublin, Ireland and is leased by the Company, while its main operational offices are located in the Minneapolis, Minnesota metropolitan area and are owned by the Company.

The Company's total manufacturing and research space is approximately 9 million square feet. Approximately 43 percent of the manufacturing or research facilities are owned by Medtronic and the balance is leased. The following is a summary of the Company's largest manufacturing and research facilities by location:

Location Country or State	Square Feet (in thousands)
Connecticut	1,138
Minnesota	984
China	843
Puerto Rico	831
Mexico	762
Italy	454
Ireland	446
Texas	431
California	389
Colorado	336
Arizona	319
Dominican Republic	304
Switzerland	283
Massachusetts	255
Israel	204

Medtronic also maintains sales and administrative offices in the U.S. at 4 locations in 4 states and outside the U.S. at 161 locations in 66 countries. Most of these locations are leased. The Company is using substantially all of its currently available productive space to develop, manufacture, and market products. The Company's facilities are well-maintained, suitable for their respective uses, and adequate for current needs.

Item 3. Legal Proceedings

A discussion of the Company’s legal proceedings is contained in Note 19 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Medtronic's Common Equity, Related Shareholder Matters, and Issuer Purchases of Equity Securities

The Company's ordinary shares are listed on the New York Stock Exchange under the symbol "MDT."

The following table provides information about the shares repurchased by the Company during the fourth quarter of fiscal year 2019:

Fiscal Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as a Part of Publicly Announced Program	Maximum Approximate Dollar Value of Shares that may yet be Purchased Under the Program
1/26/2019-2/22/2019	—	$ —	—	$ 1,323,491,730
2/23/2019-3/29/2019	1,581,836	91.67	1,581,836	7,178,491,789
3/30/2019-4/26/2019	—	—	—	7,178,491,789
Total	1,581,836	$ 91.67	1,581,836	$ 7,178,491,789

In June 2017, the Company's Board of Directors authorized the repurchase of $5.0 billion of the Company's ordinary shares. This authorization replaced the previous June 2015 repurchase authorization to redeem up to an aggregate number of 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.

On June 18, 2019, there were approximately 25,797 shareholders of record of the Company's ordinary shares. Ordinary cash dividends declared and paid totaled 50.0 cents per share for each quarter of fiscal year 2019 and 46.0 cents per share for each quarter of fiscal year 2018.

Stock Performance Graph

The following graph compares the cumulative total shareholder return on Medtronic's ordinary shares with the cumulative total shareholder return on the Standard & Poor's (S&P) 500 Index and the S&P 500 Health Care Equipment Index for the last five fiscal years. The graph assumes that $100 was invested at market close on April 25, 2014 in Medtronic's ordinary shares, the S&P 500 Index, and the S&P 500 Health Care Equipment Index and that all dividends were reinvested.

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Company/Index	April 2014	April 2015	April 2016	April 2017	April 2018	April 2019
Medtronic, Inc./ Medtronic plc	$ 100.00	$ 135.72	$ 141.29	$ 151.50	$ 151.59	$ 166.52
S&P 500 Index	100.00	115.98	115.62	136.33	155.69	174.89
S&P 500 Health Care Equipment Index	100.00	131.70	139.55	163.50	196.77	230.93

For information on the Company's equity compensation plans, see "Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters" in this Annual Report on Form 10-K.

Irish Restrictions on Import and Export of Capital

Except as indicated below, there are no restrictions on non-residents of Ireland dealing in Irish domestic securities, which includes ordinary shares of Irish companies. Except as indicated below, dividends and redemption proceeds also continue to be freely transferable to non-resident holders of such securities. The Financial Transfers Act, 1992, provides that the Irish Minister for Finance can make provision for the restriction of financial transfers between Ireland and other countries. For the purposes of this Act, "financial transfers" include all transfers which would be movements of capital or payments within the meaning of the treaties governing the E.U. if they had been made between Member States of the E.U. This Act has been used by the Minister for Finance to implement European Council Directives, which provide for the restriction of financial transfers to certain countries, organizations and people including the Al-Qaeda network and the Taliban, Afghanistan, Belarus, Burma (Myanmar), Democratic People's Republic of Korea, Democratic Republic of Congo, Egypt, Eritrea, Iran, Iraq, Ivory Coast, Lebanon, Liberia, Libya, Republic of Guinea, Somalia, Sudan, Syria, Tunisia, Ukraine and Zimbabwe.

Any transfer of, or payment in respect of, a share or interest in a share involving the government of any country that is currently the subject of United Nations sanctions, any person or body controlled by any of the foregoing, or by any person acting on behalf of the foregoing, may be subject to restrictions pursuant to such sanctions as implemented into Irish law.

Irish Taxes Applicable to U.S. Holders

Dividends paid by Medtronic will generally be subject to Irish dividend withholding tax at the standard rate of income tax (currently 20 percent) unless an exemption applies.

Dividends paid to U.S. residents will not be subject to Irish dividend withholding tax provided that:

- in the case of a beneficial owner of Medtronic shares held in the Depository Trust Company (DTC), the address of the beneficial owner in the records of his or her broker is in the United States and this information is provided by the broker to the Company's qualifying intermediary; or

- in the case of a record owner, the record owner has provided to the Company's transfer agent a valid U.S. Certification of Residence (Form 6166) or valid Irish Non-Resident Form V2.

Irish income tax may also arise with respect to dividends paid on Medtronic's ordinary shares. A U.S. resident who meets one of the exemptions from dividend withholding tax described above and who does not hold Medtronic shares through a branch or agency in Ireland through which a trade is carried on generally will not have any Irish income tax liability on a dividend paid by Medtronic. In addition, if a U.S. shareholder is subject to the dividend withholding tax, the withholding payment discharges any Irish income tax liability, provided the shareholder furnishes to the Irish Revenue authorities a statement of the dividend withholding tax imposed.

While the U.S./Ireland Double Tax Treaty contains provisions regarding withholding, due to the wide scope of the exemptions from dividend withholding tax available under Irish domestic law, it would generally be unnecessary for a U.S. resident shareholder to rely on the treaty provisions.

Item 6. Selected Financial Data

Our fiscal year-end is the last Friday in April, and therefore, the total weeks in a fiscal year fluctuates between 52 and 53 weeks. Fiscal years 2019, 2018, 2017, and 2015 were 52-week years. Fiscal year 2016 was a 53-week year, with the additional week occurring in the first quarter. The table below illustrates operating results and other selected financial data for fiscal years 2015 to 2019. Certain reclassifications have been made to prior year selected financial data to conform to classifications used in the current year.

	Fiscal Year				
(in millions, except per share data and additional information)	**2019**	**2018**	**2017**	**2016**	**2015[1]**
Operating Results:					
Net sales	$ 30,557	$ 29,953	$ 29,710	$ 28,833	$ 20,261
Cost of products sold	9,155	9,067	9,294	9,128	6,306
Research and development expense	2,330	2,256	2,193	2,211	1,638
Selling, general, and administrative expense	10,418	10,238	10,018	9,770	7,446
Amortization of intangible assets	1,764	1,823	1,980	1,931	733
Restructuring charges, net	198	30	303	290	237
Certain litigation charges	166	61	300	26	42
Gain on sale of businesses	—	(697)	—	—	—
Other operating expense, net	258	535	239	93	182
Operating profit	6,268	6,640	5,383	5,384	3,677
Other non-operating income, net	(373)	(181)	(313)	(338)	(475)
Interest expense	1,444	1,146	1,094	1,386	666
Income before income taxes	5,197	5,675	4,602	4,336	3,486
Income tax provision	547	2,580	578	798	811
Net income	4,650	3,095	4,024	3,538	2,675
Net (income) loss attributable to noncontrolling interests	(19)	9	4	—	—
Net income attributable to Medtronic	$ 4,631	$ 3,104	$ 4,028	$ 3,538	$ 2,675
Basic earnings per share	$ 3.44	$ 2.29	$ 2.92	$ 2.51	$ 2.44
Diluted earnings per share	3.41	2.27	2.89	2.48	2.41
Cash dividends declared per ordinary share	2.00	1.84	1.72	1.52	1.22
Financial Position at Fiscal Year-end:					
Total assets	89,694	91,393	99,857	99,685	106,726
Long-term debt	24,486	23,699	25,921	30,109	33,752
Shareholders' equity	50,091	50,720	50,208	51,977	53,144
Additional Information:					
Full-time employees at year-end	90,071	86,368	91,267	88,063	85,573
Full-time equivalent employees at year-end	101,013	98,003	102,688	98,017	92,500

(1) Covidien plc was acquired on January 26, 2015. As such, for the fiscal year ended April 24, 2015, the results of operations of Covidien are reflected in Medtronic's results of operations for only the fourth quarter due to the timing of the acquisition, which affects comparability.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis provides information management believes to be relevant to understanding the financial condition and results of operations of the Company. You should read this discussion and analysis along with our consolidated financial statements and related notes thereto at April 26, 2019 and April 27, 2018 and for each of the three fiscal years ended April 26, 2019 (fiscal year 2019), April 27, 2018 (fiscal year 2018), and April 28, 2017 (fiscal year 2017), which are presented within "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

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 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 diluted earnings per share for fiscal years 2019, 2018, and 2017:

	Fiscal Year			Percent Change	
(in millions, except per share data)	2019	2018	2017	2019	2018
Net income attributable to Medtronic	$ 4,631	$ 3,104	$ 4,028	49 %	(23 %)
Diluted earnings per share	$ 3.41	$ 2.27	$ 2.89	50 %	(21 %)

The increase in net income attributable to Medtronic and diluted earnings per share (EPS) for fiscal year 2019 as compared to fiscal year 2018 was primarily attributable to the $2.4 billion tax charge recognized during fiscal year 2018 related to the enactment of U.S. comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"). Further contributing to the increases was a reduction in other operating expense, net, and an increase in other non-operating income, net. These items were partially offset by the $697 million gain on the sale of our Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses within the Minimally Invasive Therapies Group on July 29, 2017 (the "Divestiture") in fiscal year 2018, along with increases in interest expense and restructuring and associated costs.

The decrease in net income attributable to Medtronic and diluted EPS for fiscal year 2018 as compared to fiscal year 2017 was unfavorably affected by the aforementioned $2.4 billion tax charge related to the Tax Act, along with the impacts of the Divestiture;

net sales of the divested businesses for fiscal years 2018 and 2017 were $0.6 billion and $2.4 billion, respectively. For fiscal year 2018, decreases in net income attributable to Medtronic and diluted EPS were partially offset by a $697 million gain on the Divestiture.

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 fiscal years 2019, 2018, and 2017.

GAAP to Non-GAAP Reconciliations The tables below present reconciliations of our Non-GAAP financial measures to the most directly comparable financial measures prepared in accordance with U.S. GAAP for fiscal years 2019, 2018, and 2017:

	Fiscal year ended April 26, 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	$ 5,197	$ 547	$ 4,631	$ 3.41	10.5 %
Non-GAAP Adjustments:					
Restructuring and associated costs [2]	407	66	341	0.25	16.2
Acquisition-related items [3]	88	16	72	0.05	18.2
Certain litigation charges	166	24	142	0.10	14.5
(Gain)/loss on minority investments [4]	(62)	3	(65)	(0.05)	(4.8)
Debt tender premium and other charges [5]	457	113	344	0.25	24.7
IPR&D charges [6]	58	9	49	0.04	15.5
Exit of businesses [7]	149	31	118	0.09	20.8
Amortization of intangible assets	1,764	267	1,497	1.10	15.1
Certain tax adjustments, net [8]	—	40	(40)	(0.03)	—
Non-GAAP	$ 8,224	$ 1,116	$ 7,089	$ 5.22	13.6 %

	Fiscal year ended April 27, 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	$ 5,675	$ 2,580	$ 3,104	$ 2.27	45.5 %
Non-GAAP Adjustments:					
Restructuring and associated costs [2]	107	20	87	0.06	18.7
Acquisition-related items [9]	132	42	90	0.07	31.8
Debt redemption premium [10]	38	12	26	0.02	31.6
Divestiture-related items [11]	115	12	103	0.08	10.4
Certain litigation charges	61	8	53	0.04	13.1
Investment loss [12]	227	(1)	228	0.17	(0.4)
IPR&D charges [13]	46	5	41	0.03	10.9
Gain on sale of businesses [14]	(697)	—	(697)	(0.51)	—
Hurricane Maria [15]	34	1	33	0.02	2.9
Contribution to Medtronic Foundation	80	26	54	0.04	32.5
Amortization of intangible assets	1,823	322	1,501	1.10	17.7
Certain tax adjustments, net [16]	—	(1,907)	1,907	1.39	—

Non-GAAP	$ 7,641	$ 1,120	$ 6,530	$ 4.77	14.7 %

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(in millions, except per share data)	Fiscal year ended April 28, 2017				
	Income Before Income Taxes	Income Tax Provision	Net Income Attributable to Medtronic	Diluted EPS [1]	Effective Tax Rate
GAAP	$ 4,602	$ 578	$ 4,028	$ 2.89	12.6%
Non-GAAP Adjustments:					
Restructuring charges, net	373	101	272	0.20	27.1
Acquisition-related items [9]	230	74	156	0.11	32.2
Certain litigation charges	300	110	190	0.14	36.7
Contribution to Medtronic Foundation	100	37	63	0.05	37.0
Impact of inventory step-up [17]	38	14	24	0.02	36.8
Amortization of intangible assets	1,980	520	1,460	1.05	26.3
Certain tax adjustments, net [18]	—	(202)	202	0.15	—
Non-GAAP	$ 7,623	$ 1,232	$ 6,395	$ 4.60	16.2%

(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 include unvested stock option payouts and investment banker and other transaction fees, along with integration-related costs incurred in connection with the Covidien acquisition and changes in the fair value of contingent consideration.

(4) Effective in fiscal year 2019, 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 net charge, which includes $485 million recognized in *interest expense* and ($28 million) recognized in *other operating expense, net*, primarily relates to the early redemption of approximately $6.4 billion of Medtronic Inc. and CIFSA senior notes.

(6) The charges represent acquired IPR&D in connection with asset acquisitions and charges recognized in connection with the impairment of IPR&D assets.

(7) The net charge relates to business exits and is primarily comprised of intangible asset impairments.

(8) The net benefit relates to the impacts of U.S. tax reform, along with intercompany legal entity restructuring, and the finalization of certain income tax aspects of the Divestiture.

(9) The charges primarily include integration-related costs incurred in connection with the Covidien acquisition and changes in the fair value of contingent consideration.

(10) The charge, included within *interest expense* in our consolidated statements of income, was recognized in connection with the early redemption of approximately $1.2 billion of Medtronic Inc. senior notes.

(11) The transaction expenses incurred in connection with the Divestiture.

(12) The charge was recognized in connection with the impairment of certain cost and equity method investments.

(13) The charge was recognized in connection with the impairment of IPR&D assets.

(14) The gain on the divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses.

(15) The charges represent idle facility costs, asset write-downs, and humanitarian efforts related to Hurricane Maria.

(16) The net charge primarily relates to the impact of U.S. tax reform, inclusive of the transition tax, remeasurement of deferred tax assets and liabilities, and the decrease in the U.S. statutory tax rate. Additionally, the net charge includes the impacts from the Divestiture, and the net tax cost associated with an internal reorganization, which were partially offset by the tax effects from the intercompany sale of intellectual property.

(17) The charge represents the amortization of step-up in fair value of inventory acquired in connection with the Covidien acquisition.

(18) The net charge primarily relates to the tax effect from the recognition of the outside basis of certain subsidiaries which were included in the Divestiture, along with certain tax charges recorded in connection with the redemption of an intercompany minority interest, and the resolution of various tax matters from prior periods.

NET SALES

Segment and Division

The table below illustrates net sales by segment and division for fiscal years 2019, 2018, and 2017:

	Net Sales by Fiscal Year			Percent Change	
(in millions)	2019	2018	2017	2019	2018
Cardiac Rhythm & Heart Failure	$ 5,849	$ 5,947	$ 5,649	(2) %	5 %
Coronary & Structural Heart	3,730	3,562	3,113	5	14
Aortic, Peripheral & Venous	1,926	1,845	1,736	4	6
Cardiac and Vascular Group	11,505	11,354	10,498	1	8
Surgical Innovations	5,753	5,537	5,145	4	8
Respiratory, Gastrointestinal, & Renal	2,725	3,179	4,774	(14)	(33)
Minimally Invasive Therapies Group	8,478	8,716	9,919	(3)	(12)
Spine	2,654	2,668	2,641	(1)	1
Brain Therapies	2,604	2,354	2,098	11	12
Specialty Therapies	1,641	1,556	1,491	5	4
Pain Therapies	1,284	1,165	1,136	10	3
Restorative Therapies Group	8,183	7,743	7,366	6	5
Diabetes Group	2,391	2,140	1,927	12	11
Total	$ 30,557	$ 29,953	$ 29,710	2 %	1 %

Net sales growth for fiscal year 2019 as compared to fiscal year 2018 was primarily attributable to strong growth in our Restorative Therapies Group and Diabetes Group, partially offset by the impact of the Divestiture within the Minimally Invasive Therapies Group.

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 6 percent during fiscal year 2019 as compared to fiscal year 2018. Our emerging market performance continues to benefit from geographic diversification, with strong, balanced results 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 while delivering 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.

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Segment and Market Geography

The tables below include net sales by market geography for each of our segments for fiscal years 2019, 2018, and 2017:

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	U.S.[1]			Non-U.S. Developed Markets[2]			Emerging Markets[3]		
(in millions)	Fiscal Year 2019	Fiscal Year 2018	% Change	Fiscal Year 2019	Fiscal Year 2018	% Change	Fiscal Year 2019	Fiscal Year 2018	% Change
Cardiac and Vascular Group	$ 5,750	$ 5,681	1 %	$ 3,767	$ 3,790	(1 %	$ 1,988	$ 1,883	6 %
Minimally Invasive Therapies Group	3,630	3,804	(5)	3,250	3,378	(4)	1,598	1,534	4
Restorative Therapies Group	5,478	5,164	6	1,759	1,720	2	946	859	10
Diabetes Group	1,336	1,226	9	855	739	16	200	175	14
Total	$ 16,194	$ 15,875	2 %	$ 9,631	$ 9,627	— %	$ 4,732	$ 4,451	6 %

	U.S.[1]			Non-U.S. Developed Markets[2]			Emerging Markets[3]		
(in millions)	Fiscal Year 2018	Fiscal Year 2017	% Change	Fiscal Year 2018	Fiscal Year 2017	% Change	Fiscal Year 2018	Fiscal Year 2017	% Change
Cardiac and Vascular Group	$ 5,681	$ 5,454	4 %	$ 3,790	$ 3,393	12 %	$ 1,883	$ 1,651	14 %
Minimally Invasive Therapies Group	3,804	5,049	(25)	3,378	3,479	(3)	1,534	1,391	10
Restorative Therapies Group	5,164	5,012	3	1,720	1,588	8	859	766	12
Diabetes Group	1,226	1,148	7	739	625	18	175	154	14
Total	$ 15,875	$ 16,663	(5 %	$ 9,627	$ 9,085	6 %	$ 4,451	$ 3,962	12 %

(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.

Net sales increases in the U.S. for fiscal year 2019 as compared to fiscal year 2018 were primarily attributable to strong growth in our Restorative Therapies Group and Diabetes Group, partially offset by the impact of the Divestiture within the Minimally Invasive Therapies Group. Net sales remained flat in non-U.S. developed markets for fiscal year 2019, reflecting consistent growth across our segments in Japan and Korea, partially offset by declines in Australia. Net sales growth in emerging markets continues to reflect our broad diversification and was driven by strong performance in China, the Middle East & Africa, Eastern Europe, and both South and Southeast Asia. Currency had an unfavorable impact on net sales in non-U.S. developed markets and emerging markets of $205 million and $250 million, respectively, for fiscal year 2019.

Net sales declines in the U.S. for fiscal year 2018 as compared to fiscal year 2017 were primarily attributable to the Divestiture within the Minimally Invasive Therapies Group, partially offset by growth in our other segments. Net sales growth in non-U.S.

developed markets was led by strong performance in Western Europe. Net sales growth in emerging markets continues to reflect our broad diversification and was driven by strong performance in all of our segments, with strong performance in China, Latin America, Eastern Europe, and the Middle East & Africa.

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, the 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 fiscal year 2019 were $11.5 billion, an increase of 1 percent as compared to fiscal year 2018. Currency had an unfavorable impact on net sales for fiscal year 2019 of $182 million. The Cardiac and Vascular Group's net sales for fiscal year 2019, as compared to fiscal year 2018, benefited from net sales growth in Coronary & Structural Heart and Aortic, Peripheral & Venous (formerly known as Aortic & Peripheral Vascular) divisions, offset by declines in Cardiac Rhythm & Heart Failure.

Cardiac Rhythm & Heart Failure net sales for fiscal year 2019 were $5.8 billion, a decrease of 2 percent as compared to fiscal year 2018. Cardiac Rhythm & Heart Failure net sales decrease for fiscal year 2019 was driven by declines in Heart Failure, Care Management Services, and CLMS, offset by growth in Arrhythmia Management. The decline in Heart Failure was driven by CRT-D replacements and LVAD headwinds due to a competitor product launch in the U.S. and changes in the U.S. heart transplant guidelines. The growth in Arrhythmia Management was driven by AF Solutions due to the continued strength of the Arctic Front Cardiac CryoAblation Catheter System and Diagnostics due to growth from our Reveal LINQ insertable cardiac monitor. Arrhythmia Management net sales growth also benefited from strong adoption of the TYRX absorbable antibacterial envelope through further expansion of value-based health-care arrangements.

Coronary & Structural Heart net sales for fiscal year 2019 were $3.7 billion, an increase of 5 percent as compared to fiscal year 2018. Coronary & Structural Heart net sales growth for fiscal year 2019 was driven by the global strength of the CoreValve Evolut PRO transcatheter aortic valve system (Evolut PRO) and continued penetration into intermediate risk in the U.S., as well as growth in cannulae, including the Bio-Medicus Next Gen Cannulae, guide catheters, and coronary balloons.

Aortic, Peripheral & Venous net sales for fiscal year 2019 were $1.9 billion, an increase of 4 percent as compared to fiscal year 2018. Aortic, Peripheral & Venous net sales growth for fiscal year 2019 was driven by strong performance of the VenaSeal vein closure system, for which final approval for reimbursement payment in the U.S. from the Centers for Medicare & Medicaid Services (CMS) was received in January 2018, growth in Percutaneous Transluminal Angioplasty (PTA) balloons, as well as the launch of the Valiant Navion thoracic stent graft system which received U.S. FDA and CE Mark approval in October and November 2018, respectively.

Cardiac Rhythm & Heart Failure net sales for fiscal year 2018 were $5.9 billion, an increase of 5 percent as compared to fiscal year 2017. Cardiac Rhythm & Heart Failure net sales growth for fiscal year 2018 was driven by strong growth in Arrhythmia Management and Heart Failure. The strong growth in Arrhythmia Management was largely due to growth in AF Solutions, driven by the continued global acceptance of our Arctic Front Cardiac CryoAblation Catheter System, growth in Diagnostics, driven by the continued adoption of the Reveal LINQ insertable cardiac monitor, as well as strong adoption of the Micra transcatheter pacing system and TYRX absorbable

antibacterial envelope. The strong growth in Heart Failure was driven by growth in Mechanical Circulatory Support from sales of the HVAD system, as well as continued demand for the CRT-P quadripolar pacing system, which launched in the U.S. in the first quarter of fiscal year 2018.

Coronary & Structural Heart net sales for fiscal year 2018 were $3.6 billion, an increase of 14 percent as compared to fiscal year 2017. Coronary & Structural Heart net sales growth for fiscal year 2018 was largely driven by the continued strong customer adoption of Evolut PRO and the Evolut R 34mm transcatheter aortic heart valve, as well as continued penetration into intermediate risk in the U.S., which received approval late in the first quarter of fiscal year 2018. Net sales growth was also driven by the continued strong demand for the Resolute Onyx drug-eluting stent in the U.S. and Japan, which launched in the first quarter of fiscal year 2018.

Aortic, Peripheral & Venous net sales for fiscal year 2018 were $1.8 billion, an increase of 6 percent as compared to fiscal year 2017. Aortic, Peripheral & Venous net sales growth for fiscal year 2018 was driven by growth in Valiant Captivia thoracic stent grafts, PTA and drug-coated balloons, as well as success of the Heli-FX EndoAnchor System. Net sales growth was further driven by strong performance in EndoVenous due to accelerated growth of the VenaSeal vein closure system, for which approval for reimbursement payment in the U.S. from CMS was received in January 2018.

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

- Acceptance and growth from penetration of the self-expanding CoreValve Evolut transcatheter aortic valve replacement platform into intermediate risk indication in the U.S.

- Continued acceptance and growth from Evolut PRO, which provides industry-leading hemodynamics, reliable delivery, and advanced sealing with an excellent safety profile. Evolut PRO received CE Mark approval at the end of the first quarter of fiscal year 2018 and launched in Europe during the second quarter of fiscal year 2018. Evolut PRO launched in Japan and received approval from the Ministry of Health, Labour, and Welfare during the second quarter of fiscal year 2019.

- 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, which launched in Japan during the third quarter of fiscal year 2018.

- Continued growth of our Micra transcatheter pacing system. We received final approval for reimbursement in the U.S. from the CMS and in Japan from the Ministry of Health, Labour, and Welfare during the fourth quarter of fiscal year 2017 and during the second quarter of fiscal year 2018, respectively, which we expect will continue to accelerate sales in the U.S. and in Japan.

- Continued acceptance and growth from the Azure XT and S SureScan pacing systems, which launched in the U.S. during the third quarter of fiscal year 2018. 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 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.

- Approval and acceptance of the self-expanding CoreValve Evolut transcatheter aortic valve replacement platform for the treatment of patients determined to be at low risk with surgery. The

application for expanded indication is pending regulatory approval and is anticipated in fiscal year 2020.

- 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.

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. Net sales for the three months ended July 28, 2017 and fiscal year 2017 also include sales of dental and animal health, chart paper, wound care, incontinence, electrodes, SharpSafety, thermometry, perinatal protection, blood collection, compression, and enteral feeding offerings, which were divested on July 29, 2017.

The Minimally Invasive Therapies Group's net sales for fiscal year 2019 were $8.5 billion, a decrease of 3 percent as compared to fiscal year 2018. Currency had an unfavorable impact on net sales of $164 million for fiscal year 2019. The Minimally Invasive Therapies Group's net sales for fiscal year 2018 were affected by the Divestiture.

Subsequent to the Divestiture, during the second quarter of fiscal year 2018, the Surgical Solutions and Patient Monitoring & Recovery divisions were realigned into the Surgical Innovations and Respiratory, Gastrointestinal, & Renal divisions. The Surgical Innovations division consists of the Advanced Surgical and General Surgical businesses. The Advanced Surgical business includes the Advanced Stapling, Advanced Energy, Hernia, Gynecology, and Interventional Lung product lines. The General Surgical business includes the Wound Closure, Electrosurgery, and Instrument product lines.

The Respiratory, Gastrointestinal, & Renal division consists of the Patient Monitoring, Respiratory Interventions, GI & Hepatology, and Renal Care Solutions businesses. The Patient Monitoring business includes Oxygenation, Anesthesia, and Perfusion Monitoring and Informatics product lines. The Respiratory Interventions business includes Airway and Ventilation product lines. The GI & Hepatology business includes GI Diagnostics and Therapeutics product lines. The Renal Care Solutions business includes the Renal Access and Dialyzers product lines.

Surgical Innovations net sales for fiscal year 2019 were $5.8 billion, an increase of 4 percent as compared to fiscal year 2018. Surgical Innovations net sales growth was driven by new products in Advanced Stapling and Advanced Energy, led by the LigaSure vessel sealing instruments with nano-coating, Exact and L-Hook, and both the Tri-Staple 2.0 endo stapling specialty reloads and Signia powered stapler.

Respiratory, Gastrointestinal, & Renal net sales for fiscal year 2019 were $2.7 billion, a decrease of 14 percent as compared to fiscal year 2018, due to the Divestiture. Aside from the decline due to the Divestiture, Respiratory, Gastrointestinal, & Renal net sales growth was driven by growth in Patient Monitoring, including the continued adoption of MicroStream capnography monitoring products and pulse oximetry, along with growth in Respiratory Interventions, including the continued adoption of ventilators and video laryngoscopy products. Also driving growth for fiscal year 2019 was growth in GI & Hepatology and strength in renal access products.

Surgical Innovations net sales for fiscal year 2018 were $5.5 billion, an increase of 8 percent as compared to fiscal year 2017. Surgical Innovations net sales growth was driven by new products in Advanced Stapling and Advanced Energy, including the Signia powered surgical stapling system and endo stapling specialty reloads. Also driving net sales growth was our Valleylab FT10 energy platform and new iterations of our LigaSure vessel sealing instruments, along with growth in emerging markets.

Respiratory, Gastrointestinal, & Renal net sales for fiscal year 2018 were $3.2 billion, a decrease of 33 percent as compared to fiscal year 2017. Respiratory, Gastrointestinal, & Renal net sales declined as a result of the Divestiture. Apart from the decline in net sales due to the Divestiture, net sales performance in Respiratory, Gastrointestinal, & Renal benefited from growth in GI Solutions, the strength in Nellcor pulse oximetry products due to the intensity of the flu season in the U.S., the continued adoption of MicroStream capnography monitoring product, and growth in Airway and Ventilation net sales.

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 robotics platform.

- Our ability to obtain adequate replacement sterilization capacity in our Surgical Innovations business and Gastrointestinal product lines in light of the Illinois Environmental Protection Agency's (Illinois EPA) decision to close the Sterigenics U.S. LLC (Sterigenics) Willowbrook, Illinois facility on February 15, 2019. We have

been working to identify alternate suppliers and rerouting our supply chain, and expect to return to full sterilization capacity late in the first quarter of fiscal year 2020.

- The July 29, 2017 divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses. Net sales of the businesses included in the Divestiture were $0.6 billion and $2.4 billion for fiscal years 2018 and 2017, respectively. 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 will 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.

- Continued acceptance and growth in respiratory care, airway and ventilation management, and Patient Monitoring. Key products in this area include the Puritan Bennett 980 ventilator, Microstream Capnography bedside capnography monitor, portable monitor with Nellcor pulse oximetry system with OxiMax technology and the Nellcor Respiratory Compromise monitor with vital signs of SpO2, pulse rate, End-Tidal CO2, McGRATH MAC video laryngoscopes, and Respiratory Rate.

- Continued and future acceptance of less invasive standards of care, including the areas of GI Diagnostic and Therpeutic product lines. Recently launched products include the PillCam COLON capsule endoscopy, the Barrx platform through ablation with the Barrx 360 Express catheter, Endoflip Reflux/Disphagia diagnosis, 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 stent retrievers, and flow diversion products. The Restorative Therapies Group’s net sales for fiscal year 2019 were $8.2 billion, an increase of 6 percent as compared to fiscal year 2018. Currency had a negative impact on net sales for fiscal year 2019 of $73 million. The Restorative Therapies Group’s performance for fiscal year 2019 was driven by the Brain Therapies, Specialty Therapies, and Pain Therapies divisions.

Spine net sales for fiscal year 2019 were $2.7 billion, a decrease of 1 percent as compared to fiscal year 2018. Despite the decline, we saw incremental growth driven by increased spinal impact attachment rates in conjunction with our Surgical Synergy strategy, which integrates our spinal implants with enabling technologies such as robotics, imaging, navigation, power instruments, and nerve monitoring. Further contributing to growth was our "Speed-to-Scale" initiative, which involves faster innovation cycles and the launching of a steady cadence of new products at scale with sets immediately available for the entire market. Recently launched products include the Infinity OCT System and the Solera Voyager 5.5/6.0 fixation system.

Brain Therapies net sales for fiscal year 2019 were $2.6 billion, an increase of 11 percent as compared to fiscal year 2018. Brain Therapies net sales growth was driven by strong growth in both Neurovascular and Neurosurgery. Neurovascular net sales growth was driven by strength across our stroke franchise, with growth across our stent retriever, flow diversion, neuro access, coil, and embolic protection products. Neurosurgery net sales growth was driven by strong capital equipment sales of the Mazor X robotic guidance systems, StealthStation S8 surgical navigation systems, Midas Rex powered surgical instrument systems, O-Arm Imaging Systems, and Visualase MRI-guided laser ablation systems.

Specialty Therapies net sales for fiscal year 2019 were $1.6 billion, an increase of 5 percent as compared to fiscal year 2018. Net sales growth was driven by strong sales of the Aquamantys biopolar sealers and PlasmaBlade dissection devices within Transformative Solutions and growth in ENT.

Pain Therapies net sales for fiscal year 2019 were $1.3 billion, an increase of 10 percent as compared to fiscal year 2018. The increase in net sales was driven by our Intellis spinal cord stimulation platform which received U.S. FDA approval in September 2017 and CE Mark in November 2017. Further driving net sales growth were the Evolve workflow algorithm, Snapshot reports, and our Targeted Drug Delivery products, including the new clinician and patient programmers.

Spine net sales for fiscal year 2018 were $2.7 billion, an increase of 1 percent as compared to fiscal year 2017. Spine net sales growth was driven by growth in bone morphogenetic protein (composed of INFUSE bone graft (InductOs in the European Union)), partially offset by a slight decline in Core Spine. Core Spine net sales declined due to continued overall market softness in the U.S. and Europe, partially offset by the continued success of our Surgical Synergy strategy and our "Speed-to-Scale" initiative.

Brain Therapies net sales for fiscal year 2018 were $2.4 billion, an increase of 12 percent as compared to fiscal year 2017. Brain Therapies net sales growth was driven by strong growth in both Neurovascular and Neurosurgery. Neurovascular net sales growth was driven by strength across our stroke portfolio, specifically in stents, as a result of our leading role in the development of the endovascular therapy market for treatment of ischemic stroke. Neurosurgery net sales growth was driven by strong sales of the StealthStation S8 surgical navigation system, O-arm O2 surgical imaging system, Visualase MRI-guided laser ablation system, Midas disposables, as well as disposables revenue from placement of capital equipment. Net sales growth in Neurovascular and Neurosurgery for fiscal year 2018 was partially offset by slight declines in Brain Modulation due to competitive pressures in major markets.

Specialty Therapies net sales for fiscal year 2018 were $1.6 billion, an increase of 4 percent as compared to fiscal year 2017. Specialty Therapies net sales growth was driven by growth in ENT, Pelvic Health, and Transformative Solutions.

Pain Therapies net sales for fiscal year 2018 were $1.2 billion, an increase of 3 percent as compared to fiscal year 2017. Pain Therapies net sales growth was driven by Interventional from the OsteoCool RF Spinal Tumor ablation system. Within Spinal Cord Stimulation, the Intellis Platform launch and ongoing roll-out of the Evolve workflow algorithm contributed to net sales in fiscal year 2018 and helped mitigate competitive pressures in the U.S. and Europe.

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

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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.

- Acceptance of our React Catheter and Riptide aspiration system, along with the launch of 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.

- 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, such as our Infinity OCT System and Solera Voyager 5.5/6.0 fixation system, as well as our CD Horizon Solera Voyager system, our ELEVATE expandable interbody cages, and our OLIF25 and OLIF51 procedural solutions.

- 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 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 Transformative Solutions core portfolio products including Aquamantys biopolar sealers and PlasmaBlade soft tissue dissection devices.

Diabetes Group

The Diabetes Group's products include insulin pumps, continuous glucose monitoring (CGM) systems, insulin pump consumables, and therapy management software. The Diabetes Group’s net sales for fiscal year 2019 were $2.4 billion, an increase of 12 percent as compared to fiscal year 2018. Currency had an unfavorable impact on net sales for fiscal year 2019 of $36 million. The Diabetes Group's net sales growth for fiscal year 2019 was primarily attributable to the continued demand for the MiniMed 670G hybrid closed loop system, which offers the latest in SmartGuard technology, as well as the higher sensor attachment and utilization we are seeing with our integrated CGM users. Further, we experienced continued international growth due to strong sales of insulin pump systems in Europe, Latin America, and Asia Pacific as well as worldwide strength of the Guardian Connect CGM system.

The Diabetes Group’s net sales for fiscal year 2018 were $2.1 billion, an increase of 11 percent as compared to fiscal year 2017. The Diabetes Group's net sales growth for fiscal year 2018 was primarily attributable to increased sales in the U.S. due to continued growth in our customer base through the adoption of the MiniMed 670G hybrid closed loop system. Further, we experienced continued international growth due to strong sales of the MiniMed 640G system in Europe and Asia Pacific.

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

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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. More than 180,000 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 certain European countries. The global adoption of sensor-augmented insulin pump systems has resulted in strong sensor attachment rates.

- 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, along with the advancement of our Personalized Closed Loop system which was recently granted "Breakthrough Device" designation by the FDA. 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.

- Continued partnership and future growth of our outcomes-based agreement with select health plans (i.e. Aetna), where a component of our pump reimbursement is based on successfully meeting clinical improvement thresholds as part of our value-based healthcare solutions.

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 in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

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 19 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Income Tax Reserves and U.S. Tax Reform 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.

On December 22, 2017, the U.S. government enacted comprehensive tax legislation, commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"), which significantly revised U.S. corporate income taxation by, among other things, lowering the U.S. corporate income tax rate, broadening the base of taxation, and implementing a territorial

tax system. We had a measurement period of up to one year after the enactment date of the Tax Act to finalize the recognition of the related tax impacts. The measurement period closed during fiscal year 2019.

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.

ACQUISITIONS AND DIVESTITURES

Information regarding acquisitions and divestitures is included in Notes 3 and 4, respectively, to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

NEW ACCOUNTING PRONOUNCEMENTS

Information regarding new accounting pronouncements is included in Note 1 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

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:

	Fiscal Year		
	2019	2018	2017
Cost of products sold	30.0 %	30.3 %	31.3 %
Research and development expense	7.6 %	7.5 %	7.4 %
Selling, general, and administrative expense	34.1 %	34.2 %	33.7 %

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 was $9.2 billion, $9.1 billion, and $9.3 billion during fiscal years 2019, 2018, and 2017, respectively. The decrease in cost of products sold as a percentage of net sales from fiscal year 2019 as compared to fiscal year 2018 was favorably affected by decreased sales of lower-margin products as a result of the Divestiture. Also contributing to the decrease in cost of products sold as a percentage of net sales during fiscal year 2019 was the infusion set recall in our Diabetes Group, along with $17 million of costs recognized in relation to restoring operations at four Puerto Rico manufacturing sites after Hurricane Maria, including idle facility costs, asset write-downs, and other facility-related costs, incurred during fiscal year 2018. These benefits were slightly offset by increased restructuring and associated costs, a change in product mix due to strong growth in some of our lower-margin businesses, and additional expenses incurred due to the closing of a supplier sterilization facility used by our

Minimally Invasive Therapies Group during fiscal year 2019. Cost of products sold for fiscal year 2019 includes $91 million of restructuring and associated costs, as compared to $40 million for fiscal year 2018.

The decrease in cost of products sold as a percentage of sales from fiscal year 2018 as compared to 2017 was due primarily to decreased sales of lower-margin products as a result of the Divestiture and a $38 million charge recognized during fiscal year 2017 related to the fair value step-up taken on inventory acquired in connection with the HeartWare acquisition. Partially offsetting these benefits were the costs recognized in relation to restoring operations at four Puerto Rico manufacturing sites after Hurricane Maria and the infusion set recall in our Diabetes group during fiscal year 2018.

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 was $2.3 billion during fiscal years 2019 and 2018 and $2.2 billion during fiscal year 2017.

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, restructuring, and divestiture-related expenses.

Selling, general, and administrative expense was $10.4 billion, $10.2 billion, and $10.0 billion during fiscal years 2019, 2018, and 2017, respectively. The decrease in selling, general, and administrative expense as a percentage of sales from fiscal year 2018 to 2019 benefited from our Enterprise Excellence program, continued net sales growth, cost containment measures, and $115 million of professional service fees and accelerated stock compensation expense incurred in connection with the Divestiture during fiscal year 2018. Offsetting these benefits were increased restructuring and associated costs. Selling, general, and administrative expense in fiscal year 2019 includes $118 million of restructuring and associated costs, as compared to $37 million in fiscal year 2018.

The increase in selling, general, and administrative expense as a percentage of net sales from fiscal year 2017 to 2018 was driven by expenses incurred for new product launches, expenses incurred to fulfill our Transition Service Agreements (TSAs) that we entered into with Cardinal Health in conjunction with the Divestiture, and $115 million of professional service fees and accelerated stock compensation expense incurred in connection with the Divestiture. Offsetting these increases were decreased acquisition-related items. Selling, general, and administrative expense in fiscal year 2018 includes $137 million of acquisition-related items, as compared to $303 million in fiscal year 2017.

The following is a summary of other costs and expenses:

	Fiscal Year		
(in millions)	2019	2018	2017
Amortization of intangible assets	$ 1,764	$ 1,823	$ 1,980
Restructuring charges, net	198	30	303
Certain litigation charges	166	61	300
Gain on sale of businesses	—	(697)	—
Other operating expense, net	258	535	239
Other non-operating income, net	(373)	(181)	(313)
Interest expense	1,444	1,146	1,094

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 $1.8 billion during fiscal years 2019 and 2018 and $2.0 billion during fiscal year 2017.

While amortization expense remained consistent when comparing fiscal year 2018 to 2019, the decrease in amortization expense from fiscal year 2017 to fiscal year 2018 was primarily attributable to the discontinuation of amortization on the definite-lived intangible assets classified as assets held for sale at April 28, 2017 and through the first quarter of fiscal year 2018 related to the Divestiture, which was completed during the second quarter of fiscal year 2018.

Restructuring Charges, Net

Enterprise Excellence

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 restructuring charges are related to employee termination benefits. The remaining restructuring 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.

During fiscal year 2019, we recognized restructuring charges of $424 million. For fiscal year 2019, restructuring charges included $198 million recognized within *restructuring charges, net* in the consolidated statements of income, primarily comprised of employee termination benefits. For fiscal year 2019, restructuring 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 $91 million recognized within *cost of products sold* and $118 million recognized within *selling, general and administrative expense* in the consolidated statements of income. For fiscal year 2019, *selling, general, and administrative expense* also includes $17 million of fixed asset write-downs.

During fiscal year 2018, we recognized restructuring charges of $96 million. For fiscal year 2018, restructuring charges included $35 million recognized within *restructuring charges, net* in the consolidated statements of income, primarily comprised of employee termination benefits. For fiscal year 2018, restructuring 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 $28 million recognized within *cost of products sold* and $33 million recognized within *selling, general and administrative expense* in the consolidated statements of income.

Cost Synergies

In the third quarter of fiscal year 2018, we achieved $850 million in cost synergies related to the acquisition of Covidien plc. The cost synergies related to administrative office optimization, manufacturing and supply chain infrastructure, and certain general and administrative savings. Cash outlays for the cost synergies program are scheduled to be substantially complete by the end of fiscal year 2019.

During fiscal year 2019, we recognized no restructuring charges and accrual adjustments of $17 million. Accrual adjustments relate to certain employees identified for termination finding other positions within Medtronic, cancellations of employee terminations, and employee termination benefits being less than initially estimated.

For fiscal years 2018 and 2017, we recognized restructuring charges of $45 million and $441 million, respectively, partially offset by accrual adjustments of $34 million and $68 million, respectively. Accrual adjustments relate to certain employees identified for termination finding other positions within Medtronic, cancellations of employee terminations, and employee termination benefits being less than initially estimated. For fiscal year 2017, restructuring charges included asset write-downs of $17 million related to property, plant, and equipment impairments and $10 million related to inventory write-offs recognized within *cost of*

products sold in the consolidated statements of income. Additionally, fiscal year 2017 restructuring charges included $73 million of incremental defined benefit pension and post-retirement related expenses for employees that accepted voluntary early retirement packages.

For additional information, see Note 5 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Certain Litigation Charges We classify litigation charges and gains related to significant legal matters as certain litigation charges. During fiscal years 2019, 2018, and 2017, we recognized $166 million, $61 million, and $300 million, respectively, of certain litigation charges related to probable and estimable damages for significant legal matters.

Gain on Sale of Businesses We recognized a pre-tax gain of $697 million on the sale of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses during fiscal year 2018. There were no sales of businesses during fiscal years 2019 or 2017.

Other Operating Expense, Net Other operating expense, net primarily includes royalty income and expense, TSA income, intangible asset charges, currency transaction and derivative gains and losses, contributions to the Medtronic Foundation, Puerto Rico excise taxes, changes in the fair value of contingent consideration, and charges associated with business exits. Other operating expense, net was $258 million, $535 million, and $239 million, during fiscal years 2019, 2018, and 2017, respectively.

The decrease in other operating expense, net from fiscal year 2018 to fiscal year 2019 was primarily attributable to remeasurement and our hedging programs, which, combined, resulted in a gain of $87 million for fiscal year 2019 and a loss of $176 million for fiscal year 2018. Also contributing to the change was a charge of $80 million recognized in fiscal year 2018 for charitable contributions to the Medtronic Foundation and increased gains from the change in fair value of contingent consideration. These items were partially offset by intangible asset impairments and other charges of $149 million associated with business exits during fiscal year 2019 and a reduction of TSA income.

The increase in other operating expense, net from fiscal year 2017 to fiscal year 2018 was primarily attributable to remeasurement and our hedging programs, which, combined, resulted in a loss of $176 million for fiscal year 2018 and a gain of $81 million for fiscal year 2017. Also contributing to the increase were losses of $68 million related to the impairment of IPR&D assets in fiscal year 2018, $15 million of humanitarian aid provided to our employees affected by Hurricane Maria in fiscal year 2018, and a decrease in gains from the changes in fair value of contingent consideration. These items were partially offset by $74 million of TSA income and a reduction in charitable contributions to the Medtronic Foundation.

Other Non-Operating Income, Net Other non-operating income, net includes the non-service component of net periodic pension and post-retirement benefit cost, investment gains and losses, and interest income. Other non-operating income, net was $373 million, $181 million, and $313 million during fiscal years 2019, 2018, and 2017, respectively.

The change in other non-operating income, net from fiscal year 2018 to 2019 was due to $227 million of losses recognized in fiscal year 2018 related to the impairment of certain cost and equity method investments, increased investment gains on our minority investment portfolio, and decreased interest income. Increases in investment gains on our minority investment portfolio were partially due to the adoption of new accounting guidance in the first quarter of fiscal year 2019. Refer to Note 1 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K for more information on recently adopted accounting pronouncements.

The change in other non-operating income, net from fiscal year 2017 to 2018 was due to $227 million of losses recognized in fiscal year 2018 related to the impairment of certain cost and equity method investments, partially offset by increased interest income, and charges of $60 million related to the non-service component of net periodic pension and post-retirement benefit costs associated with voluntary early retirement packages offered and accepted by certain eligible U.S. employees during fiscal year 2017.

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, ineffectiveness on interest rate derivative instruments, and charges recognized in connection with the tender and early redemption of senior notes. Interest expense was $1.4 billion during fiscal year 2019 and $1.1 billion during fiscal years 2018 and 2017.

The increase in interest expense from fiscal year 2018 to 2019 was the result of $485 million of charges recognized in connection with the tender and early redemption of approximately $6.4 billion of Medtronic Inc. and CIFSA senior notes during fiscal year 2019. This increase in interest expense was partially offset by interest expense savings resulting from a decrease in total debt obligations and a decrease in the weighted-average interest rate of outstanding debt obligations during fiscal year 2019, on average, compared to fiscal year 2018.

The change in interest expense from fiscal year 2017 to 2018 was primarily driven by modestly higher average interest rates on total debt obligations outstanding and a $38 million charge recognized in connection with the early redemption of approximately $1.2 billion of Medtronic Inc. senior notes during fiscal year 2018.

INCOME TAXES

	Fiscal Year		
(in millions)	**2019**	**2018**	**2017**
Income tax provision	$ 547	$ 2,580	$ 578
Income before income taxes	5,197	5,675	4,602
Effective tax rate	10.5 %	45.5 %	12.6 %
Non-GAAP income tax provision	$ 1,116	$ 1,120	$ 1,232
Non-GAAP income before income taxes	8,224	7,641	7,623
Non-GAAP Nominal Tax Rate	13.6 %	14.7 %	16.2 %
Difference between the effective tax rate and Non-GAAP Nominal Tax Rate	3.1 %	(30.8 %)	3.6 %

On December 22, 2017, the U.S. government enacted the Tax Act, which significantly revises U.S. corporate income taxation by, among other things, lowering the U.S. corporate income tax rate from 35.0 percent to 21.0 percent, broadening the base of taxation, implementing a territorial tax system, and imposing a repatriation tax on deemed repatriated earnings of foreign subsidiaries.

We made the accounting policy election to treat taxes due on U.S. inclusions in taxable income related to Global Intangible Low-Taxed Income (GILTI) as a current period expense when incurred (the "period cost method").

Many of the countries we operate in have statutory tax rates lower than our blended U.S. statutory rate, thereby resulting in an overall effective tax rate less than the U.S. statutory rate of 21.0 percent for fiscal year 2019. 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 expire between fiscal years 2020 and 2030. The tax incentive grants which expired during fiscal year 2019 did not have a material impact on our financial results. See Note 14 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K for additional information.

Our effective tax rate for fiscal year 2019 was 10.5 percent, as compared to 45.5 percent in fiscal year 2018. The decrease in the effective tax rate was primarily due to the impacts from U.S. tax reform, certain tax adjustments, the gain on the Divestiture, the impact from investment losses, and year-over-year changes in operational results by jurisdiction.

Our Non-GAAP Nominal Tax Rate for fiscal year 2019 was 13.6 percent, as compared to 14.7 percent in fiscal year 2018. The decrease in our Non-GAAP Nominal Tax Rate for fiscal year 2019 as compared to fiscal year 2018 was primarily due to the impacts from U.S. tax reform and year-over-year changes in operational results by jurisdiction.

During fiscal year 2019, we recognized $134 million of operational tax benefits. The operational tax benefits included a $50 million benefit from excess tax benefits associated with stock-based compensation, and an $84 million net benefit associated with the resolution of certain income tax audits, finalization of certain tax returns, changes to uncertain tax position reserves, and changes to certain deferred income tax balances.

Our effective tax rate for fiscal year 2018 was 45.5 percent, as compared to 12.6 percent in fiscal year 2017. The increase in the effective tax rate was primarily due to the impacts from U.S. tax reform, the Divestiture, the utilization of non-U.S. special deductions, the net tax cost associated with an internal reorganization, excess tax benefits associated with stock-based compensation, and the tax effect from the intercompany sales of certain intellectual property.

Our Non-GAAP Nominal Tax Rate for fiscal year 2018 was 14.7 percent, as compared to 16.2 percent in fiscal year 2017. The decrease in our Non-GAAP Nominal Tax Rate for fiscal year 2018 as compared to fiscal year 2017 was primarily due to operational tax benefits and year-over-year changes in operational results by jurisdiction.

During fiscal year 2018, we recognized $135 million of operational tax benefits. The operational tax benefits included a $61 million benefit from excess tax benefits associated with stock-based compensation and a $74 million net benefit associated with

the resolution of certain income tax audits, finalization of certain tax returns, changes to uncertain tax position reserves, and changes to certain deferred income tax balances.

An increase in our Non-GAAP Nominal Tax Rate of 1 percent would result in an additional income tax provision for fiscal years 2019, 2018, and 2017 of approximately $82 million, $77 million, and $76 million, respectively.

Certain Tax Adjustments

During fiscal year 2019, certain tax adjustments of $40 million, recognized in *income tax provision* in the consolidated statement of income, included the following:

- A net benefit of $30 million associated with the finalization of the transition tax liability and the Tax Act impact to deferred tax assets, liabilities, and valuation allowances.

- 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 under the Tax Act and the current year sale of U.S. manufactured inventory held as of April 27, 2018.

- A benefit of $32 million related to intercompany legal entity restructuring.

- A net benefit of $20 million associated with the finalization of certain income tax aspects of the Divestiture.

During fiscal year 2018, certain tax adjustments of $1.9 billion, recognized in *income tax provision* in the consolidated statement of income, included the following:

- A net charge of $2.4 billion associated with U.S. tax reform, inclusive of the transition tax, remeasurement of U.S. Federal deferred tax assets and liabilities, and the decrease in the U.S. statutory tax rate.

- A charge of $73 million associated with an internal reorganization of certain foreign subsidiaries.

- A net benefit of $579 million associated with the intercompany sale of intellectual property.

During fiscal year 2017, certain tax adjustments of $202 million, recognized in *income tax provision* in the consolidated statement of income, included the following:

- A charge of $404 million associated with the IRS resolution for the Ardian, CoreValve, Inc., Ablation Frontiers, Inc., PEAK Surgical, Inc. and Salient Surgical Technologies, Inc. acquisition-related issues and the allocation of income between Medtronic, Inc. and its wholly owned subsidiary operating in Puerto Rico for certain businesses. This resolution does not include the businesses that are the subject of the Medtronic, Inc. U.S. Tax Court case for fiscal years 2005 and 2006.

- A net charge of $125 million associated with the Divestiture. The net charge primarily relates to the tax effect from the recognition of the outside basis difference of certain subsidiaries which were included in the divestiture.

- A charge of $86 million associated with the IRS's disallowance of the utilization of certain net operating losses, along with the recognition of a valuation allowance against the net operating loss deferred tax asset, was recognized during the year.

- A charge of $18 million as a result of the redemption of an intercompany minority interest during the year.

- A benefit of $431 million as the result of the resolution of Covidien's previously disclosed Tyco International plc intercompany debt issues with the U.S. Tax Court and the Appeals Division of the IRS.

Certain tax adjustments will affect the comparability of our operating results between periods. Therefore, we consider these Non-GAAP Adjustments. Refer to the "Executive Level Overview" section of this Management's Discussion and Analysis for further discussion of these adjustments.

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:

	Fiscal Year		
(in millions)	2019	2018	2017
Cash provided by (used in):			
Operating activities	$ 7,007	$ 4,684	$ 6,880
Investing activities	(774)	5,858	(1,571)
Financing activities	(5,431)	(11,954)	(3,283)
Effect of exchange rate changes on cash and cash equivalents	(78)	114	65
Net change in cash and cash equivalents	$ 724	$ (1,298)	$ 2,091

Operating Activities The $2.3 billion increase in net cash provided in fiscal year 2019 as compared to fiscal year 2018 was primarily driven by our operating margin expansion as well as decreases in cash paid to suppliers and other vendors, cash paid for taxes, cash paid for interest, and retirement benefit plan contributions, partially offset by an increase in certain litigation payments. The decrease in cash paid to suppliers is primarily due to our continued progress in extending supplier payment terms. The decrease in cash paid for taxes was primarily a result of a $1.1 billion pre-payment that we elected to make to the U.S. IRS in fiscal year 2018 related to in-process litigation on Puerto Rico transfer pricing. Cash paid for interest decreased due to a decrease in total debt obligations as well as a decrease in the weighted average interest rate of outstanding debt obligations. The decrease in retirement benefit plan contributions reflects lower contributions to the U.S. pension plan for fiscal year 2019 as compared to fiscal year 2018. Certain litigation payments increased primarily due to the payment of previously accrued settlement amounts for the INFUSE litigation matter.

The $2.2 billion decrease in net cash provided in fiscal year 2018 as compared to fiscal year 2017 was primarily driven by an increase in cash paid for taxes of $1.5 billion, an increase in net cash outflows for collateral related to our derivative instruments of $145 million, cash paid for divestiture-related expenses of approximately $100 million, and a decrease in cash collected from customers. The increase in cash paid for income taxes was primarily a result of the aforementioned $1.1 billion Puerto Rico pre-payment, tax payments related to the intercompany sale of intellectual property and the Divestiture, as well as settlement payments for U.S. federal income taxes for fiscal years 2012 to 2014 and audit settlements outside of the U.S.

Investing Activities The $6.6 billion increase in net cash used in fiscal year 2019 as compared to fiscal year 2018 was primarily attributable to the Divestiture in fiscal year 2018, which resulted in net proceeds of $6.1 billion, and an increase in cash paid for acquisitions of $1.7 billion, primarily due to the acquisition of Mazor and EPiX during fiscal year 2019, partially offset by an increase in net proceeds from purchases and sales and maturities of investments.

The $7.4 billion increase in net cash provided in fiscal year 2018 as compared to fiscal year 2017 was primarily attributable to the Divestiture in fiscal year 2018, a decrease in cash paid for acquisitions of $1.2 billion, primarily due to the acquisition of Heartware during fiscal year 2017, and a decrease in additions to property, plant, and equipment.

Financing Activities The $6.5 billion decrease in net cash used in fiscal year 2019 as compared to fiscal year 2018 was primarily attributable to the issuance of $7.8 billion of Euro-denominated senior notes in fiscal year 2019, partially offset by an increase in share repurchases of $706 million and an increase in repayments of commercial paper. In fiscal year 2019, we repaid $7.9 billion of long-term debt primarily through the use of the net proceeds from

the Euro-debt issuance. In fiscal year 2018, we repaid $7.4 billion of long-term debt, which was not funded through the issuance of long-term debt.

The $8.7 billion increase in net cash used in fiscal year 2018 as compared to fiscal year 2017 was primarily attributable to long-term debt repayments of $7.4 billion, the issuance of $2.0 billion of Senior Notes in fiscal year 2017, and a reduction of commercial paper borrowings in fiscal year 2018 as compared to fiscal year 2017, partially offset by a decrease in share repurchases of $1.4 billion.

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:

	Fiscal Year		
(in millions)	2019	2018	2017
Net cash provided by operating activities	$ 7,007	$ 4,684	$ 6,880
Additions to property, plant, and equipment	(1,134)	(1,068)	(1,254)
Free cash flow	$ 5,873	$ 3,616	$ 5,626

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 April 26, 2019 was $838 million as compared to $2.1 billion at April 27, 2018. Long-term debt at April 26, 2019 was $24.5 billion as compared to $23.7 billion at April 27, 2018. 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 April 26, 2019 was $25.3 billion, as compared to $25.8 billion at April 27, 2018. The decrease in total debt was primarily driven by the reduction in our commercial paper borrowings of $698 million, partially offset by the net impact of the issuance, cash tender offer, early redemptions, and repayment described below.

In March 2019, Medtronic Global Holdings S.C.A. (Medtronic Luxco) issued six tranches of Euro-denominated senior notes with an aggregate principal of €7.0 billion, with maturities ranging from fiscal year 2021 to fiscal year 2039, resulting in cash proceeds of approximately $7.8 billion, net of discounts and issuance costs. We used the net proceeds of the offering to fund the previously announced cash tender offers 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 and early redemption of $6.4 billion of Medtronic Inc. and CIFSA senior notes for $6.9 billion of total consideration in March 2019. We recognized a loss on debt extinguishment of $485 million, which primarily included cash premiums and accelerated amortization of deferred financing costs and debt discounts and premiums. The loss on debt extinguishment was recognized in *interest expense* in the consolidated statements of income. Also in March 2019, we repaid our 1.700 percent two-year 2017 senior notes, including interest, for $1.0 billion.

For additional information on the issuance of these senior notes and the subsequent cash tender offer and early redemption, refer to Note 7 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K. For additional information on the Euro-denominated debt designated as a net investment hedge, refer to Note 8 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

During fiscal year 2018, we repaid our senior unsecured term loan, including accrued interest, for $3.0 billion, our 6.000 percent ten-year 2008 CIFSA senior notes, including accrued interest, for $1.2 billion, our 3.500 percent seven-year 2010 HTWR senior notes, including interest, for $43 million, our 1.500 percent three-year 2015 senior notes, including accrued interest, for $1.0 billion, our 1.375 percent five-year 2013 senior notes, including accrued interest, for $1.0 billion, our 4.450 percent ten-year 2010 senior notes, including accrued interest and early redemption

premium, for $795 million, and our 5.600 percent ten-year 2009 senior notes, including accrued interest and early redemption premium, for $413 million.

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 April 26, 2019, we had no commercial paper outstanding, as compared to $698 million outstanding at April 27, 2018. During fiscal years 2019 and 2018, the weighted average original maturity of the commercial paper outstanding was approximately 27 and 28 days, respectively, and the weighted average interest rate was 2.12 percent and 1.46 percent, respectively. 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 was amended and restated in December 2018, and now 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 April 26, 2019 and April 27, 2018, no amounts were outstanding on the committed line of credit.

Interest rates on advances of our Credit Facility are determined by a pricing matrix, based on our long-term debt ratings assigned by S&P and 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 April 26, 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 fiscal years 2019 and 2018, we repurchased a total of 31 million and 25 million shares, respectively, under these programs at an average price of $91.43 and $83.71, respectively. At April 26, 2019, we had approximately $7.2 billion remaining under the share repurchase programs authorized by our Board of Directors.

For more information on credit arrangements, see Note 7 of the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Liquidity

Our liquidity sources at April 26, 2019 include $4.4 billion of cash and cash equivalents and $5.5 billion of current investments. Additionally, we maintain a commercial paper program (no commercial paper outstanding at April 26, 2019) and Credit Facility. See discussion above regarding changes in our cash and cash equivalents, 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. Our auction rate security holdings continue to experience reduced liquidity due to low investor demand. Although our auction rate securities are currently illiquid and other securities could become illiquid, we believe we could liquidate a substantial amount of our portfolio without incurring a material impairment loss.

For fiscal year 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 April 26, 2019, we have $61 million of gross unrealized losses on our aggregate available-for-sale debt securities of $5.5 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. See Note 6 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K for additional information.

The following table is a summary of our Standard and Poor's Rating Services (S&P) and Moody's Investors Service (Moody's) long-term debt ratings and short-term debt ratings:

	Agency Rating [1]	
	April 26, 2019	April 27, 2018
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 is 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 April 26, 2019 were unchanged as compared to the ratings at April 27, 2018. 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 19 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K 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 have 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. We removed the assertion for all earnings of such subsidiaries through April 27, 2018 and reasserted for earnings generated for subsequent fiscal years. 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

In the normal course of business, we periodically enter into agreements that require us to indemnify customers or suppliers for specific risks, such as claims for injury or property damage arising as a result of our products or the negligence of our personnel or claims alleging that our products infringe third-party patents or other intellectual

property. Our maximum exposure under these indemnification provisions is unable to be estimated, and we have not accrued any liabilities within our consolidated financial statements or included any indemnification provisions in the table below. Historically, we have not experienced significant losses on these types of indemnification agreements.

Presented below is a summary of our off-balance sheet contractual obligations and other minimum commercial commitments at April 26, 2019, as well as long-term contractual obligations reflected in the balance sheet at April 26, 2019.

	Maturity by Fiscal Year						
(in millions)	Total	2020	2021	2022	2023	2024	Thereafter
Contractual obligations related to off-balance sheet arrangements:							
Operating leases	$ 652	$ 216	$ 157	$ 103	$ 61	$ 34	$ 81
Commitments to fund minority investments, milestone payments, and royalty obligations[1]	296	86	117	47	7	9	30
Interest payments[2]	8,384	723	708	688	579	545	5,141
Other[3]	790	315	246	54	40	34	101
Contractual obligations related to off-balance sheet arrangements subtotal	$ 10,122	$ 1,340	$ 1,228	$ 892	$ 687	$ 622	$ 5,353
Contractual obligations reflected in the balance sheet:							
Debt obligations[4]	$ 25,374	$ 832	$ 2,744	$ 3,255	$ 2,861	$ 1,160	$ 14,522
Capital leases	13	6	2	1	1	1	2
Contingent consideration[5]	222	81	129	8	1	1	2
Tax obligations[6]	2,024	176	176	176	176	330	990
Contractual obligations reflected in the balance sheet subtotal[7]	27,633	1,095	3,051	3,440	3,039	1,492	15,516
Total contractual obligations	$ 37,755	$ 2,435	$ 4,279	$ 4,332	$ 3,726	$ 2,114	$ 20,869

(1) Includes commitments related to the funding of equity method or other investments, estimated milestone payments, and royalty obligations. While it is not certain if and/or when payments will be made, the maturity dates included in the table reflect our best estimates.

(2) Includes the contractual interest payments on our outstanding debt and excludes the impacts of debt premium and discount amortization and interest rate swap agreements. See Note 7 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for additional information on our debt agreements.

(3) Includes inventory purchase commitments and research and development arrangements which are legally binding and specify minimum purchase quantities or spending amounts. These purchase commitments do not exceed our projected requirements and are in the normal course of business. Excludes open purchase orders with a remaining term of less than one year.

(4) Includes the current and non-current portion of our Senior Notes and bank borrowings. Excludes debt premium and discount, the fair value impact of outstanding interest rate swap agreements, unamortized gains from terminated interest rate swap agreements, and commercial paper. See Notes 7 and 8 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for additional information on our debt agreements and interest rate swap agreements, respectively.

(5) Includes the fair value of our current and non-current portions of contingent consideration. While it is not certain if and/or when payments will be made, the maturity dates included in this table reflect our best estimates.

(6) Represents the tax obligations associated with the transition tax that resulted from U.S. Tax Reform. The transition tax will be paid over an eight-year period and will not accrue interest. See Note 14 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for further information.

(7) Excludes defined benefit plan obligations, guarantee obligations, uncertain tax positions, non-current tax liabilities, and litigation settlements for which we cannot make a reliable estimate of the period of cash settlement. For further

information, see Notes 14, 16, and 19 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for further information.

Item 7A. 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, as well as 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 April 26, 2019 and April 27, 2018 was $11.1 billion and $11.5 billion, respectively. At April 26, 2019, these contracts were in a net unrealized gain position of $322 million. A sensitivity analysis of changes in the fair value of all currency exchange rate derivative contracts at April 26, 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 $916 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 fiscal year 2019.

INTEREST RATE RISK

We are subject to interest rate risk on our 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 April 26, 2019 was comprised of debt predominately denominated in U.S. dollars and the Euro, 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, fixed-to-floating interest rate swap agreements, and forward starting interest rate swap agreements.

A sensitivity analysis of the impact on our interest rate-sensitive financial instruments of a hypothetical 10 basis point change in interest rates, as compared to interest rates at April 26, 2019, indicates that the fair value of these instruments would correspondingly change by $49 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 Management's Discussion and Analysis in "Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations" in this Annual Report on Form 10-K. For additional discussion of market risk, see Notes 6 and 8 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Medtronic plc:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Medtronic plc and its subsidiaries (the "Company") as of April 26, 2019 and April 27, 2018, and the related consolidated statements of income, comprehensive income, equity and cash flows for each of the three years in the period ended April 26, 2019, including the related notes and schedule of valuation and qualifying accounts for each of the three years in the period ended April 26, 2019 appearing under Item 15(a)(1) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of April 26, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of April 26, 2019 and April 27, 2018, and the results of its operations and its cash flows for each of the three years in the period ended April 26, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of April 26, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Annual Report on Internal Control over Financial Reporting appearing under Item 9A . Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly

reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP
Minneapolis, Minnesota
June 21, 2019

We have served as the Company's auditor since 1963.

Medtronic plc
Consolidated Statements of Income

(in millions, except per share data)	Fiscal Year 2019	2018	2017
Net sales	$ 30,557	$ 29,953	$ 29,710
Costs and expenses:			
Cost of products sold	9,155	9,067	9,294
Research and development expense	2,330	2,256	2,193
Selling, general, and administrative expense	10,418	10,238	10,018
Amortization of intangible assets	1,764	1,823	1,980
Restructuring charges, net	198	30	303
Certain litigation charges	166	61	300
Gain on sale of businesses	—	(697)	—
Other operating expense, net	258	535	239
Operating profit	6,268	6,640	5,383
Other non-operating income, net	(373)	(181)	(313)
Interest expense	1,444	1,146	1,094
Income before income taxes	5,197	5,675	4,602
Income tax provision	547	2,580	578
Net income	4,650	3,095	4,024
Net (income) loss attributable to noncontrolling interests	(19)	9	4
Net income attributable to Medtronic	$ 4,631	$ 3,104	$ 4,028
Basic earnings per share	$ 3.44	$ 2.29	$ 2.92
Diluted earnings per share	$ 3.41	$ 2.27	$ 2.89
Basic weighted average shares outstanding	1,346.4	1,356.7	1,378.9
Diluted weighted average shares outstanding	1,357.5	1,368.2	1,391.4

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

Medtronic plc
Consolidated Statements of Comprehensive Income

(in millions)	Fiscal Year 2019	2018	2017
Net income	$ 4,650	$ 3,095	$ 4,024
Other comprehensive income (loss), net of tax:			
Unrealized gain (loss) on investment securities	102	(103)	38
Translation adjustment	(1,375)	1,184	(977)
Net investment hedge	88	—	—
Net change in retirement obligations	(191)	167	68
Unrealized gain (loss) on cash flow hedges	401	(218)	127
Other comprehensive (loss) income	(975)	1,030	(744)
Comprehensive income including noncontrolling interests	3,675	4,125	3,280
Comprehensive (income) loss attributable to noncontrolling interests	(16)	9	3
Comprehensive income attributable to Medtronic	$ 3,659	$ 4,134	$ 3,283

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

Medtronic plc
Consolidated Balance Sheets

(in millions)	April 26, 2019	April 27, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 4,393	$ 3,669
Investments	5,455	7,558
Accounts receivable, less allowances of $190 and $193, respectively	6,222	5,987
Inventories, net	3,753	3,579
Other current assets	2,144	2,187
Total current assets	21,967	22,980
Property, plant, and equipment, net	4,675	4,604
Goodwill	39,959	39,543
Other intangible assets, net	20,560	21,723
Tax assets	1,519	1,465
Other assets	1,014	1,078
Total assets	$ 89,694	$ 91,393
LIABILITIES AND EQUITY		
Current liabilities:		
Current debt obligations	$ 838	$ 2,058
Accounts payable	1,953	1,628
Accrued compensation	2,189	1,988
Accrued income taxes	567	979
Other accrued expenses	2,925	3,431
Total current liabilities	8,472	10,084
Long-term debt	24,486	23,699
Accrued compensation and retirement benefits	1,651	1,425
Accrued income taxes	2,838	3,051
Deferred tax liabilities	1,278	1,423
Other liabilities	757	889
Total liabilities	39,482	40,571
Commitments and contingencies (Notes 3, 17, and 19)		
Shareholders' equity:		
Ordinary shares— par value $0.0001, 2.6 billion shares authorized, 1,340,697,595 and 1,354,218,154 shares issued and outstanding, respectively	—	—
Additional paid-in capital	26,532	28,127
Retained earnings	26,270	24,379
Accumulated other comprehensive loss	(2,711)	(1,786)
Total shareholders' equity	50,091	50,720
Noncontrolling interests	121	102
Total equity	50,212	50,822
Total liabilities and equity	$ 89,694	$ 91,393

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

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Medtronic plc
Consolidated Statements of Equity

(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 29, 2016	1,399	$ —	$ 32,227	$ 21,618	$ (1,868)	$ 51,977	$ —	$ 51,977
Net income (loss)	—	—	—	4,028	—	4,028	(4)	4,024
Other comprehensive (loss) income	—	—	—	—	(745)	(745)	1	(744)
Dividends to shareholders ($1.72 per ordinary share)	—	—	—	(2,376)	—	(2,376)	—	(2,376)
Issuance of shares under stock purchase and award plans	13	—	428	—	—	428	—	428
Repurchase of ordinary shares	(43)	—	(3,544)	—	—	(3,544)	—	(3,544)
Tax benefit from exercise of stock-based awards	—	—	92	—	—	92	—	92
Stock-based compensation		—	348	—	—	348	—	348
Changes to noncontrolling ownership interests	—	—	—	—	—	—	125	125
April 28, 2017	1,369	$ —	$ 29,551	$ 23,270	$ (2,613)	$ 50,208	$ 122	$ 50,330
Net income (loss)	—	—	—	3,104	—	3,104	(9)	3,095
Other comprehensive income	—	—	—	—	1,030	1,030	—	1,030
Dividends to shareholders ($1.84 per ordinary share)	—	—	—	(2,494)	—	(2,494)	—	(2,494)
Issuance of shares under stock purchase and award plans	10	—	329	—	—	329	—	329
Repurchase of ordinary shares	(25)	—	(2,097)	—	—	(2,097)	—	(2,097)
Stock-based compensation	—	—	344	—	—	344	—	344
Changes to noncontrolling ownership interests	—	—	—	—	—	—	(11)	(11)
Cumulative effect of change in accounting principle[1]	—	—	—	499	(203)	296	—	296
April 27, 2018	1,354	$ —	$ 28,127	$ 24,379	$ (1,786)	$ 50,720	$ 102	$ 50,822
Net income	—	—	—	4,631	—	4,631	19	4,650
Other comprehensive loss	—	—	—	—	(972)	(972)	(3)	(975)
Dividends to shareholders ($2.00 per ordinary share)	—	—	—	(2,693)	—	(2,693)	—	(2,693)
Issuance of shares under stock purchase and award plans	18	—	923	—	—	923	—	923
Repurchase of ordinary shares	(31)	—	(2,808)	—	—	(2,808)	—	(2,808)
Stock-based compensation	—	—	290	—	—	290	—	290
Changes to noncontrolling ownership interests	—	—	—	—	—	—	3	3
Cumulative effect of change in accounting principle[2]	—	—	—	(47)	47	—	—	—

April 26, 2019	1,341	$ —	$ 26,532	$ 26,270	$ (2,711)	$ 50,091	$ 121	$ 50,212

(1) The cumulative effect of change in accounting principle in fiscal year 2018 resulted from the adoption of accounting guidance that requires the tax effect of intra-entity transactions, other than sales of inventory, to be recognized when the transaction occurs, and accounting guidance which permitted reclassification of stranded tax effects resulting from the enactment of comprehensive U.S. tax legislation from accumulated other comprehensive loss to retained earnings.

(2) See Note 1 to the consolidated financial statements for discussion regarding the adoption of accounting standards during fiscal year 2019.

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

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Medtronic plc
Consolidated Statements of Cash Flows

(in millions)	Fiscal Year 2019	2018	2017
Operating Activities:			
Net income	$ 4,650	$ 3,095	$ 4,024
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	2,659	2,644	2,917
Provision for doubtful accounts	78	52	39
Deferred income taxes	(304)	(919)	(459)
Stock-based compensation	290	344	348
Loss on debt extinguishment	457	38	—
Gain on sale of businesses	—	(697)	—
Investment loss	—	227	—
Other, net	257	73	(128)
Change in operating assets and liabilities, net of acquisitions and divestitures:			
Accounts receivable, net	(581)	(275)	(75)
Inventories, net	(274)	(192)	(227)
Accounts payable and accrued liabilities	399	65	356
Other operating assets and liabilities	(624)	229	85
Net cash provided by operating activities	7,007	4,684	6,880
Investing Activities:			
Acquisitions, net of cash acquired	(1,827)	(137)	(1,324)
Proceeds from sale of businesses	—	6,058	—
Additions to property, plant, and equipment	(1,134)	(1,068)	(1,254)
Purchases of investments	(2,532)	(3,200)	(4,371)
Sales and maturities of investments	4,683	4,227	5,356
Other investing activities, net	36	(22)	22
Net cash (used in) provided by investing activities	(774)	5,858	(1,571)
Financing Activities:			
Change in current debt obligations, net	(713)	(249)	906
Issuance of long-term debt	7,794	21	2,140
Payments on long-term debt	(7,948)	(7,370)	(863)
Dividends to shareholders	(2,693)	(2,494)	(2,376)
Issuance of ordinary shares	992	403	428
Repurchase of ordinary shares	(2,877)	(2,171)	(3,544)
Other financing activities	14	(94)	26
Net cash used in financing activities	(5,431)	(11,954)	(3,283)
Effect of exchange rate changes on cash and cash equivalents	(78)	114	65
Net change in cash and cash equivalents	724	(1,298)	2,091
Cash and cash equivalents at beginning of period	3,669	4,967	2,876
Cash and cash equivalents at end of period	$ 4,393	$ 3,669	$ 4,967
Supplemental Cash Flow Information			
Cash paid for:			
Income taxes	$ 1,558	$ 2,542	$ 1,029
Interest	973	1,147	1,134

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

Medtronic plc
Notes to Consolidated Financial Statements

1. Summary of Significant Accounting Policies

Nature of Operations Medtronic plc (Medtronic or the Company) 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. The Company provides innovative products and therapies to serve hospitals, physicians, clinicians, and patients. Medtronic was founded in 1949 and is headquartered in Dublin, Ireland.

Principles of Consolidation The 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 fully eliminated in consolidation. Certain reclassifications have been made to prior year financial statements to conform to classifications used in the current year. For the purpose of providing more concise consolidated statements of income, amounts previously reported in *acquisition-related items* were reclassified to *selling, general, and administrative expense* and *other operating expense, net*; amounts previously reported in *divestiture-related items* were reclassified to *selling, general, and administrative expense*; amounts previously reported in *special charge* were reclassified to *other operating expense, net*, and amounts previously reported in *investment loss* and *interest income* were reclassified to *other non-operating income, net.*

Use of Estimates The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States (U.S.) (U.S. GAAP) requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Estimates are used when accounting for items such as income taxes, contingencies, intangible asset, and liability valuations. Actual results may or may not differ from those estimates.

Fiscal Year-End The Company utilizes a 52/53-week fiscal year, ending the last Friday in April, for the presentation of its consolidated financial statements and related notes thereto at April 26, 2019 and April 27, 2018 and for each of the three fiscal years ended April 26, 2019 (fiscal year 2019), April 27, 2018 (fiscal year 2018), and April 28, 2017 (fiscal year 2017). Fiscal years 2019, 2018, 2017 were 52-week years.

Cash Equivalents The Company considers highly liquid investments with maturities of three months or less from the date of purchase to be cash equivalents. These investments are carried at cost, which approximates fair value.

Investments The Company invests in marketable debt and equity securities, investments that do not have readily determinable fair values, and investments accounted for under the equity method.

Marketable debt securities are classified and accounted for as available-for-sale. These investments are recorded at fair value in the consolidated balance sheets. The change in fair value for available-for-sale securities is recorded, net of taxes, as a component of *accumulated other comprehensive loss* on the consolidated balance sheets. The Company determines the appropriate classification of its investments in marketable debt securities at the time of purchase and reevaluates such determinations at each balance sheet date. The classification of marketable debt securities as current or long-term is based on the nature of the securities and the availability for use in current operations consistent with the Company's management of its capital structure and liquidity.

Certain of the Company’s investments in marketable equity securities and other securities are long-term, strategic investments in companies that are in various stages of development and are included in *other assets* on the consolidated balance sheets. Marketable equity securities are recorded at fair value in the consolidated balance sheets. The change in fair value of marketable equity securities is recognized within *other non-operating income, net* in the consolidated statements of income. Investments without readily determinable fair values that do not qualify for the practical expedient to estimate fair value using the net asset value per share or its equivalent are accounted for at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or similar investments of the issuer. This election is made for each investment separately and is reassessed at each reporting period as to whether the investment continues to qualify for this election. At each

reporting period, the Company makes a qualitative assessment considering impairment indicators to evaluate whether the investment is impaired. Equity securities accounted for under the equity method are initially recorded at the amount of the Company's investment and are adjusted each period for the Company's share of the investee's income or loss and dividends paid. Securities accounted for under the equity method are reviewed quarterly for changes in circumstance or the occurrence of events that suggest the Company's investment may not be recoverable.

Accounts Receivable and Allowance for Doubtful Accounts The Company grants credit to customers in the normal course of business and maintains an allowance for doubtful accounts for potential credit losses. When evaluating allowances for doubtful accounts, the Company considers various factors, including historical experience and customer-specific information. Uncollectible accounts are written-off against the allowance when it is deemed that a customer account is uncollectible.

Inventories Inventories are stated at the lower of cost or net realizable value, with cost determined on a first-in, first-out basis. The Company reduces the carrying value of inventories for items that are potentially excess, obsolete, or slow-moving based on changes in customer demand, technology developments, or other economic factors.

Property, Plant, and Equipment Property, plant, and equipment is stated at cost. Additions and improvements that extend the lives of the assets are capitalized, while expenditures for repairs and maintenance are expensed as incurred. The Company assesses property, plant, and equipment for impairment whenever events or changes in circumstances indicate that the carrying amount of property, plant, and equipment asset groupings may not be recoverable. The Company utilizes the straight-line method of depreciation over the estimated useful lives of the various assets. The cost of interest that is incurred in connection with ongoing construction projects is capitalized using a weighted average interest rate. These costs are included in property, plant, and equipment and amortized over the useful life of the related asset. Upon retirement or disposal of property, plant, and equipment, the costs and related amounts of accumulated depreciation or amortization are eliminated from the asset and accumulated depreciation accounts. The difference, if any, between the net asset value and the proceeds, is recognized in earnings.

Goodwill and Intangible Assets Goodwill is the excess of the purchase price over the estimated fair value of net assets of acquired businesses. In accordance with U.S. GAAP, goodwill is not amortized. 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 the carrying amount may be impaired. Impairment testing for goodwill is performed at a reporting unit level. There were no changes in reporting units during fiscal year 2019. 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. An impairment loss is recognized when the carrying amount of the reporting unit’s net assets exceeds the estimated fair value of the reporting unit.

Intangible assets include patents, trademarks, tradenames, customer relationships, purchased technology, and in-process research and development (IPR&D). Intangible assets with a definite life are amortized on a straight-line basis with estimated useful lives typically ranging from three to 20 years. Amortization is recognized within *amortization of intangible assets* in the consolidated statements of income. Intangible assets with a definite life are tested for impairment whenever events or changes in circumstances indicate that the carrying amount of an intangible asset (asset group) may not be recoverable. When events or changes in circumstances indicate that the carrying amount 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.

Acquired IPR&D represents the fair value assigned to those research and development projects that were acquired in a business combination for which the related products have not received regulatory approval and have no alternative future use. IPR&D is capitalized at its fair value as an indefinite-lived intangible asset, and any development costs incurred after the acquisition are expensed as incurred. The fair value of IPR&D is determined by estimating the future cash flows of each project and discounting the net cash flows back to their present values. Upon achieving regulatory approval or commercial viability for the related product, the indefinite-lived intangible asset is accounted for as a definite-lived asset and is amortized on a straight-line basis over the estimated useful life. If the project is not completed or is terminated or abandoned, the Company may have an impairment related to the IPR&D which is charged to expense. Indefinite-lived intangible assets are tested for impairment annually in the third quarter of the fiscal year and whenever events or changes in circumstances indicate that the carrying amount may be impaired. Impairment is calculated as the excess of the asset’s carrying value over its fair value. Fair value is generally determined using a discounted future cash flow analysis. IPR&D acquired outside of a business combination is expensed immediately.

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. The Company records contingent consideration at fair value at the date of acquisition based on the consideration expected to be transferred, estimated as the probability-weighted future cash flows, discounted back to present value. The fair value of contingent consideration is measured using projected payment dates, discount rates, probabilities of payment, and projected revenues (for revenue-based considerations). Projected revenues are based on the Company's most recent internal operational budgets and long-range strategic plans. The discount rate used is determined at the time of measurement in accordance with accepted valuation methodologies. Changes in projected revenues, probabilities of payment, discount rates, and projected payment dates may result in adjustments to the fair value measurements. Contingent consideration is remeasured each reporting period using Level 3 inputs, and the change in fair value, including accretion for the passage of time, is recognized as income or expense 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.

Self-Insurance The Company self-insures the majority of its insurable risks, including medical and dental costs, disability coverage, physical loss to property, business interruptions, workers' compensation, comprehensive general, and product liability. Insurance coverage is obtained for risks required to be insured by law or contract. The Company uses claims data and historical experience, as applicable, to estimate liabilities associated with the exposures that the Company has self-insured.

Retirement Benefit Plan Assumptions 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. See Note 16 for assumptions used in determining pension and post-retirement benefit costs and liabilities.

Derivatives The Company recognizes all derivative financial instruments in its consolidated financial statements at fair value in accordance with authoritative guidance on derivatives and hedging, and presents assets and liabilities associated with derivative financial instruments on a gross basis in the consolidated financial statements. For derivative instruments that are designated and qualify as hedging instruments, the hedging instrument must be designated, based upon the exposure being hedged, as a fair value hedge or a cash flow hedge. See Note 8 for more information on the Company's derivative instruments and hedging programs.

Fair Value Measurements The Company follows the authoritative guidance on fair value measurements and disclosures with respect to assets and liabilities that are measured at fair value on both a recurring and nonrecurring basis. Fair value is defined as the exit price, or the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. The authoritative guidance also establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs market participants would use in valuing the asset or liability, based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the factors market participants would use in valuing the asset or liability developed based upon the best information available in the circumstances. The categorization of financial assets and financial liabilities within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The hierarchy is broken down into three levels defined as follows:

- Level 1 - Inputs are quoted prices in active markets for identical assets or liabilities.
- Level 2 - Inputs include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, and inputs (other than quoted prices) that are observable for the asset or liability, either directly or indirectly.
- Level 3 - Inputs are unobservable for the asset or liability.

Financial assets that are classified as Level 1 securities include highly liquid government bonds within U.S. government and agency securities and marketable equity securities for which quoted market prices are available. In addition, the Company classifies currency forward contracts as Level 1 since they are valued using quoted market prices in active markets which have identical assets or liabilities.

The valuation for most fixed maturity securities are classified as Level 2. Financial assets that are classified as Level 2 include corporate debt securities, government and agency securities, other asset-backed securities, debt funds, and mortgage-backed securities whose value is determined using inputs that are observable in the market or may be derived principally from, or corroborated by, observable market data such as pricing for similar securities, recently executed transactions, cash flow models with yield curves, and benchmark securities. In addition, interest rate swaps and total return swaps are included in Level 2 as the Company uses inputs other than quoted prices that are

observable for the asset. The Level 2 derivative instruments are primarily valued using standard calculations and models that use readily observable market data as their basis.

Financial assets are considered Level 3 when their fair values are determined using pricing models, discounted cash flow methodologies, or similar techniques, and at least one significant model assumption or input is unobservable. Financial assets that are classified as Level 3 include certain investment securities for which there is limited market activity such that the determination of fair value requires significant judgment or estimation, certain corporate debt securities and auction rate securities. With the exception of auction rate securities, these securities are valued using third-party pricing sources that incorporate transaction details such as contractual terms, maturity, timing, and amount of expected future cash flows, as well as assumptions about liquidity and credit valuation adjustments by market participants. The fair value of auction rate securities is estimated by the Company using a discounted cash flow model, which incorporates significant unobservable inputs. The significant unobservable inputs used in the

fair value measurement of the Company's auction rate securities are years to principal recovery and the illiquidity premium that is incorporated into the discount rate.

Certain investments for which the fair value is measured using the net asset value per share (or its equivalent) practical expedient are excluded from the fair value hierarchy. Financial assets for which the fair value is measured using the net asset value per share practical expedient include certain debt funds, equity and fixed income commingled trusts, and registered investment companies.

Revenue Recognition The Company sells its products through direct sales representatives and independent distributors. Additionally, a portion of the Company's revenue is generated from consignment inventory maintained at hospitals. The Company recognizes revenue when control is transferred to the customer. For products sold through direct sales representatives and independent distributors, control is transferred upon shipment or upon delivery, based on the contract terms and legal requirements. For consignment inventory, control is transferred when the product is used or implanted. Payment terms vary depending on the country of sale, type of customer, and type of product.

If a contract contains more than one performance obligation, the transaction price is allocated to each performance obligation based on relative standalone selling price. Shipping and handling is treated as a fulfillment activity rather than a promised service, and therefore, is not considered a performance obligation. Taxes assessed by a governmental authority that are both imposed on, and concurrent with, a specific revenue producing transaction and collected by the Company from customers (for example, sales, use, value added, and some excise taxes) are not included in revenue. For contracts that have an original duration of one year or less, the Company uses the practical expedient applicable to such contracts and does not adjust the transaction price for the time value of money.

The amount of revenue recognized reflects sales rebates and returns, which are estimated based on sales terms, historical experience, and trend analysis. In estimating rebates, the Company considers the lag time between the point of sale and the payment of the rebate claim, the stated rebate rates, and other relevant information. The Company records adjustments to rebates and returns reserves as increases or decreases of revenue.

The Company offers warranties on various products. For standard, assurance-type warranties, the Company estimates the costs that may be incurred under its warranties and records a liability in the amount of such costs at the time the product is sold. The amount of the reserve is equal to the net costs to repair or otherwise satisfy the obligation. The Company includes the warranty obligation in *other accrued expenses* and *other liabilities* in the consolidated balance sheets. For extended, service-type warranties, a portion of the transaction price is allocated to the performance obligation. Warranty obligations at April 26, 2019 and April 27, 2018 were not material.

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 primarily represents remote monitoring services and equipment maintenance, for which consideration is received at the same time as consideration for the device or equipment. Deferred revenue also includes extended, service-type warranties. Revenue related to remote monitoring services, equipment maintenance, and service-type warranties is recognized over the service period as time elapses.

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, primarily related to consumables for previously sold equipment as well as remote monitoring services and equipment maintenance. For contracts that have an original duration of one year or less, the Company has elected the practical expedient applicable to such contracts and does not disclose the transaction price for remaining performance obligations at the end of each reporting period and when the Company expects to recognize this revenue.

Shipping and Handling Shipping and handling costs incurred to physically move product from the Company's premises to the customer's premises are recognized in *selling, general, and administrative expense* in the consolidated statements of income and were $350 million, $363 million, and $370 million in fiscal years 2019, 2018,

and 2017, respectively. Other shipping and handling costs incurred to store, move, and prepare products for shipment are recognized in *cost of products sold* in the consolidated statements of income.

Research and Development Research and development costs are expensed when incurred. Research and development costs include costs of other research, engineering, and technical activities to develop a new product or service or make significant improvement to an existing product or manufacturing process. Research and development costs also include pre-approval regulatory and clinical trial expenses.

Contingencies The Company records a liability in the consolidated financial statements for loss contingencies 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. Insurance recoveries related to potential claims are recognized up to the amount of the recorded liability when coverage is confirmed and the estimated recoveries are probable of payment. These recoveries are not netted against the related liabilities for financial statement presentation.

Income Taxes The Company has deferred taxes that arise as a result of the different treatment of transactions for U.S. GAAP and income tax accounting, known as temporary differences. The Company records the tax effect of these temporary differences as deferred tax assets and deferred tax liabilities. Deferred tax assets generally represent items that may be used as a tax deduction or credit in a tax return in future years for which the Company has already recognized the tax benefit in the consolidated statements of income. The Company establishes valuation allowances for deferred tax assets when the amount of expected future taxable income is not likely to support the use of the deduction or credit. Deferred tax liabilities generally represent tax expense for which payment has been deferred or expense has already been taken as a deduction on the Company's tax return but has not yet been recognized as an expense in the consolidated statements of income.

Other Operating Expense, Net Other operating expense, net primarily includes royalty income and expense, Transition Service Agreement income, intangible asset charges, currency transaction and derivative gains and losses, contributions to the Medtronic Foundation, Puerto Rico excise taxes, changes in the fair value of contingent consideration, and charges associated with business exits.

Other Non-Operating Income, Net Other non-operating income, net includes the non-service component of net periodic pension and post-retirement benefit cost, investment gains and losses, and interest income.

Currency Translation Assets and liabilities of non-U.S. dollar functional currency entities are translated to U.S. dollars at period-end exchange rates, and the currency impacts arising from the translation of the assets and liabilities are recorded as a cumulative translation adjustment, a component of *accumulated other comprehensive loss,* on the consolidated balance sheets. Elements of the consolidated statements of income are translated at the average monthly currency exchange rates in effect during the period. Currency transaction gains and losses are included in *other operating expense, net* in the consolidated statements of income.

Stock-Based Compensation The Company measures stock-based compensation expense at the grant date based on the fair value of the award and recognizes the compensation expense over the requisite service period, which is generally the vesting period. The amount of stock-based compensation expense recognized during a period is based on the portion of the awards that are expected to vest. The Company estimates pre-vesting forfeitures at the time of grant and revises the estimates in subsequent periods.

New Accounting Standards

Recently Adopted

In May 2014, the Financial Accounting Standards Board (FASB) issued amended revenue recognition guidance to clarify the principles for recognizing revenue from contracts with customers. The guidance requires an entity to recognize revenue in an amount that reflects the consideration to which an entity expects to be entitled in exchange for the transfer of goods or services. The guidance also requires expanded disclosures relating to the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. Additionally, qualitative and quantitative disclosures are required about customer contracts, significant judgments and changes in judgments, and assets recognized from the costs to obtain or fulfill a contract. The Company adopted this guidance using the modified retrospective method in the first quarter of fiscal year 2019, and elected to apply the guidance only to

contracts that were not completed as of the date of initial application. The adoption of this guidance did not have a material impact on the Company's consolidated financial statements.

In January 2016, the FASB issued guidance which 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. The guidance also includes a simplified impairment assessment of equity investments without readily determinable fair values and presentation and disclosure changes. The Company adopted this guidance in the first quarter of fiscal year 2019 on a prospective basis. 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.

In March 2017, the FASB issued guidance which changes the financial statement presentation requirements for pension and other post-retirement benefit expense. While service cost will continue to be recognized in the same financial statement line items as other current employee compensation costs, the guidance requires all other non-service components of net benefit costs to be

classified and presented outside of income from operations. The Company adopted this guidance in the first quarter of fiscal year 2019, and the consolidated statements of income were retrospectively adjusted. For fiscal years 2018 and 2017, the Company reclassified $11 million of income and $53 million of expense, respectively, of non-service components of net periodic benefit costs, which were previously presented as a component of operating profit, to *other non-operating income, net*.

Not Yet Adopted

In February 2016, the FASB issued guidance which requires lessees to recognize right-of-use assets and lease liabilities on the balance sheet. The guidance will be adopted using the modified retrospective method by applying the new guidance as of the transition date with a cumulative-effect adjustment to the opening balance of retained earnings as of the beginning of the period of adoption. The Company will elect the package of practical expedients upon adoption which allows the Company to not reassess whether any expired or existing contracts are or contain leases, the classification of any expired or existing leases or any initial direct costs for existing leases. Further, the Company will make 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.

This guidance is effective for the Company beginning in the first quarter of fiscal year 2020. As a result of adopting the guidance, the Company expects to record right-of-use assets and lease liabilities for operating leases in an amount of approximately one percent of total assets on the consolidated balance sheet. The Company expects the adoption to have an immaterial impact on the consolidated statements of income and cash flows. The Company will also make additional lease related disclosures in the footnotes to the Company's consolidated financial statements upon adoption.

2. 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 fiscal years 2019, 2018, and 2017:

	Net Sales by Fiscal Year		
(in millions)	**2019**	**2018**	**2017**
Cardiac Rhythm & Heart Failure	$ 5,849	$ 5,947	$ 5,649
Coronary & Structural Heart	3,730	3,562	3,113
Aortic, Peripheral & Venous	1,926	1,845	1,736
Cardiac and Vascular Group	11,505	11,354	10,498
Surgical Innovations	5,753	5,537	5,145
Respiratory, Gastrointestinal, & Renal	2,725	3,179	4,774
Minimally Invasive Therapies Group	8,478	8,716	9,919
Spine	2,654	2,668	2,641
Brain Therapies	2,604	2,354	2,098
Specialty Therapies	1,641	1,556	1,491
Pain Therapies	1,284	1,165	1,136
Restorative Therapies Group	8,183	7,743	7,366
Diabetes Group	2,391	2,140	1,927

Total	$ 30,557	$ 29,953	$ 29,710

The tables below include net sales by market geography and segment for fiscal years 2019, 2018, and 2017:

	U.S.[1]		Non-U.S. Developed Markets[2]		Emerging Markets[3]	
(in millions)	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2019	Fiscal Year 2018
Cardiac and Vascular Group	$ 5,750	$ 5,681	$ 3,767	$ 3,790	$ 1,988	$ 1,883
Minimally Invasive Therapies Group	3,630	3,804	3,250	3,378	1,598	1,534
Restorative Therapies Group	5,478	5,164	1,759	1,720	946	859
Diabetes Group	1,336	1,226	855	739	200	175
Total	$ 16,194	$ 15,875	$ 9,631	$ 9,627	$ 4,732	$ 4,451

	U.S.[1]		Non-U.S. Developed Markets[2]		Emerging Markets[3]	
(in millions)	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2018	Fiscal Year 2017
Cardiac and Vascular Group	$ 5,681	$ 5,454	$ 3,790	$ 3,393	$ 1,883	$ 1,651
Minimally Invasive Therapies Group	3,804	5,049	3,378	3,479	1,534	1,391
Restorative Therapies Group	5,164	5,012	1,720	1,588	859	766
Diabetes Group	1,226	1,148	739	625	175	154
Total	$ 15,875	$ 16,663	$ 9,627	$ 9,085	$ 4,451	$ 3,962

(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.

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. At April 27, 2018, $614 million of rebates were classified as *other accrued expenses* and $376 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 o*ther current assets* in the consolidated balance sheets. The right-of-return asset and liability at April 26, 2019 and right-of-return liability at April 27, 2018 were not material. There was no right-of-return asset at April 27, 2018 as the liability was recorded net of the asset under previous guidance. During fiscal year 2019, 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

Deferred revenue at April 26, 2019 and April 27, 2018 was $315 million and $289 million, respectively. At April 26, 2019 and April 27, 2018, $211 million and $196 million was included in *other accrued expenses*, respectively, and $104 million and $93 million was included in *other liabilities*, respectively. During the fiscal year ended April 26, 2019, the Company recognized $199 million of revenue that was included in deferred revenue as of April 27, 2018.

At April 26, 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 $900 million. The Company expects to recognize revenue on the majority of these remaining performance obligations over the next four years.

3. Acquisitions

The Company had acquisitions during fiscal years 2019 and 2018 that were accounted for as business combinations. The assets and liabilities of 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 acquisitions during fiscal years 2019 and 2018 was not significant, either individually or in the aggregate, to the results of the Company. 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 2019

The acquisition date fair values of the assets acquired and liabilities assumed in fiscal year 2019 were as follows:

(in millions)	Mazor Robotics	EPiX Therapeutics, Inc.	All Other	Total
Cash and cash equivalents	$ 109	$ 3	$ 3	$ 115
Investments	52	—	—	52
Accounts receivable	10	—	2	12
Inventory	7	—	27	34
Other current assets	2	1	3	6
Property, plant, and equipment	3	1	29	33
Goodwill	1,197	165	148	1,510
Other intangible assets	399	162	210	771
Tax assets	6	—	7	13
Other assets	1	2	—	3
Total assets acquired	1,786	334	429	2,549
Current liabilities	54	4	45	103
Accrued income taxes	—	—	5	5
Deferred tax liabilities	58	11	—	69
Total liabilities assumed	112	15	50	177
Net assets acquired	$ 1,674	$ 319	$ 379	$ 2,372

Mazor Robotics

On December 18, 2018, the Company's Restorative Therapies Group acquired Mazor Robotics (Mazor), a pioneer in the field of robotic guidance systems. The acquisition of Mazor strengthens the Company's position as a global leader in enabling technologies for spine surgery. The Company offers a fully-integrated procedural solution for surgical planning, execution and confirmation by combining the Company's spine implants, navigation, and intra-operative imaging technology with Mazor's robotic-assisted surgery systems. Total consideration for the transaction, net of cash acquired, was $1.6 billion, consisting of $1.3 billion of cash and $246 million of a previously-held equity investment in Mazor. Based upon a preliminary acquisition valuation, the Company acquired $383 million of technology-based intangible assets and $16 million of tradenames with estimated useful lives of 10 years and $1.2 billion of goodwill. The goodwill is primarily attributable to pull-through revenue, future yet to be defined technologies, and an assembled workforce. The goodwill is not deductible for tax purposes.

During fiscal year 2019, the Company recognized $51 million of costs incurred in connection with the acquisition of Mazor, including payouts for unvested stock options and investment banker and other transaction fees, which were recognized in *selling, general, and administrative expense* in the consolidated statements of income. Revenue and net income (loss) attributable to Mazor since the date of acquisition included in the consolidated statements of income were not significant for fiscal year 2019.

EPiX Therapeutics, Inc.

On March 8, 2019, the Company's Cardiac and Vascular Group acquired EPiX Therapeutics, Inc. (EPiX), a medical device company that designs and manufactures a novel, catheter-based, temperature-controlled cardiac ablation system for the treatment of patients with cardiac arrhythmias, including atrial fibrillation. This acquisition expands the Company's cardiac ablation portfolio to offer physicians a comprehensive suite of tools to treat patients with cardiac arrhythmias. Total consideration for the transaction, net of cash acquired, was $316 million, consisting of $216 million of cash and $100 million of contingent consideration. Contingent consideration is primarily comprised of a product development-based payment triggered upon a U.S. Federal Drug Administration regulatory approval. Based upon a preliminary acquisition valuation, the Company acquired $162 million of IPR&D related to the DiamondTemp ablation system and $165 million of goodwill. The goodwill is primarily attributable to future yet to be defined technologies and is not deductible for tax purposes. Expenses incurred in connection with the acquisition of EPiX were not significant. Revenue and net income (loss) attributable to EPiX since the date of acquisition included in the consolidated statements of income were not significant for fiscal year 2019.

Fiscal Year 2018

The acquisition date fair value of net assets acquired in fiscal year 2018 was $152 million, consisting of $156 million of assets acquired and $4 million of liabilities assumed. Assets acquired were primarily comprised of $52 million of goodwill, $48 million of customer-related intangible assets with estimated useful lives of 7 years, and $47 million of technology-based intangible assets with estimated useful lives ranging from 10 to 12 years.

Additionally, in the first quarter of fiscal year 2018, adjustments were made to finalize the allocation of purchase price for the Company's acquisition of HeartWare International, Inc., which was acquired on August 23, 2016, related to contingent liabilities and other assets, which resulted in an increase to goodwill of $54 million.

Acquired In-Process Research & Development

IPR&D acquired outside of a business combination is expensed immediately. During fiscal year 2019, the Company acquired $38 million of IPR&D in connection with asset acquisitions, which was recognized in *other operating expense, net* in the consolidated statements of income. The Company did not acquire any IPR&D in connection with asset acquisitions during fiscal years 2018 and 2017.

Contingent Consideration

The fair value of contingent consideration at April 26, 2019 and April 27, 2018 was $222 million and $173 million, respectively. At April 26, 2019, $73 million was recorded in *other accrued expenses* and $149 million was recorded in *other liabilities* on the consolidated balance sheets. At April 27, 2018, $108 million was reflected in *other accrued expenses* and $65 million was reflected in *other liabilities* on the consolidated balance sheets.

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

	Fiscal Year	
(in millions)	**2019**	**2018**
Beginning Balance	$ 173	$ 246
Purchase price contingent consideration	151	28
Contingent consideration payments	(36)	(72)
Change in fair value of contingent consideration	(66)	(29)
Ending Balance	$ 222	$ 173

The recurring Level 3 fair value measurements of contingent consideration include the following significant unobservable inputs:

(in millions)	Fair Value at April 26, 2019	Valuation Technique	Unobservable Input	Range
			Discount rate	11.5% - 32.5%
Revenue-based payments	$ 90	Discounted cash flow	Probability of payment	65% - 100%
			Projected fiscal year of payment	2020 - 2025
			Discount rate	5.5%
Product development-based payments	$ 132	Discounted cash flow	Probability of payment	75% - 100%
			Projected fiscal year of payment	2020 - 2027

4. Divestiture

On July 29, 2017, the Company completed the sale of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses within the Minimally Invasive Therapies Group segment to Cardinal Health, Inc. (Cardinal). As a result of the transaction, the Company received proceeds of $6.1 billion, which was recorded in *proceeds from sale of businesses* in the consolidated statements of cash flows, and recognized a before-tax gain of $697 million, which was recognized within *gain on sale of businesses* in the consolidated statements of income. Among the product lines included in the divestiture were dental and animal health, chart paper, wound care, incontinence, electrodes, SharpSafety, thermometry, perinatal protection, blood collection, compression, and enteral feeding offerings. The divestiture also included 17 dedicated manufacturing sites.

In fiscal year 2018, the Company recognized expenses incurred in connection with the divestiture of $115 million, primarily comprised of professional services, including banker, legal, tax, and advisory fees, as well as $16 million of accelerated stock compensation expense related to the acceleration of the vesting period for employees that transferred with the divestiture. Expenses incurred in connection with the divestiture were recognized in *selling, general, and administrative expense* in the consolidated statements of income. There were no divestiture-related expenses during fiscal years 2019 or 2017.

The divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses did not meet the criteria to be classified as discontinued operations, as such, the results of operations of these businesses are included within net income through the date of the divestiture.

5. Restructuring Charges

For fiscal year 2019, the Company recognized $407 million in restructuring charges, net of $17 million of accrual adjustments. For fiscal year 2018, the Company recognized $107 million in restructuring charges, net of $34 million of accrual adjustments, including $96 million in restructuring charges related to the Enterprise Excellence restructuring program and $11 million in restructuring charges, net of $34 million of accrual adjustments, related to the Cost Synergies restructuring program. For fiscal year 2017, the Company recognized $300 million in restructuring charges, net of $68 million of accrual adjustments related to the Cost Synergies restructuring program. Accrual adjustments relate to certain employees identified for termination finding other positions within the Company, cancellations of employee terminations, and employee termination benefits being less than initially estimated.

Enterprise Excellence

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 associated with the restructuring program 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 restructuring 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.

During fiscal year 2019, the Company recognized $424 million in charges, including $91 million recognized within *cost of products sold* and $118 million recognized within *selling, general, and administrative expense* in the consolidated statements of income. During fiscal year 2018, the Company recognized $96 million in charges, including $28 million within *cost of products sold* and $33 million 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 fiscal years 2019 and 2018:

(in millions)	Employee Termination Benefits	Associated Costs[1]	Asset Write-downs[2]	Other Costs	Total
April 28, 2017	$ —	$ —	$ —	$ —	$ —
Charges	35	61	—	—	96
Cash payments	(8)	(59)	—	—	(67)
April 27, 2018	27	2	—	—	29
Charges	192	193	17	22	424
Cash payments	(118)	(186)	—	(10)	(314)
Settled non-cash	—	—	(17)	—	(17)
April 26, 2019	$ 101	$ 9	$ —	$ 12	$ 122

(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 *selling, general, and administrative expense* in the consolidated statements of income.

Cost Synergies

The cost synergies program related to administrative office optimization, manufacturing and supply chain infrastructure, and certain general and administrative savings was achieved as part of the Covidien plc (Covidien) integration and completed in the third quarter of fiscal year 2018. Restructuring charges incurred throughout the life of the initiative affecting all segments were primarily related to employee termination costs and costs related to manufacturing and facility closures.

The following table summarizes the activity related to the Cost Synergies restructuring program for fiscal years 2019, 2018, and 2017:

(in millions)	Employee Termination Benefits	Asset Write-downs	Other Costs	Total
April 29, 2016	$ 213	$ —	$ 37	$ 250
Charges	287	27	54	368
Cash payments	(179)	—	(53)	(232)
Settled non-cash	—	(27)	—	(27)
Accrual adjustments	(60)	—	(8)	(68)
April 28, 2017	261	—	30	291
Charges	25	—	20	45
Cash payments	(132)	—	(32)	(164)
Accrual adjustments	(38)	—	4	(34)
April 27, 2018	116	—	22	138
Cash payments	(44)	—	(13)	(57)

Accrual adjustments	(13)	—	(4)	(17)
April 26, 2019	$ 59	$ —	$ 5	$ 64

For fiscal year 2019, the Company recognized no charges and accrual adjustments of $17 million. For fiscal year 2018, the Company recognized $45 million in charges, partially offset by accrual adjustments of $34 million, including $12 million recognized within

cost of products sold and $4 million recognized within *selling, general, and administrative expense* in the consolidated statements of income.

For fiscal year 2017, the Company recognized $441 million in charges, which included $73 million of incremental defined pension and post-retirement related expenses for employees that accepted voluntary early retirement packages. These costs are not included in the table summarizing the restructuring above, because they are associated with costs that are accounted for under the pension and post-retirement rules. See Note 16 for further discussion on the incremental defined benefit pension and post-retirement related expenses. The charges recognized during 2017 were partially offset by accrual adjustments of $68 million. For fiscal year 2017, asset write-downs included $17 million of property, plant, and equipment impairments. Fiscal year 2017 assets write-downs also included $10 million of inventory write-offs of discontinued product lines 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. Refer to Note 1 for information regarding valuation techniques and inputs used in the fair value measurements.

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 April 26, 2019 and April 27, 2018:

	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

	April 27, 2018					
	Valuation				Balance Sheet Classification	
(in millions)	Cost	Unrealized Gains	Unrealized Losses	Fair Value	Investments	Other Assets
Level 1:						
U.S. government and agency securities	$ 732	$ —	$ (26)	$ 706	$ 706	$ —
Level 2:						
Corporate debt securities	4,179	20	(75)	4,124	4,124	—
U.S. government and agency securities	848	—	(24)	824	824	—
Mortgage-backed securities	725	2	(34)	693	693	—
Non-U.S. government and agency securities	74	—	(1)	73	73	—
Other asset-backed securities	358	—	(2)	356	356	—
Total Level 2	6,184	22	(136)	6,070	6,070	—
Level 3:						
Auction rate securities	47	—	(3)	44	—	44
Total available-for-sale debt securities	$ 6,963	$ 22	$ (165)	$ 6,820	$ 6,776	$ 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 April 26, 2019 and April 27, 2018:

	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)

	April 27, 2018			
	Less than 12 months		More than 12 months	
(in millions)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. government and agency securities	$ 762	$ (33)	$ 374	$ (17)
Corporate debt securities	2,620	(58)	272	(17)
Mortgage-backed securities	442	(15)	102	(19)
Non-U.S. government and agency securities	32	—	36	(1)
Other asset-backed securities	238	(1)	63	(1)
Auction rate securities	—	—	44	(3)
Total	$ 4,094	$ (107)	$ 891	$ (58)

The following table presents the unobservable inputs utilized in the fair value measurement of the auction rate securities classified as Level 3 at April 26, 2019:

	Valuation Technique	Unobservable Input	Range (Weighted Average)
Auction rate securities	Discounted cash flow	Years to principal recovery	2 yrs. - 12 yrs. (3 yrs.)
		Illiquidity premium	6%

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 fiscal years 2019 or 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.

The following table provides a reconciliation of the beginning and ending balances of items measured at fair value on a recurring basis that used significant unobservable inputs (Level 3):

(in millions)	Total Level 3 Investments	Corporate Debt Securities	Auction Rate Securities
April 28, 2017	$ 45	$ 1	$ 44
Settlements	(1)	(1)	—
April 27, 2018	44	—	44
Settlements	—	—	—
April 26, 2019	$ 44	$ —	$ 44

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

(in millions)	April 26, 2019	April 27, 2018	April 28, 2017
Proceeds from sales	$ 3,718	$ 3,309	$ 3,646
Gross realized gains	18	27	49
Gross realized losses	(62)	(21)	(14)

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 April 26, 2019 and April 27, 2018, the credit loss portion of other-than temporary impairments on debt securities was not significant. The total reductions for available-for-sale debt securities sold during fiscal years 2019 and 2018 were not significant.

The April 26, 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)	April 26, 2019
Due in one year or less	$ 1,022
Due after one year through five years	2,198
Due after five years through ten years	2,244
Due after ten years	35

Total debt securities	$ 5,499

Equity Securities, Equity Method Investments, and Other Investments

The Company commonly holds investments in equity securities with readily determinable fair values, equity investments without readily determinable fair values, investments accounted for under the equity method, and other investments.

Effective April 28, 2018, the Company adopted accounting standards update (ASU) 2016-01, which 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 Company uses quoted market prices to determine the fair value of equity securities with readily determinable fair values. For equity investments without readily determinable fair values that do not qualify for the practical expedient to estimate fair value using the net asset value per share or its equivalent, the Company has elected to measure these investments at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or similar investment of the same issuer. This election is made for each investment separately and is reassessed at each reporting period as to whether the investment continues to qualify for this election. Additionally, at each reporting period, the Company makes a qualitative assessment considering impairment indicators to evaluate whether the investment is impaired.

Equity securities with readily determinable fair values are included within Level 1 of the fair value hierarchy, as they are measured using quoted market prices. Equity method investments and investments without readily determinable fair values, as described above, 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 April 26, 2019, which are classified as *other assets* in the consolidated balance sheets:

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

Prior to the adoption of ASU 2016-01, marketable equity securities were classified as available-for-sale and measured at fair value with unrealized changes recognized in accumulated other comprehensive income (AOCI), net of deferred taxes. Gains and losses on available-for-sale marketable equity securities were recognized in net income when realized. The Company also accounted for certain investments without quoted market prices under the cost method of accounting.

The following table summarizes the values of the Company's equity and other investments by significant investment category and the related consolidated balance sheet classification at April 27, 2018:

	Valuation				Balance Sheet Classification	
(in millions)	Cost	Unrealized Gains	Unrealized Losses	Fair Value	Investments	Other Assets
Level 1:						
Marketable equity securities	$ 63	$ 99	$ —	$ 162	$ —	$ 162
Level 2:						
Debt funds	739	—	(154)	585	585	—
Investments measured at net asset value[1]:						
Debt funds	199	—	(2)	197	197	—
Total available-for-sale equity securities	1,001	99	(156)	944	782	162

Cost method, equity method, and other investments:						
Level 3:						
Cost method, equity method, and other investments	353	—	—	N/A	—	353
Total equity and other investments	$ 1,354	$ 99	$ (156)	$ 944	$ 782	$ 515

(1) Certain investments that are measured at the net asset value per share (or its equivalent) as a practical expedient are excluded from the fair value hierarchy. The fair value amounts presented herein are intended to permit reconciliation to the consolidated balance sheets.

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.

(in millions)	April 26, 2019	April 27, 2018	April 28, 2017
Proceeds from sales	$ 964	$ 918	$ 1,710
Gross realized gains	134	18	75
Gross realized losses	(30)	(4)	(42)
Recognized impairment losses	(45)	(231)	(30)

Net gains recognized during fiscal year 2019 were $104 million, comprised of $94 million net realized gains on equity and other investments sold during the period and $10 million of unrealized gains on equity and other investments still held at April 26, 2019. Gross gains and losses for fiscal years 2018 and 2017 represent gains and losses on instruments sold during the period.

During fiscal year 2018, the Company received bids from potential buyers and investors for some or all of its ownership in a portfolio of selected investments, which indicated that the fair values of certain of the underlying cost and equity method investments in the portfolio may be below the respective carrying values. The Company determined that the decline in the fair values was other-than-temporary given the uncertainty regarding the Company's intent to hold the investments for a period of time that would be sufficient to recover the carrying values. As a result, the Company recognized impairment charges of $227 million during fiscal year 2018, which were recognized in *other non-operating income, net* in the consolidated statements of income. The fair values of the investments were determined based on Level 3 inputs. The carrying values of the investments prior to recognizing the impairment charges was $317 million. There were no other significant impairment charges recognized during fiscal year 2018 and impairment charges during fiscal years 2019 and 2017 were not significant.

7. Financing Arrangements

Current debt obligations consisted of the following:

(in millions)	April 26, 2019	April 27, 2018
Bank borrowings	$ 332	$ 355
Floating rate five-year 2015 senior notes	500	—
Capital lease obligations	6	5
Commercial paper	—	698
1.700 percent two-year 2017 senior notes	—	1,000
Current debt obligations	$ 838	$ 2,058

Bank Borrowings Outstanding bank borrowings at April 26, 2019 were short-term advances to certain non-U.S. subsidiaries under credit agreements with various banks. Bank borrowings consist primarily of borrowings in Japanese Yen at an interest rate of 0.18%, and the borrowing is a natural hedge of currency and exchange rate risk.

Commercial Paper On January 26, 2015, Medtronic Global Holdings S.C.A. (Medtronic Luxco), an entity organized under the laws of Luxembourg, entered into various agreements pursuant to which Medtronic Luxco may issue unsecured commercial paper notes (the 2015 Commercial Paper Program) on a private placement basis up to a maximum aggregate amount outstanding at any time of $3.5 billion. The Company and Medtronic, Inc. have guaranteed the obligations of Medtronic Luxco under the 2015 Commercial Paper Program.

There was no commercial paper outstanding at April 26, 2019, as compared to $698 million outstanding at April 27, 2018. During fiscal years 2019 and 2018, the weighted average original maturity of the commercial paper outstanding was approximately 27 days and 28 days, respectively, and the weighted average interest rate was 2.12 percent and 1.46 percent, respectively. The issuance of commercial paper reduces the amount of credit available under the Company's existing Credit Facility, defined below.

Line of Credit On December 12, 2018, Medtronic Luxco, as borrower, entered into an amended and restated credit agreement (Credit Facility), by and among Medtronic, Medtronic, Inc., Medtronic Luxco, the lenders from time to time party thereto, and Bank of America, N.A., as administrative agent and issuing bank, which expires in December 2023. The Credit Facility replaces the previous credit agreement dated November 7, 2014 and effective as of January 26, 2015.

The Credit Facility provides for a $3.5 billion five-year unsecured revolving credit facility (Credit Facility). At each anniversary date of the Credit Facility, but not more than twice prior to the maturity date, the Company could also request a one-year extension of the maturity date. The Credit Facility provides the Company with the ability to increase its borrowing capacity by an additional $1.0 billion at any time during the term of the agreement. The Company and Medtronic, Inc. have guaranteed the obligations of the borrowers under the Credit Facility, and Medtronic Luxco will also guarantee the obligations of any designated borrower. The Credit Facility includes a multi-currency borrowing feature for certain specified foreign currencies. At April 26, 2019 and April 27, 2018, no amounts were outstanding under the original or amended credit facilities.

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 agreements also contain customary covenants, all of which the Company remained in compliance with at April 26, 2019.

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Long-term debt consisted of the following:

(in millions, except interest rates)	Maturity by Fiscal Year	April 26, 2019 Amount	April 26, 2019 Effective Interest Rate	April 27, 2018 Amount	April 27, 2018 Effective Interest Rate
Floating rate five-year 2015 senior notes	2020	$ —	—%	$ 500	2.92%
2.500 percent five-year 2015 senior notes	2020	—	—	2,500	2.63
4.200 percent ten-year 2010 CIFSA senior notes	2021	—	—	600	2.33
0.000 percent two-year 2019 senior notes	2021	1,681	0.22	—	—
Floating rate two-year 2019 senior notes	2021	560	0.05	—	—
4.125 percent ten-year 2011 senior notes	2021	500	4.21	500	4.21
3.150 percent seven-year 2015 senior notes	2022	2,500	3.29	2,500	3.29
3.125 percent ten-year 2012 senior notes	2022	675	3.21	675	3.21
3.200 percent ten-year 2012 CIFSA senior notes	2023	650	2.72	650	2.72
0.375 percent four-year 2019 senior notes	2023	1,681	0.56	—	—
2.750 percent ten-year 2013 senior notes	2023	530	3.25	530	3.25
2.950 percent ten-year 2013 CIFSA senior notes	2024	310	2.71	310	2.71
3.625 percent ten-year 2014 senior notes	2024	850	3.61	850	3.61
3.500 percent ten-year 2015 senior notes	2025	4,000	3.74	4,000	3.74
1.125 percent eight-year 2019 senior notes	2027	1,681	1.25	—	—
3.350 percent ten-year 2017 senior notes	2027	850	3.53	850	3.53
1.625 percent twelve-year 2019 senior notes	2031	1,121	1.75	—	—
4.375 percent twenty-year 2015 senior notes	2035	2,382	4.47	2,382	4.47
6.550 percent thirty-year 2007 CIFSA senior notes	2038	284	4.68	374	4.68
2.250 percent twenty-year 2019 senior notes	2039	1,121	2.34	—	—
6.500 percent thirty-year 2009 senior notes	2039	183	6.56	300	6.56
5.550 percent thirty-year 2010 senior notes	2040	306	5.58	500	5.58
4.500 percent thirty-year 2012 senior notes	2042	129	4.54	400	4.54
4.000 percent thirty-year 2013 senior notes	2043	325	4.10	325	4.10
4.625 percent thirty-year 2014 senior notes	2044	177	4.67	650	4.67
4.625 percent thirty-year 2015 senior notes	2045	1,963	4.69	4,150	4.69
Bank borrowings	2021-2022	83	1.94	125	3.99
Debt premium, net	2021-2045	29	—	120	—
Capital lease obligations	2021-2028	10	6.39	21	4.46
Interest rate swaps	2021-2022	9	—	(6)	—
Deferred financing costs	2021-2045	(104)	—	(107)	—
Long-term debt		$ 24,486		$ 23,699	

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 April 26, 2019. The Company used the net

proceeds from the sale of the Senior Notes primarily for general corporate purposes, which includes the repayment of other indebtedness of the Company.

In March 2019, Medtronic Luxco issued six tranches of Euro-denominated Senior Notes with an aggregate principal of €7.0 billion, with maturities ranging from fiscal year 2021 to fiscal year 2039, resulting in cash proceeds of approximately $7.8 billion, net of

discounts and issuance costs (collectively, the 2019 Senior Notes). The issuance included €500 million of floating rate Senior Notes due in fiscal year 2021, €1.5 billion of 0.000 percent Senior Notes due in fiscal year 2021, €1.5 billion of 0.375 percent Senior Notes due in fiscal year 2023, €1.5 billion of 1.125 percent Senior Notes due in fiscal year 2027, €1.0 billion of 1.625 percent Senior Notes due in fiscal year 2031, and €1.0 billion of 2.250 percent Senior Notes due in fiscal year 2039. The Company used a portion of the net proceeds of the offering to fund the previously announced cash tender offers 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 and early redemption of $6.4 billion of Medtronic Inc. and CIFSA senior notes for $6.9 billion of total consideration in March 2019. The Company recognized a loss on debt extinguishment of $485 million, which primarily included cash premiums and accelerated amortization of deferred financing costs and debt discounts and premiums. The loss on debt extinguishment was recognized in *interest expense* in the consolidated statements of income. Also in March 2019, the Company repaid its 1.700 percent two-year 2017 senior notes, including interest, for $1.0 billion.

In April 2018, the Company completed an early redemption of approximately $1.2 billion of Senior Notes for $1.2 billion of total consideration. The Company recognized a loss on the debt redemption of $38 million, which included cash premiums and accelerated amortization of deferred financing costs. The loss was recognized in *interest expense* in the consolidated statements of income.

At April 26, 2019 and April 27, 2018, the Company had interest rate swap agreements designated as fair value hedges of certain underlying fixed-rate obligations, including the Company's $500 million 4.125 percent 2011 Senior Notes and $675 million 3.125 percent 2012 Senior Notes. Refer to Note 8 for additional information regarding the interest rate swap agreements.

Contractual maturities of debt for the next five fiscal years and thereafter, excluding deferred financing costs, debt premium, net, and the fair value of outstanding interest rate swap agreements are as follows:

(in millions)	
2020	$ 838
2021	2,747
2022	3,258
2023	2,862
2024	1,161
Thereafter	14,524
Total debt	25,390
Less: Current debt obligations	838
Long-term debt	$ 24,552

Financial Instruments Not Measured at Fair Value

At April 26, 2019, the estimated fair value of the Company's Senior Notes was $26.2 billion compared to a principal value of $25.0 billion. At April 27, 2018 the estimated fair value was $25.1 billion compared to a principal value of $24.5 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, as well as 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 $11.1 billion and $11.5 billion at April 26, 2019 and April 27, 2018, 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 April 26, 2019 and April 27, 2018 was $4.3 billion and $5.2 billion, respectively. 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 entered into total return swaps in fiscal year 2018, which are used to hedge the liability of a non-qualified, deferred compensation plan. The gross notional amount of the Company's total return swaps outstanding at April 26, 2019 and April 27, 2018 was $191 million and $210 million, respectively. 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 fiscal years 2019, 2018, and 2017 are as follows:

		Fiscal Year		
(in millions)	**Classification**	**2019**	**2018**	**2017**
Currency exchange rate contracts	Other operating expense, net	$ 218	$ (253)	$ 54
Total return swaps	Other operating expense, net	18	27	—
Total		$ 236	$ (226)	$ 54

Cash Flow Hedges

Currency Exchange Rate Risk

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 April 26, 2019 and April 27, 2018 was $6.8 billion and $6.3 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 effective portion of the gain or loss on the derivative instrument is reported as a component of *accumulated other comprehensive loss*. The effective portion of 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. 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 gains or losses relating to ineffectiveness of cash flow hedges were recognized in earnings during fiscal years 2019, 2018, or 2017. No components of the hedge contracts were excluded in the measurement of hedge ineffectiveness, and no hedges were derecognized or discontinued during fiscal years 2019, 2018, or 2017.

The amount of gross gains (losses) recognized in the consolidated statements of income related to derivative instruments designated as cash flow hedges for fiscal years 2019, 2018, and 2017 were as follows:

		Fiscal Year		
(in millions)	**Classification**	**2019**	**2018**	**2017**
Currency exchange rate contracts	Other operating expense, net	$ 108	$ (69)	$ 173

The amount of the gains (losses) recognized in AOCI related to the effective portion of currency exchange rate contract derivative instruments designated as cash flow hedges for fiscal years 2019, 2018, and 2017 were as follows:

	Fiscal Year		
(in millions)	**2019**	**2018**	**2017**
Currency exchange rate contracts	$ 615	$ (404)	$ 342

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 effective portion of 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 effective portion of the gains or losses are then reclassified into *interest expense* over the term of the related debt. Any portion of the gains or losses that are determined to be ineffective is immediately recognized in *interest expense*. For fiscal years 2019 and 2018, the reclassifications of the effective portion of net gains (losses) on forward starting interest rate derivative instruments from accumulated other comprehensive loss to interest expense were not significant.

During fiscal year 2017, in connection with the issuance of the 2017 Senior Notes, the Company terminated $300 million of fixed pay, forward starting interest rate swaps with a weighted average fixed rate of 3.10 percent. During fiscal year 2017, there were $21 million of unrealized gains recorded in *accumulated other comprehensive loss*.

No gains or losses related to the ineffectiveness of forward starting interest rate derivative instruments were recognized in *interest expense* during fiscal year 2017. Additionally, during fiscal year 2017, no components of the forward starting interest rate derivative instruments were excluded in the measurement of hedge ineffectiveness and no hedges were derecognized or discontinued. The reclassification of the effective portion of the net losses from *accumulated other comprehensive loss* to *interest expense* was not significant.

At April 26, 2019 and April 27, 2018, the Company had $194 million and $(207) million, respectively, in after-tax net unrealized gains (losses) associated with cash flow hedging instruments recorded in *accumulated other comprehensive loss*. The Company expects that $175 million of after-tax net unrealized gains at April 26, 2019 will be recognized in the consolidated statements of income over the next 12 months.

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 April 26, 2019, the Company had $7.8 billion of outstanding Euro-denominated debt designated as a hedge of its net investment in certain of its European operations. These non-derivative instruments will mature beginning fiscal year 2021 through fiscal year 2039.

Additionally, during the fourth quarter of fiscal year 2019, 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 the 2019 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 were terminated in conjunction with the issuance of the 2019 Senior Notes. Historically, the Company utilized forward currency exchange rate contracts designated as net investment hedges, all of which were terminated effective in fiscal year 2009 or prior.

For instruments that are designated and qualify as net investment hedges, the effective portion of the gains or losses is reported as a component of *accumulated other comprehensive loss*. The effective portion of the gains or losses is reclassified into earnings in the same period as a liquidation event or upon 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 April 26, 2019 and April 27, 2018, the Company had $169 million and $257 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 April 26, 2019 to be recognized in the consolidated statements of income over the next 12 months.

No significant hedge ineffectiveness was recognized as a result of these net investment hedges during fiscal years 2019, 2018, or 2017. In addition, the Company did not recognize any gains or losses during fiscal years 2019, 2018, or 2017 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 ineffectiveness were as follows:

		Fiscal Year		
(in millions)	**Classification**	**2019**	**2018**	**2017**
Net investment hedges	Other operating expense, net	$ 12	$ —	$ —

The amount of the gains recognized in AOCI related to the effective portion of instruments designated as net investment hedges for fiscal year 2019, 2018, or 2017 were as follows:

	Fiscal Year		
(in millions)	**2019**	**2018**	**2017**
Net investment hedges	$ 88	$ —	$ —

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 both April 26, 2019 and April 27, 2018, the Company had interest rate swaps with 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.

At April 26, 2019, the market value of outstanding interest rate swap agreements was an unrealized gain of $9 million, as compared to an unrealized loss of $6 million at April 27, 2018. The amounts were recorded in *other liabilities* and *other assets* with the offsets recorded in *long-term debt* on the consolidated balance sheets.

No significant hedge ineffectiveness was recognized as a result of these fair value hedges for fiscal years 2019, 2018, or 2017. In addition, the Company did not recognize any gains or losses during fiscal years 2019, 2018, or 2017 on firm commitments that no longer qualify as fair value hedges.

Balance Sheet Presentation

The following tables summarize the balance sheet classification and fair value of derivative instruments included in the consolidated balance sheets at April 26, 2019 and April 27, 2018. 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.

	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

	April 27, 2018			
	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	$ 37	Other accrued expenses	$ 162
Interest rate contracts	Other assets	8	Other liabilities	14
Currency exchange rate contracts	Other assets	11	Other liabilities	51
Total derivatives designated as hedging instruments		56		227
Derivatives not designated as hedging instruments				
Currency exchange rate contracts	Other current assets	31	Other accrued expenses	25
Total return swaps	Other current assets	4	Other accrued expenses	—
Stock warrants	Other assets	21	Other liabilities	—

Cross-currency interest rate contracts	Other assets	6	Other liabilities	6
Total derivatives not designated as hedging instruments		62		31
Total derivatives		$ 118		$ 258

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

	April 26, 2019		April 27, 2018	
(in millions)	Level 1	Level 2	Level 1	Level 2
Derivative assets	$ 335	$ 30	$ 79	$ 39
Derivative liabilities	19	—	238	20

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.

	April 26, 2019				
		Gross Amount Not Offset on the Balance Sheet			
(in millions)	Gross Amount of Recognized Assets (Liabilities)	Financial Instruments	Cash Collateral (Received) Posted	Securities Collateral (Received) Posted	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

	April 27, 2018				
		Gross Amount Not Offset on the Balance Sheet			
(in millions)	Gross Amount of Recognized Assets (Liabilities)	Financial Instruments	Cash Collateral (Received) Posted	Securities Collateral (Received) Posted	Net Amount
Derivative assets:					
Currency exchange rate contracts	$ 79	$ (61)	$ —	$ —	$ 18
Interest rate contracts	8	(6)	—	—	2
Total return swaps	4	—	—	—	4
Stock warrants	21	—	—	—	21
Cross-currency interest rate contracts	6	(4)	—	—	2
	118	(71)	—	—	47
Derivative liabilities:					
Currency exchange rate contracts	(238)	61	—	74	(103)
Interest rate contracts	(14)	6	—	2	(6)
Cross-currency interest rate contracts	(6)	4	—	—	(2)
	(258)	71	—	76	(111)
Total	$ (140)	$ —	$ —	$ 76	$ (64)

Concentrations of Credit Risk

Financial instruments, which potentially subject the Company to significant concentrations of credit risk, consist principally of interest-bearing investments, forward exchange derivative contracts, and trade accounts receivable. Global concentrations of credit risk with respect to trade accounts receivable are limited due to the large number of customers and their dispersion across many geographic areas. The Company monitors the creditworthiness of its customers to which it grants credit terms in the normal course of business.

The Company maintains cash and cash equivalents, investments, and certain other financial instruments (including currency exchange rate and interest rate derivative contracts) with various major financial institutions. The Company performs periodic evaluations of the relative credit standings of these financial institutions and limits the amount of credit exposure with any one institution. In addition, the Company has collateral credit agreements with its primary derivatives counterparties. Under these agreements, either party is required to post eligible collateral when the market value of transactions covered by the agreement exceeds specific thresholds, thus limiting credit exposure for both parties. At April 26, 2019, the Company received net cash collateral of $44 million from its counterparties. At April 27, 2018, the Company posted net securities collateral of $76 million to its counterparties. The cash collateral received was recorded in *cash and cash equivalents*, with the offset recorded as an increase in *other accrued expenses* on the consolidated balance sheets. The securities collateral posted remained in *investments* on the consolidated balance sheets.

9. Inventories

Inventory balances, net of reserves, were as follows:

(in millions)	April 26, 2019	April 27, 2018
Finished goods	$ 2,476	$ 2,407
Work-in-process	572	496

Raw materials	705	676
Total	$ 3,753	$ 3,579

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 28, 2017	$ 6,651	$ 20,411	$ 9,600	$ 1,853	$ 38,515
Goodwill as a result of acquisitions	6	10	9	27	52
Purchase accounting adjustments	54	—	—	—	54
Currency translation and other	80	734	108	—	922
April 27, 2018	6,791	21,155	9,717	1,880	39,543
Goodwill as a result of acquisitions	165	83	1,238	24	1,510
Currency translation and other	(102)	(857)	(134)	(1)	(1,094)
April 26, 2019	$ 6,854	$ 20,381	$ 10,821	$ 1,903	$ 39,959

The Company did not recognize any goodwill impairments during fiscal years 2019, 2018, or 2017.

Intangible Assets

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

	April 26, 2019		April 27, 2018	
(in millions)	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Definite-lived:				
Customer-related	$ 16,944	$ (4,095)	$ 16,949	$ (3,139)
Purchased technology and patents	11,405	(4,570)	11,569	(4,441)
Trademarks and tradenames	570	(324)	822	(569)
Other	85	(59)	94	(52)
Total	$ 29,004	$ (9,048)	$ 29,434	$ (8,201)
Indefinite-lived:				
IPR&D	$ 604	$ —	$ 490	$ —

During fiscal year 2019, the Company recognized $87 million of definite-lived intangible asset charges, including $61 million and $26 million recognized in connection with business exits in the Cardiac and Vascular Group and Restorative Therapies Group segments, respectively. Definite-lived intangible asset charges are recognized in *other operating expense, net* in the consolidated statements of income. The Company did not recognize any definite-lived intangible asset impairments during fiscal years 2018 or 2017.

During fiscal year 2019, the Company recognized $30 million of indefinite-lived intangible asset charges, including $11 million in connection with a business exit in the Restorative Therapies Group segment, and $10 million and $9 million in connection with the discontinuation of certain IPR&D projects within the Minimally Invasive Therapies Group and Cardiac and Vascular Group segments, respectively. During fiscal year 2018, the Company recognized impairment losses on indefinite-lived intangibles of $68 million as a result of the discontinuation of certain IPR&D

projects within the Restorative Therapies Group segment. Indefinite-lived intangible asset charges are recognized in *other operating expense, net* in the consolidated statements of income. The Company did not recognize any significant indefinite-lived intangible asset charges during fiscal year 2017. 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 such clinical trials, delays or failures to obtain required market clearances or other failures to achieve a commercially viable product, or the discontinuation of certain projects, and as a result, may recognize impairment losses in the future.

Amortization

Intangible asset amortization expense was $1.8 billion for fiscal years 2019 and 2018 and $2.0 billion for fiscal year 2017. Estimated aggregate amortization expense by fiscal year based on the current carrying value and remaining estimated useful lives of definite-lived intangible assets at April 26, 2019, excluding any possible future amortization associated with acquired IPR&D which has not met technological feasibility, is as follows:

(in millions)	Amortization Expense
2020	$ 1,741
2021	1,724
2022	1,684
2023	1,615
2024	1,574

11. Property, Plant, and Equipment

Property, plant, and equipment balances and corresponding estimated useful lives were as follows:

(in millions)	April 26, 2019	April 27, 2018	Estimated Useful Lives (in years)
Equipment	$ 5,519	$ 5,171	Generally 2-7, up to 15
Computer software	1,842	1,578	Up to 5
Land and land improvements	181	187	Up to 20
Buildings and leasehold improvements	2,267	2,265	Up to 40
Construction in progress	1,111	1,058	—
Property, plant, and equipment	10,920	10,259	
Less: Accumulated depreciation	(6,245)	(5,655)	
Property, plant, and equipment, net	$ 4,675	$ 4,604	

Depreciation expense of $895 million, $821 million, and $937 million was recognized in fiscal years 2019, 2018, and 2017, respectively.

12. Shareholders' Equity

Share Capital Medtronic plc is authorized to issue 2.6 billion Ordinary Shares, $0.0001 par value; 40 thousand Euro Deferred Shares, €1.00 par value; 127.5 million Preferred Shares, $0.20 par value; and 500 thousand A Preferred Shares, $1.00 par value.

Euro Deferred Shares The authorized share capital of the Company includes 40 thousand Euro Deferred Shares, with a par value of €1.00 per share. At April 26, 2019, no Euro Deferred Shares were issued or outstanding.

Preferred Shares The authorized share capital of the Company includes 127.5 million of Preferred Shares, with a par value of $0.20 per share. At April 26, 2019, no Preferred Shares were issued or outstanding.

A Preferred Shares The authorized share capital of the Company includes 500 thousand A Preferred Shares, with a par value of $1.00 per share. At April 26, 2019, 1,872 A Preferred Shares were outstanding. The holders of A

Preferred Shares are entitled to payment of dividends prior to any other class of shares in the Company equal to twice the dividend to be paid per Company ordinary share. On a return of assets, whether on liquidation or otherwise, the A Preferred Shares are entitled to repayment of the capital paid up thereon in priority to any repayment of capital to the holders of any other shares and the holders of the A Preferred Shares shall not be entitled to any further participation in the assets or profits of the Company. The holders of the A Preferred Shares are not entitled to receive notice of, nor to attend, speak, or vote at any general meeting of the Company.

Dividends The timing, declaration, and payment of future dividends to holders of the Company's ordinary and A Preferred shares falls within the discretion of the Company's Board of Directors and depends upon many factors, including the statutory requirements of Irish law, the Company's earnings and financial condition, the capital requirements of the Company's businesses, industry practice and any other factors the Board of Directors deems relevant.

Ordinary Share Repurchase Program Shares are repurchased from time to time to support the Company's stock-based compensation programs and to return capital to shareholders. During fiscal years 2019 and 2018, the Company repurchased approximately 31 million and 25 million shares, respectively, at an average price of $91.43 and $83.71, respectively.

In June 2015, the Company's Board of Directors authorized, subject to the ongoing existence of sufficient distributable reserves, the repurchase of 80 million of the Company's ordinary shares. As described below, this authorization was replaced in June 2017. During fiscal year 2018, prior to the June 2017 repurchase program which became effective on June 26, 2017, the Company purchased approximately 13 million shares authorized under the June 2015 repurchase program.

In June 2017, the Company's Board of Directors replaced the June 2015 authorization to repurchase up to an aggregate number of ordinary shares with an authorization to expend up to an aggregate amount of $5.0 billion beginning June 26, 2017 to repurchase 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. At April 26, 2019, the Company had used approximately $3.8 billion of the $11.0 billion authorized under the repurchase program, leaving approximately $7.2 billion available for future repurchases. The Company accounts for repurchases of ordinary shares using the par value method and shares repurchased are canceled.

13. Stock Purchase and Award Plans

The Medtronic, Inc. 2013 Stock Award and Incentive Plan was originally approved by the Company's shareholders in August 2013. In January 2015, the Company's Board of Directors approved an amendment to and assumption of the Medtronic, Inc. 2013 Stock Award and Incentive Plan, which created the Medtronic plc 2013 Stock Award and Incentive Plan (2013 Plan). In fiscal year 2019, the Company granted stock awards under the 2013 Plan. The 2013 Plan provides for the grant of non-qualified and incentive stock options, stock appreciation rights, restricted stock, restricted stock units, performance awards, and other stock and cash-based awards. At April 26, 2019, there were approximately 51 million shares available for future grants under the 2013 Plan.

Share Options Options are granted at the exercise price, which is equal to the closing price of the Company's ordinary shares on the grant date. The majority of the Company's options are non-qualified options with a 10-year life and a 4-year ratable vesting term. The Company also grants shares of performance-based share options that typically cliff vest after three years only if the Company has also achieved certain performance objectives. Performance awards are expensed over the performance period based on the probability of achieving the performance objectives.

Restricted Stock Restricted stock awards and restricted stock units (collectively referred to as restricted stock) are granted to officers and key employees. At April 26, 2019, the Company does not have any outstanding restricted stock awards. Beginning in fiscal year 2018, restricted stock units have a 4-year ratable vesting term. Restricted stock units issued prior to fiscal year 2018 cliff vest after four years. The expense recognized for restricted stock units is equal to the grant date fair value, which is equal to the closing stock price on the date of grant. Restricted stock units are expensed over the vesting period and are subject to forfeiture if employment terminates prior to the lapse of the restrictions. The Company also grants shares of performance-based restricted stock units that typically cliff vest after three years only if the Company has also achieved certain performance objectives. Performance awards are expensed over the performance period based on the probability of achieving the performance objectives.

Restricted stock units are not considered issued or outstanding ordinary shares of the Company. Dividend equivalent units are accumulated on restricted stock units during the vesting period. At April 26, 2019, all restricted stock outstanding were restricted stock units.

Employees Stock Purchase Plan The Medtronic plc Amended and Restated 2014 Employees Stock Purchase Plan (ESPP) allows participating employees to purchase the Company's ordinary shares at a discount through payroll deductions. The expense recognized for shares purchased under the Company's ESPP is equal to the 15 percent discount the employee receives at the end of the calendar quarter purchase period.

Employees may contribute between 2 percent and 10 percent of their wages or the statutory limit under the U.S. Internal Revenue Code toward the purchase of newly-issued ordinary shares of the Company at 85 percent of its market value at the end of the calendar quarter purchase period. Employees purchased 2 million shares at an average price of $77.74 per share in fiscal year 2019. At April 26, 2019, plan participants had approximately $12 million withheld to purchase the Company's ordinary shares at

85 percent of its market value on June 28, 2019, the last trading day before the end of the calendar quarter purchase period. At April 26, 2019, approximately 13 million ordinary shares were available for future purchase under the ESPP.

Stock Option Valuation Assumptions The Company uses the Black-Scholes option pricing model (Black-Scholes model) to determine the fair value of stock options at the grant date. The fair value of stock options under the Black-Scholes model requires management to make assumptions regarding projected employee stock option exercise behaviors, risk-free interest rates, volatility of the Company's stock price, and expected dividends.

The following table provides the weighted average fair value of options granted to employees and the related assumptions used in the Black-Scholes model:

	Fiscal Year		
	2019	2018	2017
Weighted average fair value of options granted	$ 14.77	$ 13.71	$ 14.70
Assumptions used:			
Expected life (years)[1]	6.10	6.16	6.18
Risk-free interest rate[2]	2.90 %	2.00 %	1.26 %
Volatility[3]	17.77 %	19.51 %	21.07 %
Dividend yield[4]	2.25 %	2.19 %	1.97 %

(1) The Company analyzes historical employee stock option exercise and termination data to estimate the expected life assumption. The Company calculates the expected life assumption using the midpoint scenario, which combines historical exercise data with hypothetical exercise data, as the Company believes this data currently represents the best estimate of the expected life of a new employee option.

(2) The rate is based on the grant date yield of a zero-coupon U.S. Treasury bond whose maturity period equals the expected term of the option.

(3) Expected volatility is based on a blend of historical volatility and an implied volatility of the Company's ordinary shares. Implied volatility is based on market traded options of the Company's ordinary shares.

(4) The dividend yield rate is calculated by dividing the Company's annual dividend, based on the most recent quarterly dividend rate, by the closing stock price on the grant date.

Stock-Based Compensation Expense The following table presents the components and classification of stock-based compensation expense recognized for stock options, restricted stock, and ESPP in fiscal years 2019, 2018, and 2017:

	Fiscal Year		
(in millions)	2019	2018	2017
Stock options	$ 72	$ 132	$ 157

Restricted stock	189	185	169
Employee stock purchase plan	29	27	22
Total stock-based compensation expense	$ 290	$ 344	$ 348
Cost of products sold	$ 30	$ 44	$ 49
Research and development expense	36	38	41
Selling, general, and administrative expense	224	262	256
Restructuring charges, net	—	—	2
Total stock-based compensation expense	290	344	348
Income tax benefits	(54)	(82)	(98)
Total stock-based compensation expense, net of tax	$ 236	$ 262	$ 250

Stock Options The following table summarizes all stock option activity, including activity from options assumed or issued as a result of acquisitions, during fiscal year 2019:

	Options (in thousands)	Wtd. Avg. Exercise Price	Wtd. Avg. Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Outstanding at April 27, 2018	41,039	$ 66.56		
Granted	5,407	89.05		
Exercised	(13,767)	62.76		
Expired/Forfeited	(1,002)	83.17		
Outstanding at April 26, 2019	31,677	71.52	5.91	$ 512
Vested and expected to vest at April 26, 2019	9,086	86.54	8.46	16
Exercisable at April 26, 2019	22,102	65.01	4.81	495

The following table summarizes the total cash received from the issuance of new shares upon stock option award exercises, the total intrinsic value of options exercised, and the related tax benefit during fiscal years 2019, 2018, and 2017:

	Fiscal Year		
(in millions)	2019	2018	2017
Cash proceeds from options exercised	$ 825	$ 250	$ 367
Intrinsic value of options exercised	383	248	403
Tax benefit related to options exercised	78	75	140

Unrecognized compensation expense related to outstanding stock options at April 26, 2019 was $67 million and is expected to be recognized over a weighted average period of 2.5 years.

Restricted Stock The following table summarizes restricted stock activity, including activity from restricted stock assumed or issued as a result of acquisitions, during fiscal year 2019:

	Units (in thousands)	Wtd. Avg. Grant Price
Nonvested at April 27, 2018	8,236	$ 83.35
Granted	2,812	88.78
Vested	(2,397)	72.78
Forfeited	(655)	83.73
Nonvested at April 26, 2019	7,996	88.40

The following table summarizes the weighted-average grant date fair value of restricted stock granted, total fair value of restricted stock vested and related tax benefit during fiscal years 2019, 2018, and 2017:

	Fiscal Year		
(in millions, except per share data)	2019	2018	2017

Weighted-average grant-date fair value per restricted stock	$ 88.78	$ 83.88	$ 85.07
Fair value of restricted stock vested	174	160	131
Tax benefit related to restricted stock vested	45	63	76

Unrecognized compensation expense related to restricted stock as of April 26, 2019 was $353 million and is expected to be recognized over a weighted average period of 2.5 years.

14. Income Taxes

The income tax provision is based on income before income taxes reported for financial statement purposes. The components of income before income taxes, based on tax jurisdiction, are as follows:

	Fiscal Year		
(in millions)	2019	2018	2017
U.S.	$ 877	$ (958)	$ (234)
International	4,320	6,633	4,836
Income before income taxes	$ 5,197	$ 5,675	$ 4,602

The income tax provision consists of the following:

	Fiscal Year		
(in millions)	2019	2018	2017
Current tax expense:			
U.S.	$ 579	$ 2,899	$ 614
International	406	796	840
Total current tax expense	985	3,695	1,454
Deferred tax expense (benefit):			
U.S.	(310)	45	(399)
International	(128)	(1,160)	(477)
Net deferred tax benefit	(438)	(1,115)	(876)
Income tax provision	$ 547	$ 2,580	$ 578

On December 22, 2017, the U.S. government enacted comprehensive tax legislation, commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"), which significantly revises U.S. corporate income taxation by, among other things, lowering the U.S. corporate income tax rate from 35.0 percent to 21.0 percent effective January 1, 2018, broadening the base of taxation, implementing a territorial tax system, and imposing a repatriation tax on deemed repatriated earnings of foreign subsidiaries.

The Company has recorded a cumulative income tax charge associated with the Tax Act totaling $2.4 billion. The $2.4 billion charge is made up of the following components:

- A $2.4 billion charge associated with the one-time repatriation tax based on post-1986 undistributed earnings and profits not previously subject to U.S. income tax and whether such earnings were held in cash or other specified assets.

- A $118 million charge resulting from the removal of the permanent reinvestment assertion on earnings and profits through April 27, 2018 for entities subject to the one-time repatriation tax.

- A $75 million net benefit associated with the remeasurement of U.S. Federal deferred tax assets, liabilities, and valuation allowances, and impacts from the decrease in the U.S. statutory tax rate.

The Company made the accounting policy election to treat taxes due on U.S. inclusions in taxable income related to Global Intangible Low-Taxed Income (GILTI) as a current period expense when incurred (the "period cost method").

Tax assets (liabilities), shown before jurisdictional netting of deferred tax assets (liabilities), are comprised of the following:

(in millions)	April 26, 2019	April 27, 2018
Deferred tax assets:		
Net operating loss, capital loss, and credit carryforwards	$ 6,574	$ 7,463
Other accrued liabilities	389	410
Accrued compensation	315	209
Pension and post-retirement benefits	300	256
Stock-based compensation	162	190
Other	339	332
Inventory	194	207
Federal and state benefit on uncertain tax positions	83	67
Interest limitation	111	—
Unrealized loss on available-for-sale securities and derivative financial instruments	17	93
Gross deferred tax assets	8,484	9,227
Valuation allowance	(6,300)	(7,166)
Total deferred tax assets	2,184	2,061
Deferred tax liabilities:		
Intangible assets	(1,614)	(1,697)
Realized loss on derivative financial instruments	(70)	(69)
Other	(152)	(143)
Accumulated depreciation	(38)	(38)
Outside basis difference of subsidiaries	(119)	(131)
Total deferred tax liabilities	(1,993)	(2,078)
Prepaid income taxes	363	406
Income tax receivables	335	315
Tax assets, net	$ 889	$ 704
Reported as (after valuation allowance and jurisdictional netting):		
Other current assets	$ 648	$ 662
Tax assets	1,519	1,465
Deferred tax liabilities	(1,278)	(1,423)
Tax assets, net	$ 889	$ 704

No deferred taxes have been provided on the approximately $64.1 billion and $61.0 billion of undistributed earnings of the Company's subsidiaries at April 26, 2019 and April 27, 2018, respectively, since these earnings have been, and under current plans will continue to be, permanently reinvested in these subsidiaries. During fiscal year 2018, the Company removed its permanently reinvested assertion on the undistributed earnings of certain foreign subsidiaries with a U.S. parent which were subject to the transition tax. The Company removed the assertion for all earnings of such subsidiaries through April 27, 2018 and reasserted for earnings generated in subsequent fiscal years. Due to the number of legal entities and jurisdictions involved, the complexity of the legal entity structure of the Company, and the complexity of the tax laws in the relevant jurisdictions, the Company believes it is not practicable to estimate, within any reasonable range, the amount of additional taxes which may be payable upon distribution of these undistributed earnings.

At April 26, 2019, the Company had approximately $26.2 billion of net operating loss carryforwards in certain non-U.S. jurisdictions, of which $22.9 billion have no expiration, and the remaining $3.3 billion will expire during fiscal

years 2020 through 2039. Included in these net operating loss carryforwards are $18.1 billion of net operating losses related to a subsidiary of the Company, substantially all of which were recorded in fiscal 2008 as a result of the receipt of a favorable tax ruling from certain non-U.S. taxing authorities. The Company has recorded a full valuation allowance against these net operating losses, as management does not believe that it is more likely than not that these net operating losses will be utilized. Certain of the remaining non-U.S.

net operating loss carryforwards of $8.1 billion have a valuation allowance recorded against the carryforwards, as management does not believe that it is more likely than not that these net operating losses will be utilized.

At April 26, 2019, the Company had $682 million of U.S. federal net operating loss carryforwards, which will expire during fiscal years 2020 through 2036. For U.S. state purposes, the Company had $1.3 billion of net operating loss carryforwards at April 26, 2019, which will expire during fiscal years 2020 through 2039.

At April 26, 2019, the Company also had $178 million of tax credits available to reduce future income taxes payable, of which $66 million have no expiration. The remaining credits expire during fiscal years 2020 through 2039.

The Company has established valuation allowances of $6.3 billion and $7.2 billion at April 26, 2019 and April 27, 2018, respectively, primarily related to the uncertainty of the utilization of certain deferred tax assets which are primarily comprised of tax loss and credit carryforwards in various jurisdictions. The decrease in the valuation allowance during fiscal year 2019 is primarily related to tax rate changes and the effects of currency fluctuations. These valuation allowances would result in a reduction to the income tax provision in the consolidated statements of income if they are ultimately not required.

The Company's effective income tax rate varied from the U.S. federal statutory tax rate as follows:

	Fiscal Year		
	2019	2018	2017
U.S. federal statutory tax rate	21.0 %	30.5 %	35.0 %
Increase (decrease) in tax rate resulting from:			
U.S. state taxes, net of federal tax benefit	0.9	0.8	1.0
Research and development credit	(1.2)	(0.8)	(0.9)
Puerto Rico Excise Tax	(1.6)	(1.1)	(1.5)
International	(10.7)	(18.9)	(27.9)
U.S. Tax Reform	0.2	43.0	—
Stock based compensation	(1.0)	(1.0)	—
Other, net	(0.2)	3.0	(1.0)
Divestiture related	—	(3.8)	—
Certain tax adjustments	(1.0)	(8.9)	4.4
U.S. tax on foreign earnings	4.1	2.7	3.5
Effective tax rate	10.5 %	45.5 %	12.6 %

During fiscal year 2019, certain tax adjustments of $40 million, recognized in *income tax provision* in the consolidated statements of income, included the following:

- A net benefit of $30 million associated with the finalization of the transition tax liability and the Tax Act impact to deferred tax assets, liabilities, and valuation allowances.

- 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 under the Tax Act and the current year sale of U.S. manufactured inventory held as of April 27, 2018.

- A benefit of $32 million related to intercompany legal entity restructuring.

- A net benefit of $20 million with the finalization of certain income tax aspects of the divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses.

During fiscal year 2018, certain tax adjustments of $1.9 billion, recognized in *income tax provision* in the consolidated statements of income, included the following:

- A net charge of $2.4 billion associated with U.S. tax reform, inclusive of the transition tax, remeasurement of U.S. Federal deferred tax assets and liabilities, and the decrease in the U.S. statutory tax rate.

- A charge of $73 million associated with an internal reorganization of certain foreign subsidiaries.

- A net benefit of $579 million associated with the intercompany sale of intellectual property.

During fiscal year 2017, certain tax adjustments of $202 million, recognized in *income tax provision* in the consolidated statements of income, included the following:

- A charge of $404 million associated with the IRS resolution for the Ardian, CoreValve, Inc., Ablation Frontiers, Inc., PEAK Surgical, Inc. and Salient Surgical Technologies, Inc. acquisition-related issues and the allocation of income between Medtronic, Inc. and its wholly owned subsidiary operating in Puerto Rico for certain businesses. This resolution does not include the businesses that are the subject of the Medtronic, Inc. U.S. Tax Court case for fiscal years 2005 and 2006.

- A net charge of $125 million associated with the divestiture of a portion of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses. The net charge primarily relates to the tax effect from the recognition of the outside basis difference of certain subsidiaries, which are included in the expected divestiture.

- A charge of $86 million associated with the IRS's disallowance of the utilization of certain net operating losses, along with the recognition of a valuation allowance against the net operating loss deferred tax asset, which were recognized during the year.

- A charge of $18 million as a result of the redemption of an intercompany minority interest during the year.

- A benefit of $431 million as the result of the resolution of Covidien's previously disclosed Tyco International plc intercompany debt issues with the U.S. Tax Court and the Appeals Division of the IRS.

Currently, the Company's operations in Puerto Rico, Switzerland, Singapore, Dominican Republic, Costa Rica, China, and Israel have various tax holidays and tax incentive grants. The tax reductions as compared to the local statutory rate favorably impacted earnings by $437 million, $446 million, and $475 million in fiscal years 2019, 2018, and 2017, respectively, and earnings per diluted share by $0.32, $0.33, and $0.34 in fiscal years 2019, 2018, and 2017, respectively. The tax holidays are conditional upon the Company meeting certain thresholds required under statutory law. The tax incentive grants, unless extended, will expire between fiscal years 2020 and 2030. The Company's historical practice has been to renew, extend, or obtain new tax incentive grants upon expiration of existing tax incentive grants. If the Company is not able to renew, extend, or obtain new tax incentive grants, the expiration of existing tax incentive grants could have a material impact on the Company's financial results in future periods. The tax incentive grants which expired during fiscal year 2019 did not have a material impact on the Company's consolidated financial statements.

The Company had $1.8 billion, $1.7 billion, and $1.9 billion of gross unrecognized tax benefits at April 26, 2019, April 27, 2018, and April 28, 2017, respectively. A reconciliation of the beginning and ending amount of unrecognized tax benefits for fiscal years 2019, 2018, and 2017 is as follows:

	Fiscal Year		
(in millions)	**2019**	**2018**	**2017**
Gross unrecognized tax benefits at beginning of fiscal year	$ 1,727	$ 1,896	$ 2,703
Gross increases:			

Prior year tax positions	34	13	147
Current year tax positions	109	63	75
Acquisitions	—	—	4
Gross decreases:			
Prior year tax positions	(14)	(120)	(538)
Settlements	—	(80)	(467)
Statute of limitation lapses	(20)	(45)	(28)
Gross unrecognized tax benefits at end of fiscal year	1,836	1,727	1,896
Cash advance paid to taxing authorities	(859)	(859)	—
Gross unrecognized tax benefits at end of fiscal year, net of cash advance	$ 977	$ 868	$ 1,896

If all of the Company's unrecognized tax benefits at April 26, 2019, April 27, 2018, and April 28, 2017 were recognized, $1.8 billion, $1.7 billion, and $1.8 billion would impact the Company's effective tax rate, respectively. Although the Company believes that it has adequately provided for liabilities resulting from tax assessments by taxing authorities, positions taken by these tax authorities could have a material impact on the Company's effective tax rate in future periods. The Company has recorded gross unrecognized tax benefits, net of cash advance, of $977 million as a noncurrent liability which is not expected to decrease within the next 12 months.

The Company recognizes interest and penalties related to income tax matters in *income tax provision* in the consolidated statements of income and records the liability in the current or noncurrent *accrued income taxes* in the consolidated balance sheets, as appropriate. The Company had $172 million, $128 million, and $360 million of accrued gross interest and penalties at April 26, 2019, April 27, 2018, and April 28, 2017, respectively. During fiscal years 2019, 2018, and 2017, the Company recognized gross interest expense (income) of approximately $48 million, $84 million, and $(208) million, respectively, in *income tax provision* in the consolidated statements of income.

During fiscal year 2018, the Company made a $1.1 billion advance payment to the IRS in connection with certain tax matters for fiscal years 2005 through 2014. This payment was comprised of $859 million of tax and $285 million of interest.

The Company's reserves for uncertain tax positions related to unresolved matters with the IRS and other taxing authorities. These reserves are subject to a high degree of estimation and management judgment. Resolution of these significant unresolved matters, or positions taken by the IRS or other tax authorities during future tax audits, could have a material impact on the Company's financial results in future periods. The Company continues to believe that its reserves for uncertain tax positions are appropriate and that it has meritorious defenses for its tax filings and will vigorously defend them during the audit process, appellate process, and through litigation in courts, as necessary.

The major tax jurisdictions where the Company conducts business which remain subject to examination are as follows:

Jurisdiction	Earliest Year Open
United States - federal and state	1998
Brazil	2014
Canada	2011
China	2009
Costa Rica	2015
Dominican Republic	2016
Germany	2014
India	2002
Ireland	2012
Israel	2010
Italy	2005
Japan	2017
Luxembourg	2013
Mexico	2005
Puerto Rico	2011
Singapore	2013
Switzerland	2012
United Kingdom	2016

See Note 19 for additional information regarding the status of current tax audits and proceedings.

15. 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 the 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 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:

	Fiscal Year		
(in millions, except per share data)	**2019**	**2018**	**2017**
Numerator:			
Net income attributable to ordinary shareholders	$ 4,631	$ 3,104	$ 4,028
Denominator:			
Basic – weighted average shares outstanding	1,346.4	1,356.7	1,378.9
Effect of dilutive securities:			
Employee stock options	7.6	7.9	9.0
Employee restricted stock units	3.2	3.3	3.4
Other	0.3	0.3	0.1
Diluted – weighted average shares outstanding	1,357.5	1,368.2	1,391.4
Basic earnings per share	$ 3.44	$ 2.29	$ 2.92
Diluted earnings per share	$ 3.41	$ 2.27	$ 2.89

The calculation of weighted average diluted shares outstanding excludes options to purchase approximately 7 million, 10 million, and 7 million ordinary shares in fiscal years 2019, 2018, and 2017, respectively, because their effect would have been anti-dilutive on the Company's earnings per share.

16. 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 expense related to these plans was $539 million, $552 million, and $602 million in fiscal years 2019, 2018, and 2017, respectively.

In the U.S., the Company maintains a qualified pension plan designed to provide guaranteed minimum retirement benefits to all eligible U.S. employees. Pension coverage for non-U.S. employees is provided, to the extent deemed appropriate, through separate plans. In addition to the benefits provided under the qualified pension plan, retirement benefits associated with wages in excess of the IRS allowable limits are provided to certain employees under a non-qualified plan. U.S. and Puerto Rico employees are also eligible to receive a medical benefit component, in addition to normal retirement benefits, through the Company's post-retirement benefits.

At April 26, 2019 and April 27, 2018, the net underfunded status of the Company's benefit plans was $1.1 billion and $942 million, respectively.

Effective May 1, 2019, the Company split the U.S. Pension Plan (Medtronic Retirement Plan) into two new plans. The plan split has no impact to participant benefits, or to the accumulated benefit obligation as of April 26, 2019.

During fiscal year 2017, the company offered certain eligible U.S. employees voluntary early retirement packages. The acceptance of this offer by eligible U.S. employees caused incremental expenses of $73 million to be recognized during fiscal year 2017. Of this amount, $60 million related to U.S. pension benefits, $7 million related to U.S. post-retirement benefits, $4 million related to defined contribution plans, and $2 million related to cash payments and administrative fees.

Defined Benefit Pension Plans The change in benefit obligation and funded status of the Company's U.S. and Non-U.S. pension benefits are as follows:

	U.S. Pension Benefits		Non-U.S. Pension Benefits	
	Fiscal Year		Fiscal Year	
(in millions)	2019	2018	2019	2018
Accumulated benefit obligation at end of year:	$ 3,121	$ 2,943	$ 1,621	$ 1,580
Change in projected benefit obligation:				
Projected benefit obligation at beginning of year	$ 3,202	$ 3,232	$ 1,791	$ 1,734
Service cost	109	116	59	67
Interest cost	129	117	30	28
Employee contributions	—	—	12	12
Plan curtailments and settlements	—	(168)	(5)	(8)
Actuarial loss (gain)	54	12	119	(74)
Benefits paid	(100)	(107)	(49)	(51)
Currency exchange rate changes and other	10	—	(125)	146
Divestiture	—	—	—	(63)
Projected benefit obligation at end of year	$ 3,404	$ 3,202	$ 1,832	$ 1,791
Change in plan assets:				
Fair value of plan assets at beginning of year	$ 2,661	$ 2,479	$ 1,404	$ 1,235
Actual return on plan assets	64	243	62	67
Employer contributions	93	215	78	90
Employee contributions	—	—	12	13
Plan settlements	—	(168)	(3)	(4)
Benefits paid	(100)	(108)	(49)	(51)
Currency exchange rate changes and other	10	—	(95)	108
Divestiture	—	—	—	(54)
Fair value of plan assets at end of year	$ 2,728	$ 2,661	$ 1,409	$ 1,404
Funded status at end of year:				
Fair value of plan assets	$ 2,728	$ 2,661	$ 1,409	$ 1,404
Benefit obligations	3,404	3,202	1,832	1,791
Underfunded status of the plans	(676)	(541)	(423)	(387)
Recognized liability	$ (676)	$ (541)	$ (423)	$ (387)
Amounts recognized on the consolidated balance sheets consist of:				
Non-current assets	$ —	$ —	$ 31	$ 16
Current liabilities	(18)	(17)	(8)	(8)
Non-current liabilities	(658)	(524)	(446)	(395)
Recognized liability	$ (676)	$ (541)	$ (423)	$ (387)
Amounts recognized in accumulated other comprehensive loss:				
Prior service cost (benefit)	$ 2	$ 2	$ (7)	$ (9)
Net actuarial loss	1,216	1,088	452	380
Ending balance	$ 1,218	$ 1,090	$ 445	$ 371

In certain countries outside the U.S., fully funding pension plans is not a common practice, as funding provides no income tax benefit. Consequently, certain pension plans were partially funded at April 26, 2019 and April 27, 2018. U.S. and non-U.S. plans with accumulated benefit obligations in excess of plan assets consist of the following:

	Fiscal Year	
(in millions)	2019	2018
Accumulated benefit obligation	$ 4,683	$ 4,110
Projected benefit obligation	4,822	4,282
Plan assets at fair value	3,829	3,472

Plans with projected benefit obligations in excess of plan assets consist of the following:

	Fiscal Year	
(in millions)	2019	2018
Projected benefit obligation	$ 4,963	$ 4,736
Plan assets at fair value	3,833	3,793

The net periodic benefit cost of the plans include the following components:

	U.S. Pension Benefits			Non-U.S. Pension Benefits		
	Fiscal Year			Fiscal Year		
(in millions)	2019	2018	2017	2019	2018	2017
Service cost	$ 109	$ 116	$ 117	$ 59	$ 67	$ 70
Interest cost	129	117	109	30	28	26
Expected return on plan assets	(215)	(205)	(195)	(57)	(53)	(48)
Amortization of prior service cost	1	1	1	(1)	—	(1)
Amortization of net actuarial loss	76	82	88	12	18	17
Settlement loss (gain)	—	16	—	(2)	—	—
Special termination benefits	—	—	60	—	—	—
Net periodic benefit cost	$ 100	$ 127	$ 180	$ 41	$ 60	$ 64

The other changes in plan assets and projected benefit obligations recognized in *accumulated other comprehensive loss* for fiscal year 2019 are as follows:

(in millions)	U.S. Pension Benefits	Non-U.S. Pension Benefits
Net actuarial gain	$ 205	$ 113
Amortization of prior service cost	(1)	1
Amortization of net actuarial loss	(76)	(12)
Effect of exchange rates	—	(29)
Total recognized in accumulated other comprehensive loss	$ 128	$ 73

Total recognized in net periodic benefit cost and accumulated other comprehensive loss	$ 228	$ 114

The estimated net actuarial loss that will be amortized from *accumulated other comprehensive loss* into net periodic benefit cost, before tax, in fiscal year 2020 for U.S. and non-U.S. pension benefits is expected to be $57 million and $13 million, respectively.

The actuarial assumptions are as follows:

	U.S. Pension Benefits			Non-U.S. Pension Benefits		
	Fiscal Year			Fiscal Year		
	2019	2018	2017	2019	2018	2017
Critical assumptions – projected benefit obligation:						
Discount rate	3.90% - 4.20%	4.20% - 4.35%	3.70% - 4.30%	0.40% - 13.90%	0.70% - 11.00%	0.45% - 11.40%
Rate of compensation increase	3.90 %	3.90 %	3.90 %	2.87 %	2.88 %	2.89 %
Critical assumptions – net periodic benefit cost:						
Discount rate – benefit obligation	4.20% - 4.30%	4.00% - 4.30%	3.55% - 4.30%	0.50% - 11.00%	0.45% - 11.40%	0.25% - 10.20%
Discount rate – service cost	4.10% - 4.40%	3.70% - 4.45%	3.60% - 4.45%	0.50% - 11.00%	0.20% - 11.40%	0.05% - 10.20%
Discount rate – interest cost	4.00% - 4.10%	3.45% - 3.80%	2.90% - 3.80%	0.50% - 11.00%	0.45% - 11.40%	0.30% - 10.20%
Expected return on plan assets	7.90 %	7.90 %	8.20 %	4.23 %	4.20 %	4.45 %
Rate of compensation increase	3.90 %	3.90 %	3.90 %	2.88 %	2.89 %	2.83 %

The Company utilizes a full yield curve approach methodology to estimate the service and interest cost components of net periodic pension cost and net periodic post-retirement benefit cost for the Company's pension and other post-retirement benefits. The full yield curve approach applies specific spot rates along the yield curve to their underlying projected cash flows in estimation of the cost components. The current yield curves represent high quality, long-term fixed income instruments.

The expected long-term rate of return on plan assets assumptions are determined using a building block approach, considering historical averages and real returns of each asset class. In certain countries, where historical returns are not meaningful, consideration is given to local market expectations of long-term returns.

Retirement Benefit Plan Investment Strategy The Company sponsors trusts that hold the assets for U.S. pension plans and other U.S. post-retirement benefit plans, primarily retiree medical benefits. For investment purposes, the legacy Medtronic U.S. pension and other U.S. post-retirement benefit plans are managed in an identical way, as their objectives are similar.

The Company has a Qualified Plan Committee (the Plan Committee) that sets investment guidelines for U.S. pension plans and other U.S. post-retirement benefit plans with the assistance of external consultants. These guidelines are established based on market conditions, risk tolerance, funding requirements, and expected benefit payments. The Plan Committee also oversees the investment allocation process, selects the investment managers, and monitors asset performance. As pension liabilities are long-term in nature, the Company employs a long-term total return approach to maximize the long-term rate of return on plan assets for a prudent level of risk. An annual analysis on the risk versus the return of the investment portfolio is conducted to justify the expected long-term rate of return assumption.

The investment portfolios contain a diversified allocation of investment categories, including equities, fixed income securities, hedge funds, and private equity. Securities are also diversified in terms of domestic and international, short- and long-term, growth and value styles, large cap and small cap stocks, and active and passive management.

Outside the U.S., pension plan assets are typically managed by decentralized fiduciary committees. There is significant variation in policy asset allocation from country to country. Local regulations, funding rules, and financial and tax considerations are part of the funding and investment allocation process in each country. The weighted average target asset allocations at April 26, 2019 for the plans are 38% equity securities, 30% debt securities, and 32% other.

The plans did not hold any investments in the Company's ordinary shares at April 26, 2019 or April 27, 2018.

The Company's U.S. plans target asset allocations at April 26, 2019, compared to the U.S. plans actual asset allocations at April 26, 2019 and April 27, 2018 by asset category, are as follows:

U.S. Plans

	Target Allocation	Actual Allocation	
	April 26, 2019	April 26, 2019	April 27, 2018
Asset Category:			
Equity securities	49 %	50 %	49 %
Debt securities	32	34	32
Other	19	16	19
Total	100 %	100 %	100 %

Retirement Benefit Plan Asset Fair Values The following is a description of the valuation methodologies used for retirement benefit plan assets measured at fair value:

Short-term investments: Valued at the closing price reported in the active markets in which the individual security is traded.

U.S. government securities: Certain U.S. government securities are valued at the closing price reported in the active markets in which the individual security is traded. Other U.S. government securities are valued based on inputs other than quoted prices that are observable.

Corporate debt securities: Valued based on inputs other than quoted prices that are observable.

Equity commingled trusts: Comprised of investments in equity securities held in pooled investment vehicles. The valuations of equity commingled trusts are based on the respective net asset values which are determined by the fund daily at market close. The net asset values are calculated based on the valuation of the underlying assets which are determined using observable inputs. The net asset values are not publicly reported and funds are valued at the net asset value practical expedient.

Fixed income commingled trusts: Comprised of investments in fixed income securities held in pooled investment vehicles. The valuations of fixed income commingled trusts are based on the respective net asset values which are determined by the fund daily at market close. The net asset values are calculated based on the valuation of the underlying assets which are determined using observable inputs. The net asset values are not publicly reported and funds are valued at the net asset value practical expedient.

Partnership units: Valued based on the year-end net asset values of the underlying partnerships. The net asset values of the partnerships are based on the fair values of the underlying investments of the partnerships. Quoted market prices are used to value the underlying investments of the partnerships, where the partnerships consist of the investment pools which invest primarily in common stocks. Partnership units include partnerships, private equity investments, and real asset investments. Partnerships primarily include long/short equity and absolute return strategies. These investments may be redeemed monthly with notice periods ranging from 45 to 95 days. At April 26, 2019, there are no funds in the process of liquidation. Private equity investments consist of common stock and debt instruments of private companies. For private equity funds, the sum of the unfunded commitments at April 26, 2019 is $337 million, and the estimated liquidation period of these funds is expected to be one to 15 years. Real asset investments consist of commodities, derivatives, Real Estate Investment Trusts, and illiquid real estate holdings. These investments have redemption and liquidation periods ranging from 30 days to 10 years. At April 26, 2019,

there are no real estate investments in the process of liquidation. Valuation procedures are utilized to arrive at fair value if a quoted market price is not available for a partnership investment.

Registered investment companies: Valued at net asset values which are not publicly reported. The net asset values are calculated based on the valuation of the underlying assets. The underlying assets are valued at the quoted market prices of shares held by the plan at year-end in the active market on which the individual securities are traded.

Insurance contracts: Comprised of investments in collective (group) insurance contracts, consisting of individual insurance policies. The policyholder is the employer and each member is the owner/beneficiary of their individual insurance policy. These policies are a part of the insurance company's general portfolio and participate in the insurer's profit-sharing policy on an excess yield basis.

The methods described above may produce fair values that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Company believes its valuation methodologies are appropriate and consistent with other market

participants, the use of different methodologies or assumptions to determine fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

There were no transfers between Level 1, Level 2, or Level 3 during fiscal years 2019 or 2018.

The following tables provide information by level for the retirement benefit plan assets that are measured at fair value, as defined by U.S. GAAP. See Note 1 for discussion of the fair value measurement terms of Levels 1, 2, and 3. In accordance with authoritative guidance adopted in fiscal year 2017, certain investments for which the fair value is measured using the net asset value per share (or its equivalent) practical expedient are not presented within the fair value hierarchy. The fair value amounts presented for these investments are intended to permit reconciliation to the total fair value of plan assets at April 26, 2019 and April 27, 2018.

U.S. Pension Benefits

(in millions)	Fair Value at April 26, 2019	Fair Value Measurements Using Inputs Considered as			Investments Measured at Net Asset Value
		Level 1	Level 2	Level 3	
Short-term investments	$ 61	$ 61	$ —	$ —	$ —
U.S. government securities	228	228	—	—	—
Corporate debt securities	144	—	144	—	—
Equity commingled trusts	1,365	—	—	—	1,365
Fixed income commingled trusts	301	—	—	—	301
Partnership units	629	—	—	629	—
	$ 2,728	$ 289	$ 144	$ 629	$ 1,666

(in millions)	Fair Value at April 27, 2018	Fair Value Measurements Using Inputs Considered as			Investments Measured at Net Asset Value
		Level 1	Level 2	Level 3	
Short-term investments	$ 181	$ 181	$ —	$ —	$ —
U.S. government securities	181	181	—	—	—
Corporate debt securities	142	—	142	—	—
Equity commingled trusts	1,322	—	—	—	1,322
Fixed income commingled trusts	298	—	—	—	298
Partnership units	537	—	—	537	—
	$ 2,661	$ 362	$ 142	$ 537	$ 1,620

The following tables provide a reconciliation of the beginning and ending balances of U.S. pension benefit assets measured at fair value that used significant unobservable inputs (Level 3):

(in millions)	Partnership Units
April 27, 2018	$ 537
Total realized losses	(1)
Total unrealized gains	52
Purchases and sales, net	41
April 26, 2019	$ 629

(in millions)	Partnership Units
April 28, 2017	$ 468
Total realized losses	(42)
Total unrealized gains	141
Purchases and sales, net	(30)
April 27, 2018	$ 537

Non-U.S. Pension Benefits

(in millions)	Fair Value at April 26, 2019	Fair Value Measurements Using Inputs Considered as Level 1	Level 2	Level 3	Investments Measured at Net Asset Value
Registered investment companies	$ 1,368	$ —	$ —	$ —	$ 1,368
Insurance contracts	41	—	—	41	—
	$ 1,409	$ —	$ —	$ 41	$ 1,368

(in millions)	Fair Value at April 27, 2018	Fair Value Measurements Using Inputs Considered as Level 1	Level 2	Level 3	Investments Measured at Net Asset Value
Registered investment companies	$ 1,362	$ —	$ —	$ —	$ 1,362
Insurance contracts	42	—	—	42	—
	$ 1,404	$ —	$ —	$ 42	$ 1,362

The following tables provide a reconciliation of the beginning and ending balances of non-U.S. pension benefit assets measured at fair value that used significant unobservable inputs (Level 3):

(in millions)	Insurance Contracts
April 27, 2018	$ 42
Total unrealized gains	1
Purchases and sales, net	1
Currency exchange rate changes	(3)
April 26, 2019	$ 41

(in millions)	Insurance Contracts
April 28, 2017	$ 44
Total unrealized gains	2
Purchases and sales, net	(7)
Currency exchange rate changes	3
April 27, 2018	$ 42

Retirement Benefit Plan Funding It is the Company's policy to fund retirement costs within the limits of allowable tax deductions. During fiscal year 2019, the Company made discretionary contributions of approximately $93 million to the U.S. pension plan. Internationally, the Company contributed approximately $78 million for pension benefits during fiscal year 2019. The Company anticipates that it will make contributions of $93 million and $60 million to its U.S. pension benefit plans and non-U.S. pension benefit plans, respectively, in fiscal year 2020. Based on the guidelines under the U.S. Employee Retirement Income Security Act of 1974 and the various guidelines which govern the plans outside the U.S., the majority of anticipated fiscal year 2020 contributions

will be discretionary. The Company believes that, along with pension assets, the returns on invested pension assets, and Company contributions, the Company will be able to meet its pension and other post-retirement obligations in the future.

Retiree benefit payments, which reflect expected future service, are anticipated to be paid as follows:

(in millions)	Gross Payments	
Fiscal Year	U.S. Pension Benefits	Non-U.S. Pension Benefits
2020	$ 115	$ 51
2021	123	49
2022	133	51
2023	144	57
2024	154	56
2025 – 2029	954	350
Total	$ 1,623	$ 614

Post-retirement Benefit Plans The net periodic benefit cost associated with the Company's post-retirement benefit plans was income of $17 million and $9 million in fiscal years 2019 and 2018, respectively, and expense of $11 million in fiscal year 2017. The Company's projected benefit obligation for all post-retirement benefit plans was $323 million and $317 million at April 26, 2019 and April 27, 2018, respectively. The Company's fair value of plan assets for all post-retirement benefit plans was $297 million and $303 million at April 26, 2019 and April 27, 2018, respectively.

Defined Contribution Savings Plans The Company has defined contribution savings plans that cover substantially all U.S. employees and certain non-U.S. employees. The general purpose of these plans is to provide additional financial security during retirement by providing employees with an incentive to make regular savings. Company contributions to the plans are based on employee contributions and Company performance. Expense recognized under these plans was $415 million, $374 million, and $347 million in fiscal years 2019, 2018, and 2017, respectively.

Effective May 1, 2005, the Company froze participation in the original defined benefit pension plan in the U.S. and implemented two new plans: an additional defined benefit pension plan, the Personal Pension Account (PPA), and a new defined contribution plan, the Personal Investment Account (PIA). Employees in the U.S. hired on or after May 1, 2005 but before January 1, 2016 had the option to participate in either the PPA or the PIA. Participants in the PPA receive an annual allocation of their salary and bonus on which they will receive an annual guaranteed rate of return, which is based on the ten-year Treasury bond rate. Participants in the PIA also receive an annual allocation of their salary and bonus; however, they are allowed to determine how to invest their funds among identified fund alternatives. The cost associated with the PPA is included in U.S. Pension Benefits in the tables presented earlier. The defined contribution cost associated with the PIA was approximately $54 million, $56 million, and $58 million in fiscal years 2019, 2018, and 2017, respectively.

Effective January 1, 2016, the Company froze participation in the existing defined benefit (PPA) and contribution (PIA) pension plans in the U.S. and implemented a new form of benefit under the existing defined contribution plan for legacy Covidien employees and employees in the U.S. hired on or after January 1, 2016. Participants in the Medtronic Core Contribution (MCC) also receive an annual allocation of their salary and bonus and are allowed to determine how to invest their funds among identified fund alternatives. The defined contribution cost associated with the MCC was approximately $58 million, $49 million, and $45 million and in fiscal years 2019, 2018, and 2017, respectively.

17. Leases

The Company leases office, manufacturing, and research facilities and warehouses, as well as transportation, data processing, and other equipment. A substantial number of these leases contain options that allow the Company to renew at the fair rental value on the date of renewal.

Future minimum payments under non-cancelable operating leases at April 26, 2019 are:

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

Rent expense for all operating leases was $305 million, $319 million, and $294 million in fiscal years 2019, 2018, and 2017, respectively.

18. 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 (Loss) Gain on Cash Flow Hedges	Total Accumulated Other Comprehensive (Loss) Income
April 28, 2017	$ (69)	$ (1,195)	$ (257)	$ (1,129)	$ 37	$ (2,613)
Other comprehensive (loss) income before reclassifications	(95)	1,218	—	100	(272)	951
Reclassifications	(8)	(34)	—	67	54	79
Other comprehensive (loss) income	(103)	1,184	—	167	(218)	1,030
Cumulative effect of change in accounting principle[1]	(22)	—	—	(155)	(26)	(203)
April 27, 2018	(194)	(11)	(257)	(1,117)	(207)	(1,786)
Other comprehensive income (loss) before reclassifications	67	(1,372)	88	(266)	457	(1,026)
Reclassifications	35	—	—	75	(56)	54
Other comprehensive income (loss)	102	(1,372)	88	(191)	401	(972)
Cumulative effect of change in accounting principle[2]	47	—	—	—	—	47
April 26, 2019	$ (45)	$ (1,383)	$ (169)	$ (1,308)	$ 194	$ (2,711)

(1) The cumulative effect of change in accounting principle in fiscal year 2018 related to the Company's adoption of accounting guidance which permitted reclassification from AOCI to retained earnings for stranded tax effects resulting from the Tax Act.

(2) See Note 1 to the consolidated financial statements for discussion regarding the adoption of accounting standards during fiscal year 2019.

The income tax on gains and losses on investment securities in other comprehensive income before reclassifications during fiscal years 2019, 2018, and 2017 was a benefit of $5 million, an expense of $26 million, and an expense of $41 million, respectively. During fiscal years 2019, 2018, and 2017, realized gains and losses on investment securities reclassified from AOCI were reduced by income taxes of $3 million, $4 million, and $8 million,

respectively. When realized, gains and losses on investment securities reclassified from AOCI are recognized within *other non-operating income, net*. Refer to Note 6 for additional information.

During fiscal year 2019, the income tax benefit on cumulative translation adjustments was $7 million. During fiscal years 2018 and 2017, taxes were not provided on cumulative translation adjustments as substantially all translation adjustments relate to earnings that were intended to be indefinitely reinvested outside the U.S.

During fiscal years 2019, 2018, and 2017, there were no tax impacts on net investment hedges. Refer to Note 8 for additional information.

The net change in retirement obligations in other comprehensive income includes net amortization of prior service costs and actuarial losses included in net periodic benefit cost. The income tax on the net change in retirement obligations in other comprehensive income before reclassifications during fiscal years 2019, 2018, and 2017 was a benefit of $63 million, an expense of $14 million, and an expense of $41 million, respectively. During fiscal years 2019, 2018, and 2017, the gains and losses on defined benefit and pension items reclassified from AOCI were reduced by income taxes of $19 million, $27 million, and $23 million, respectively. Refer to Note 16 for additional information.

The income tax on unrealized gains and losses on cash flow hedges in other comprehensive income before reclassifications during fiscal years 2019, 2018, and 2017 was an expense of $158 million, a benefit of $132 million, and an expense of $130 million, respectively. During fiscal years 2019, 2018, and 2017, gains and losses on cash flow hedges reclassified from AOCI were reduced by income taxes of $24 million, $22 million, and $61 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 for additional information.

19. 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. At April 26, 2019 and April 27, 2018, accrued litigation was approximately $0.5 billion and $0.9 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

Sprint Fidelis

In 2007, a putative class action was filed in the Ontario Superior Court of Justice in Canada seeking damages for personal injuries allegedly related to the Company's Sprint Fidelis family of defibrillation leads. On October 20, 2009, the court certified a class proceeding but denied class certification on plaintiffs' claim for punitive damages. The Company has recognized an expense for probable and estimable damages related to this matter, and during the fourth quarter of fiscal year 2019 the Company paid out previously accrued settlement amounts with no admission of liability, bringing this matter to a conclusion.

INFUSE Litigation

The Company estimated law firms representing approximately 6,000 claimants asserted or intended to assert personal injury claims against Medtronic in the U.S. state and federal courts involving the INFUSE bone graft product. As of June 1, 2017, the Company

had reached agreements to settle substantially all of these claims, and during the fourth quarter of fiscal year 2019 the Company paid out previously accrued settlement amounts with no admission of liability, bringing this matter to a conclusion.

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 June 1, 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 has not recognized an expense in connection with this matter because it does not currently believe a loss is probable under U.S. GAAP.

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.

HeartWare

On January 22, 2016, the St. Paul Teachers' Retirement Fund Association filed a putative class action complaint (the "Complaint") in the United States District Court for the Southern District of New York against HeartWare on behalf of all persons and entities who purchased or otherwise acquired shares of HeartWare from June 10, 2014 through January 11, 2016 (the "Class Period"). The Complaint was amended on June 29, 2016 and claims HeartWare and one of its executives violated Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 by making false and misleading statements about, among other things, HeartWare's response to a June 2014 U.S. FDA warning letter, the development of the Miniaturized Ventricular Assist Device (MVAD) System and the proposed acquisition of Valtech Cardio Ltd. The Complaint seeks to recover damages on behalf of all purchasers or acquirers of HeartWare's stock during the Class Period. In August of 2016, the Company acquired HeartWare. In October of 2018, the parties reached an agreement to settle this matter, and in January 2019, the settlement amount was deposited into a qualified settlement fund to be distributed following final court approval. In the fourth quarter of fiscal year 2019, the court approved the settlement, bringing this matter to a conclusion.

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 November of 2019.

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.

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.

See Note 14 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.

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.

20. Quarterly Financial Data (unaudited)

The table below summarizes select unaudited quarterly financial data for fiscal years 2019 and 2018:

	Fiscal Year 2019				Fiscal Year 2018			
(in millions, except per share data)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Net sales	$ 7,384	$ 7,481	$ 7,546	$ 8,146	$ 7,390	$ 7,050	$ 7,369	$ 8,144
Gross profit	5,180	5,278	5,281	5,663	5,038	4,927	5,175	5,746
Net income (loss)	1,077	1,120	1,271	1,182	1,009	2,013	(1,392)	1,465
Net income (loss) attributable to Medtronic	1,075	1,115	1,269	1,172	1,016	2,017	(1,389)	1,460
Basic earnings (loss) per share	0.79	0.83	0.95	0.87	0.75	1.49	(1.03)	1.08
Diluted earnings (loss) per share	0.79	0.82	0.94	0.87	0.74	1.48	(1.03)	1.07

The data in the schedule above has been intentionally rounded to the nearest million, and therefore, the quarterly amounts may not sum to the fiscal year-to-date amounts.

21. Segment and Geographic Information

The Company's organizational structure is based upon four principal operating and reportable segments: the Cardiac and Vascular Group, the Minimally Invasive Therapies Group, the Restorative Therapies Group, and the Diabetes Group. The Company's management has chosen to organize the entity based upon therapy solutions provided by each segment. The four principal segments are strategic businesses that are managed separately, as each one develops and manufactures products and provides services oriented toward targeted therapy solutions.

The primary products and services from which the Cardiac and Vascular Group segment derives its revenues include products for the diagnosis, treatment, and management of cardiac rhythm disorders and cardiovascular disease, as well as services to diagnose, treat, and manage heart- and vascular-related disorders and diseases.

The primary products and services from which the Minimally Invasive Therapies Group segment derives its revenues include those focused on diseases of the respiratory system, gastrointestinal tract, renal system, lungs, pelvic region, kidneys, obesity, and other preventable complications.

The primary products and services from which the Restorative Therapies Group segment derives its revenues include those focused on neurostimulation therapies and drug delivery systems for the treatment of chronic pain, as well as various areas of the spine and brain, along with pelvic health and conditions of the ear, nose, and throat.

The primary products from which the Diabetes Group segment derives its revenues include those focused on diabetes management, including insulin pumps, continuous glucose monitoring systems, insulin pump consumables, and diabetes therapy management software.

Segment disclosures are on a performance basis, consistent with internal management reporting. Net sales of the Company's 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 the performance of the segments and allocates resources based on net sales and segment earnings before interest, taxes, and amortization ("Segment EBITA"). Segment EBITA represents income before income taxes, excluding interest expense, interest income, amortization of intangible assets, centralized distribution costs, certain corporate charges, and other items not allocated to the segments.

The accounting policies of the segments are the same as those described in Note 1. 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

	Fiscal Year		
(in millions)	**2019**	**2018**	**2017**
Cardiac and Vascular Group	$ 11,505	$ 11,354	$ 10,498
Minimally Invasive Therapies Group	8,478	8,716	9,919
Restorative Therapies Group	8,183	7,743	7,366
Diabetes Group	2,391	2,140	1,927
Total	$ 30,557	$ 29,953	$ 29,710

Segment EBITA

(in millions)	Fiscal Year 2019	2018	2017
Cardiac and Vascular Group	$ 4,541	$ 4,460	$ 4,134
Minimally Invasive Therapies Group	3,266	3,346	3,434
Restorative Therapies Group	3,323	3,058	2,868
Diabetes Group	739	634	690
Segment EBITA	11,869	11,498	11,126
Interest expense	(1,444)	(1,146)	(1,094)
Interest income	283	397	366
Amortization of intangible assets	(1,764)	(1,823)	(1,980)
Corporate	(1,253)	(1,437)	(1,232)
Centralized distribution costs	(1,688)	(1,936)	(1,543)
Restructuring and associated costs	(407)	(107)	(373)
Acquisition-related items	(88)	(132)	(230)
Certain litigation charges	(166)	(61)	(300)
Gain/(loss) on minority investments	62	—	—
IPR&D charges	(58)	(46)	—
Exit of businesses	(149)	—	—
Divestiture-related items	—	(115)	—
Gain on sale of businesses	—	697	—
Contribution to Medtronic Foundation	—	(80)	(100)
Hurricane Maria	—	(34)	—
Impact of inventory step-up	—	—	(38)
Income before income taxes	$ 5,197	$ 5,675	$ 4,602

Total Assets and Depreciation Expense

(in millions)	Total Assets April 26, 2019	April 27, 2018	Depreciation Expense 2019	2018	2017
Cardiac and Vascular Group	$ 15,453	$ 15,407	$ 194	$ 183	$ 180
Minimally Invasive Therapies Group	41,186	43,002	206	217	358
Restorative Therapies Group	16,825	15,245	217	146	167
Diabetes Group	3,095	2,900	34	29	29
Segments	76,559	76,554	651	575	734
Corporate	13,135	14,839	244	246	203
Total	$ 89,694	$ 91,393	$ 895	$ 821	$ 937

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. Geographic property, plant, and equipment are attributed to the country based on the physical location of the assets.

The following table presents net sales for fiscal years 2019, 2018, and 2017, and property, plant, and equipment, net at April 26, 2019 and April 27, 2018 for the Company's country of domicile, countries with significant concentrations, and all other countries:

	Net sales			Property, plant, and equipment, net	
(in millions)	2019	2018	2017	April 26, 2019	April 27, 2018
Ireland	$ 91	$ 85	$ 69	$ 156	$ 149
United States	16,194	15,875	16,663	3,122	2,927
Rest of world	14,272	13,993	12,978	1,397	1,528
Total other countries, excluding Ireland	30,466	29,868	29,641	4,519	4,455
Total	$ 30,557	$ 29,953	$ 29,710	$ 4,675	$ 4,604

No single customer represented over 10 percent of the Company’s consolidated net sales in fiscal years 2019, 2018, or 2017.

22. 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. Medtronic plc and Medtronic, Inc. each have provided a full and unconditional guarantee of the obligations of Medtronic Luxco under the Senior Notes (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 and condensed consolidating statements of cash flows as of and for the fiscal years ended April 26, 2019, April 27, 2018, and April 28, 2017, and condensed consolidating balance sheets at April 26, 2019 and April 27, 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 fiscal year 2019, the Company undertook certain steps to reorganize ownership of various subsidiaries. The transactions were entirely among subsidiaries under the common control of Medtronic. The reorganization has been reflected as of the beginning of the earliest period presented.

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Consolidating *Statement of Comprehensive Income*
Fiscal Year Ended 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
Net sales	$ —	$ 1,318	$ —	$ 30,558	$ (1,319)	$ 30,557
Costs and expenses:						
Cost of products sold	—	1,110	—	8,833	(788)	9,155
Research and development expense	—	659	—	1,671	—	2,330
Selling, general, and administrative expense	11	1,476	—	8,931	—	10,418
Amortization of intangible assets	—	8	—	1,756	—	1,764
Restructuring charges, net	—	44	—	154	—	198
Certain litigation charges	—	55	—	111	—	166
Other operating expense (income), net	54	(2,426)	(28)	3,085	(427)	258
Operating profit (loss)	(65)	392	28	6,017	(104)	6,268
Other non-operating (income) expense, net	—	(507)	(808)	(1,890)	2,832	(373)
Interest expense	478	2,375	511	912	(2,832)	1,444
Equity in net (income) loss of subsidiaries	(5,167)	(3,089)	(4,842)	—	13,098	—
Income (loss) before income taxes	4,624	1,613	5,167	6,995	(13,202)	5,197
Income tax (benefit) provision	(7)	(246)	—	800	—	547
Net income (loss)	4,631	1,859	5,167	6,195	(13,202)	4,650
Net income attributable to noncontrolling interests	—	—	—	(19)	—	(19)
Net income (loss) attributable to Medtronic	4,631	1,859	5,167	6,176	(13,202)	4,631
Other comprehensive income (loss), net of tax	(972)	(1,049)	(972)	(882)	2,900	(975)
Comprehensive income attributable to noncontrolling interests	—	—	—	(16)	—	(16)
Total comprehensive income (loss) attributable to Medtronic	$ 3,659	$ 810	$ 4,195	$ 5,297	$ (10,302)	$ 3,659

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Consolidating *Statement of Comprehensive Income*
Fiscal Year Ended April 27, 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	$ —	$ 1,198	$ —	$ 29,952	$ (1,197)	$ 29,953
Costs and expenses:						
Cost of products sold	—	971	—	8,884	(788)	9,067
Research and development expense	—	656	—	1,600	—	2,256
Selling, general, and administrative expense	12	1,416	—	8,810	—	10,238
Amortization of intangible assets	—	8	—	1,815	—	1,823
Restructuring charges, net	—	(7)	—	37	—	30
Certain litigation charges	—	24	—	37	—	61
Gain on sale of businesses	—	—	—	(697)	—	(697)
Other operating expense (income), net	52	(2,265)	—	3,156	(408)	535
Operating (loss) profit	(64)	395	—	6,310	(1)	6,640
Other non-operating (income) expense, net	—	(192)	(482)	(1,527)	2,020	(181)
Interest expense	247	1,897	234	788	(2,020)	1,146
Equity in net (income) loss of subsidiaries	(3,408)	(940)	(3,160)	—	7,508	—
Income (loss) before income taxes	3,097	(370)	3,408	7,049	(7,509)	5,675
Income tax (benefit) provision	(7)	41	—	2,546	—	2,580
Net income (loss)	3,104	(411)	3,408	4,503	(7,509)	3,095
Net loss attributable to noncontrolling interests	—	—	—	9	—	9
Net income (loss) attributable to Medtronic	3,104	(411)	3,408	4,512	(7,509)	3,104
Other comprehensive income (loss), net of tax	1,030	972	1,030	954	(2,956)	1,030
Comprehensive loss attributable to noncontrolling interests	—	—	—	9	—	9
Total comprehensive income (loss) attributable to Medtronic	$ 4,134	$ 561	$ 4,438	$ 5,466	$ (10,465)	$ 4,134

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Consolidating *Statement of Comprehensive Income*
Fiscal Year Ended April 28, 2017
Medtronic Senior Notes and Medtronic Luxco Senior Notes

(in millions)	Medtronic plc	Medtronic, Inc.	Medtronic Luxco	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ 1,199	$ —	$ 29,708	$ (1,197)	$ 29,710
Costs and expenses:						
Cost of products sold	—	935	—	9,152	(793)	9,294
Research and development expense	—	636	—	1,557	—	2,193
Selling, general, and administrative expense	12	1,308	—	8,698	—	10,018
Amortization of intangible assets	—	11	—	1,969	—	1,980
Restructuring charges, net	—	54	—	249	—	303
Certain litigation charges	—	—	—	300	—	300
Other operating expense (income), net	18	(2,380)	—	3,024	(423)	239
Operating (loss) profit	(30)	635	—	4,759	19	5,383
Other non-operating (income) expense, net	—	(197)	(649)	(1,065)	1,598	(313)
Interest expense	113	1,652	62	865	(1,598)	1,094
Equity in net (income) loss of subsidiaries	(4,163)	(1,563)	(3,576)	—	9,302	—
Income (loss) before income taxes	4,020	743	4,163	4,959	(9,283)	4,602
Income tax (benefit) provision	(8)	(124)	—	710	—	578
Net income (loss)	4,028	867	4,163	4,249	(9,283)	4,024
Net loss attributable to noncontrolling interests	—	—	—	4	—	4
Net income (loss) attributable to Medtronic	4,028	867	4,163	4,253	(9,283)	4,028
Other comprehensive (loss) income, net of tax	(745)	(430)	(745)	(928)	2,104	(744)
Comprehensive loss attributable to noncontrolling interests	—	—	—	3	—	3
Total comprehensive income (loss) attributable to Medtronic	$ 3,283	$ 437	$ 3,418	$ 3,324	$ (7,179)	$ 3,283

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

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	71,284	65,012	—	(200,648)	—
Intercompany loans receivable	3,000	21	27,858	35,398	(66,277)	—
Other assets	—	216	—	798	—	1,014
Total assets	$ 67,402	$ 85,480	$ 92,880	$ 139,707	$ (295,775)	$ 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	42,359	57,324	101,192	(200,875)	50,091
Noncontrolling interests	—	—	—	121	—	121
Total equity	50,091	42,359	57,324	101,313	(200,875)	50,212
Total liabilities and equity	$ 67,402	$ 85,480	$ 92,880	$ 139,707	$ (295,775)	$ 89,694

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Balance Sheet*
April 27, 2018
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	$ 1	$ 3,648	$ —	$ 3,669
Investments	—	76	—	7,482	—	7,558
Accounts receivable, net	—	—	—	5,987	—	5,987
Inventories, net	—	165	—	3,539	(125)	3,579
Intercompany receivable	37	23,480	—	33,929	(57,446)	—
Other current assets	6	178	—	2,003	—	2,187
Total current assets	43	23,919	1	56,588	(57,571)	22,980
Property, plant and equipment, net	—	1,426	—	3,178	—	4,604
Goodwill	—	1,883	—	37,660	—	39,543
Other intangible assets, net	—	12	—	21,711	—	21,723
Tax assets	—	385	—	1,080	—	1,465
Investment in subsidiaries	60,381	73,495	61,461	—	(195,337)	—
Intercompany loans receivable	3,000	6,519	19,337	34,196	(63,052)	—
Other assets	—	223	—	855	—	1,078
Total assets	$ 63,424	$ 107,862	$ 80,799	$ 155,268	$ (315,960)	$ 91,393
LIABILITIES AND EQUITY						
Current liabilities:						
Current debt obligations	$ —	$ —	$ 1,696	$ 362	$ —	$ 2,058
Accounts payable	—	381	—	1,247	—	1,628
Intercompany payable	—	28,401	5,542	23,503	(57,446)	—
Accrued compensation	3	787	—	1,198	—	1,988
Accrued income taxes	—	—	—	979	—	979
Other accrued expenses	16	359	4	3,052	—	3,431
Total current liabilities	19	29,928	7,242	30,341	(57,446)	10,084
Long-term debt	—	20,598	844	2,257	—	23,699
Accrued compensation and retirement benefits	—	902	—	523	—	1,425
Accrued income taxes	10	531	—	2,510	—	3,051
Intercompany loans payable	12,675	14,339	19,335	16,703	(63,052)	—
Deferred tax liabilities	—	—	—	1,423	—	1,423
Other liabilities	—	68	—	821	—	889
Total liabilities	12,704	66,366	27,421	54,578	(120,498)	40,571
Shareholders' equity	50,720	41,496	53,378	100,588	(195,462)	50,720
Noncontrolling interests	—	—	—	102	—	102
Total equity	50,720	41,496	53,378	100,690	(195,462)	50,822
Total liabilities and equity	$ 63,424	$ 107,862	$ 80,799	$ 155,268	$ (315,960)	$ 91,393

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Statement of Cash Flows*
Fiscal Year Ended 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
Operating Activities:						
Net cash provided by operating activities	$ (7)	$ 4,944	$ 298	$ 7,691	$ (5,919)	$ 7,007
Investing Activities:						
Acquisitions, net of cash acquired	—	(237)	—	(1,590)	—	(1,827)
Additions to property, plant, and equipment	—	(313)	—	(821)	—	(1,134)
Purchases of investments	—	—	—	(2,532)	—	(2,532)
Sales and maturities of investments	—	76	—	4,607	—	4,683
Capital contributions paid	(18)	(97)	—	—	115	—
Other investing activities, net	—	—	82	(46)	—	36
Net cash (used in) provided by investing activities	(18)	(571)	82	(382)	115	(774)
Financing Activities:						
Change in current debt obligations, net	—	—	(1,696)	983	—	(713)
Issuance of long-term debt	—	—	7,791	3	—	7,794
Payments on long-term debt	—	(6,182)	—	(1,766)	—	(7,948)
Dividends to shareholders	(2,693)	—	—	—	—	(2,693)
Issuance of ordinary shares	992	—	—	—	—	992
Repurchase of ordinary shares	(2,877)	—	—	—	—	(2,877)
Net intercompany loan borrowings (repayments)	4,603	1,807	(6,518)	108	—	—
Intercompany dividends paid	—	—	—	(5,919)	5,919	—
Capital contributions received	—	—	—	115	(115)	—
Other financing activities	—	—	43	(29)	—	14
Net cash (used in) provided by financing activities	25	(4,375)	(380)	(6,505)	5,804	(5,431)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	(78)	—	(78)
Net change in cash and cash equivalents	—	(2)	—	726	—	724
Cash and cash equivalents at beginning of period	—	20	1	3,648	—	3,669
Cash and cash equivalents at end of period	$ —	$ 18	$ 1	$ 4,374	$ —	$ 4,393

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Statement of Cash Flows*
Fiscal Year Ended April 27, 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 operating activities	$ 155	$ (1,567)	$ 249	$ 16,419	$ (10,572)	$ 4,684
Investing Activities:						
Acquisitions, net of cash acquired	—	—	—	(137)	—	(137)
Proceeds from sale of businesses	—	—	—	6,058	—	6,058
Additions to property, plant, and equipment	—	(340)	—	(728)	—	(1,068)
Purchases of investments	—	(98)	(25)	(3,124)	47	(3,200)
Sales and maturities of investments	—	25	—	4,249	(47)	4,227
Capital contributions paid	—	(59)	(4,200)	—	4,259	—
Other investing activities, net	—	—	—	(22)	—	(22)
Net cash (used in) provided by investing activities	—	(472)	(4,225)	6,296	4,259	5,858
Financing Activities:						
Change in current debt obligations, net	—	—	(205)	(44)	—	(249)
Issuance of long-term debt	—	—	—	21	—	21
Payments on long-term debt	—	(6,166)	—	(1,204)	—	(7,370)
Dividends to shareholders	(2,494)	—	—	—	—	(2,494)
Issuance of ordinary shares	403	—	—	—	—	403
Repurchase of ordinary shares	(2,171)	—	—	—	—	(2,171)
Net intercompany loan borrowings (repayments)	4,107	8,180	4,177	(16,464)	—	—
Intercompany dividends paid	—	—	—	(10,572)	10,572	—
Capital contributions received	—	—	—	4,259	(4,259)	—
Other financing activities	—	—	—	(94)	—	(94)
Net cash (used in) provided by financing activities	(155)	2,014	3,972	(24,098)	6,313	(11,954)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	114	—	114
Net change in cash and cash equivalents	—	(25)	(4)	(1,269)	—	(1,298)
Cash and cash equivalents at beginning of period	—	45	5	4,917	—	4,967
Cash and cash equivalents at end of period	$ —	$ 20	$ 1	$ 3,648	$ —	$ 3,669

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Statement of Cash Flows*
Fiscal Year Ended April 28, 2017
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 operating activities	$ 842	$ 1,902	$ 302	$ 4,721	$ (887)	$ 6,880
Investing Activities:						
Acquisitions, net of cash acquired	—	(940)	—	(384)	—	(1,324)
Additions to property, plant, and equipment	—	(369)	—	(885)	—	(1,254)
Purchases of investments	—	—	—	(4,533)	162	(4,371)
Sales and maturities of investments	—	210	—	5,308	(162)	5,356
Capital contributions paid	—	(248)	—	—	248	—
Other investing activities, net	—	—	—	22	—	22
Net cash (used in) provided by investing activities	—	(1,347)	—	(472)	248	(1,571)
Financing Activities:						
Change in current debt obligations, net	—	—	901	5	—	906
Issuance of long-term debt	—	150	1,850	140	—	2,140
Payments on long-term debt	—	(500)	—	(363)	—	(863)
Dividends to shareholders	(2,376)	—	—	—	—	(2,376)
Issuance of ordinary shares	428	—	—	—	—	428
Repurchase of ordinary shares	(3,544)	—	—	—	—	(3,544)
Net intercompany loan borrowings (repayments)	4,650	(255)	(3,048)	(1,347)	—	—
Intercompany dividends paid	—	—	—	(887)	887	—
Capital contributions received	—	—	—	248	(248)	—
Other financing activities	—	40	—	(14)	—	26
Net cash (used in) provided by financing activities	(842)	(565)	(297)	(2,218)	639	(3,283)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	65	—	65
Net change in cash and cash equivalents	—	(10)	5	2,096	—	2,091
Cash and cash equivalents at beginning of period	—	55	—	2,821	—	2,876
Cash and cash equivalents at end of period	$ —	$ 45	$ 5	$ 4,917	$ —	$ 4,967

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Consolidating *Statement of Comprehensive Income*
Fiscal Year Ended April 26, 2019
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ —	$ —	$ 30,557	$ —	$ 30,557
Costs and expenses:						
Cost of products sold	—	—	—	9,155	—	9,155
Research and development expense	—	—	—	2,330	—	2,330
Selling, general, and administrative expense	11	1	4	10,402	—	10,418
Amortization of intangible assets	—	—	—	1,764	—	1,764
Restructuring charges, net	—	—	—	198	—	198
Certain litigation charges	—	—	—	166	—	166
Other operating expense (income), net	54	1	(27)	230	—	258
Operating (loss) profit	(65)	(2)	23	6,312	—	6,268
Other non-operating (income) expense, net	—	(44)	(836)	(830)	1,337	(373)
Interest expense	478	99	511	1,693	(1,337)	1,444
Equity in net (income) loss of subsidiaries	(5,167)	(3,144)	(4,819)	—	13,130	—
Income (loss) before income taxes	4,624	3,087	5,167	5,449	(13,130)	5,197
Income tax (benefit) provision	(7)	—	—	554	—	547
Net income (loss)	4,631	3,087	5,167	4,895	(13,130)	4,650
Net income attributable to noncontrolling interests	—	—	—	(19)	—	(19)
Net income (loss) attributable to Medtronic	4,631	3,087	5,167	4,876	(13,130)	4,631
Other comprehensive income (loss), net of tax	(972)	7	(972)	(1,060)	2,022	(975)
Comprehensive income attributable to noncontrolling interests	—	—	—	(16)	—	(16)
Total comprehensive income (loss) attributable to Medtronic	$ 3,659	$ 3,094	$ 4,195	$ 3,819	$ (11,108)	$ 3,659

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Consolidating *Statement of Comprehensive Income*
Fiscal Year Ended April 27, 2018
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ —	$ —	$ 29,953	$ —	$ 29,953
Costs and expenses:						
Cost of products sold	—	—	—	9,067	—	9,067
Research and development expense	—	—	—	2,256	—	2,256
Selling, general, and administrative expense	12	1	2	10,223	—	10,238
Amortization of intangible assets	—	—	—	1,823	—	1,823
Restructuring charges, net	—	—	—	30	—	30
Certain litigation charges	—	—	—	61	—	61
Gain on sale of businesses	—	—	—	(697)	—	(697)
Other operating expense, net	52	1	—	482	—	535
Operating (loss) profit	(64)	(2)	(2)	6,708	—	6,640
Other non-operating (income) expense, net	—	(60)	(498)	(346)	723	(181)
Interest expense	247	83	234	1,305	(723)	1,146
Equity in net (income) loss of subsidiaries	(3,408)	(4,105)	(3,146)	—	10,659	—
Income (loss) before income taxes	3,097	4,080	3,408	5,749	(10,659)	5,675
Income tax (benefit) provision	(7)	—	—	2,587	—	2,580
Net income (loss)	3,104	4,080	3,408	3,162	(10,659)	3,095
Net loss attributable to noncontrolling interests	—	—	—	9	—	9
Net (income) loss attributable to Medtronic	3,104	4,080	3,408	3,171	(10,659)	3,104
Other comprehensive income (loss), net of tax	1,030	43	1,030	1,030	(2,103)	1,030
Comprehensive loss attributable to noncontrolling interests	—	—	—	9	—	9
Total comprehensive income (loss) attributable to Medtronic	$ 4,134	$ 4,123	$ 4,438	$ 4,201	$ (12,762)	$ 4,134

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Consolidating *Statement of Comprehensive Income*
Fiscal Year Ended April 28, 2017
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ —	$ —	$ 29,710	$ —	$ 29,710
Costs and expenses:						
Cost of products sold	—	—	—	9,294	—	9,294
Research and development expense	—	—	—	2,193	—	2,193
Selling, general, and administrative expense	12	1	2	10,003	—	10,018
Amortization of intangible assets	—	—	—	1,980	—	1,980
Restructuring charges, net	—	—	—	303	—	303
Certain litigation charges	—	—	—	300	—	300
Other operating expense, net	18	1	4	216	—	239
Operating (loss) profit	(30)	(2)	(6)	5,421	—	5,383
Other non-operating (income) expense, net	—	(82)	(656)	(380)	805	(313)
Interest expense	113	104	62	1,620	(805)	1,094
Equity in net (income) loss of subsidiaries	(4,163)	(3,736)	(3,575)	—	11,474	—
Income (loss) before income taxes	4,020	3,712	4,163	4,181	(11,474)	4,602
Income tax (benefit) provision	(8)	—	—	586	—	578
Net income (loss)	4,028	3,712	4,163	3,595	(11,474)	4,024
Net loss attributable to noncontrolling interests	—	—	—	4	—	4
Net income (loss) attributable to Medtronic	4,028	3,712	4,163	3,599	(11,474)	4,028
Other comprehensive (loss) income, net of tax	(745)	(234)	(745)	(744)	1,724	(744)
Comprehensive loss attributable to noncontrolling interests	—	—	—	3	—	3
Total comprehensive income (loss) attributable to Medtronic	$ 3,283	$ 3,478	$ 3,418	$ 2,854	$ (9,750)	$ 3,283

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

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	39,402	63,651	—	(167,405)	—
Intercompany loans receivable	3,000	4,119	27,858	29,002	(63,979)	—
Other assets	—	—	—	1,014	—	1,014
Total assets	$ 67,402	$ 43,521	$ 92,887	$ 125,894	$ (240,010)	$ 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	31,528	57,324	78,553	(167,405)	50,091
Noncontrolling interests	—	—	—	121	—	121
Total equity	50,091	31,528	57,324	78,674	(167,405)	50,212
Total liabilities and equity	$ 67,402	$ 43,521	$ 92,887	$ 125,894	$ (240,010)	$ 89,694

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Balance Sheet*
April 27, 2018
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	$ 3,668	$ —	$ 3,669
Investments	—	—	—	7,558	—	7,558
Accounts receivable, net	—	—	—	5,987	—	5,987
Inventories, net	—	—	—	3,579	—	3,579
Intercompany receivable	37	—	1,343	5,560	(6,940)	—
Other current assets	6	—	—	2,181	—	2,187
Total current assets	43	—	1,344	28,533	(6,940)	22,980
Property, plant and equipment, net	—	—	—	4,604	—	4,604
Goodwill	—	—	—	39,543	—	39,543
Other intangible assets, net	—	—	—	21,723	—	21,723
Tax assets	—	—	—	1,465	—	1,465
Investment in subsidiaries	60,381	31,239	60,122	—	(151,742)	—
Intercompany loans receivable	3,000	1,291	19,337	19,436	(43,064)	—
Other assets	—	—	—	1,078	—	1,078
Total assets	$ 63,424	$ 32,530	$ 80,803	$ 116,382	$ (201,746)	$ 91,393
LIABILITIES AND EQUITY						
Current liabilities:						
Current debt obligations	$ —	$ —	$ 1,696	$ 362	$ —	$ 2,058
Accounts payable	—	—	—	1,628	—	1,628
Intercompany payable	—	1,283	5,542	115	(6,940)	—
Accrued compensation	3	—	—	1,985	—	1,988
Accrued income taxes	—	—	—	979	—	979
Other accrued expenses	16	21	8	3,386	—	3,431
Total current liabilities	19	1,304	7,246	8,455	(6,940)	10,084
Long-term debt	—	2,111	844	20,744	—	23,699
Accrued compensation and retirement benefits	—	—	—	1,425	—	1,425
Accrued income taxes	10	—	—	3,041	—	3,051
Intercompany loans payable	12,675	100	19,335	10,954	(43,064)	—
Deferred tax liabilities	—	—	—	1,423	—	1,423
Other liabilities	—	—	—	889	—	889
Total liabilities	12,704	3,515	27,425	46,931	(50,004)	40,571
Shareholders' equity	50,720	29,015	53,378	69,349	(151,742)	50,720
Noncontrolling interests	—	—	—	102	—	102
Total equity	50,720	29,015	53,378	69,451	(151,742)	50,822
Total liabilities and equity	$ 63,424	$ 32,530	$ 80,803	$ 116,382	$ (201,746)	$ 91,393

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Statement of Cash Flows*
Fiscal Year Ended April 26, 2019
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Operating Activities:						
Net cash provided by operating activities	$ (7)	$ 661	$ 323	$ 6,780	$ (750)	$ 7,007
Investing Activities:						
Acquisitions, net of cash acquired	—	—	—	(1,827)	—	(1,827)
Additions to property, plant, and equipment	—	—	—	(1,134)	—	(1,134)
Purchases of investments	—	—	—	(2,532)	—	(2,532)
Sales and maturities of investments	—	—	—	4,683	—	4,683
Capital contributions paid	(18)	(6,346)	—	—	6,364	—
Other investing activities, net	—	—	82	(46)	—	36
Net cash (used in) provided by investing activities	(18)	(6,346)	82	(856)	6,364	(774)
Financing Activities:						
Change in current debt obligations, net	—	—	(1,696)	983	—	(713)
Issuance of long-term debt	—	—	7,791	3	—	7,794
Payments on long-term debt	—	(732)	—	(7,216)	—	(7,948)
Dividends to shareholders	(2,693)	—	—	—	—	(2,693)
Issuance of ordinary shares	992	—	—	—	—	992
Repurchase of ordinary shares	(2,877)	—	—	—	—	(2,877)
Net intercompany loan borrowings (repayments)	4,603	6,417	(6,543)	(4,477)	—	—
Intercompany dividend paid	—	—	—	(750)	750	—
Capital contributions received	—	—	—	6,364	(6,364)	—
Other financing activities	—	—	43	(29)	—	14
Net cash (used in) provided by financing activities	25	5,685	(405)	(5,122)	(5,614)	(5,431)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	(78)	—	(78)
Net change in cash and cash equivalents	—	—	—	724	—	724
Cash and cash equivalents at beginning of period	—	—	1	3,668	—	3,669
Cash and cash equivalents at end of period	$ —	$ —	$ 1	$ 4,392	$ —	$ 4,393

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Statement of Cash Flows*
Fiscal Year Ended April 27, 2018
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Operating Activities:						
Net cash provided by operating activities	$ 155	$ 974	$ 264	$ 4,339	$ (1,048)	$ 4,684
Investing Activities:						
Acquisitions, net of cash acquired	—	—	—	(137)	—	(137)
Proceeds from sale of businesses	—	—	—	6,058	—	6,058
Additions to property, plant, and equipment	—	—	—	(1,068)	—	(1,068)
Purchases of investments	—	—	(25)	(3,200)	25	(3,200)
Sales and maturities of investments	—	—	—	4,252	(25)	4,227
Capital contributions paid	—	(1,557)	(4,200)	—	5,757	—
Other investing activities, net	—	—	—	(22)	—	(22)
Net cash (used in) provided by investing activities	—	(1,557)	(4,225)	5,883	5,757	5,858
Financing Activities:						
Change in current debt obligations, net	—	—	(205)	(44)	—	(249)
Issuance of long-term debt	—	—	—	21	—	21
Payments on long-term debt	—	(1,150)	—	(6,220)	—	(7,370)
Dividends to shareholders	(2,494)	—	—	—	—	(2,494)
Issuance of ordinary shares	403	—	—	—	—	403
Repurchase of ordinary shares	(2,171)	—	—	—	—	(2,171)
Net intercompany loan borrowings (repayments)	4,107	1,700	4,162	(9,969)	—	—
Intercompany dividend paid	—	—	—	(1,048)	1,048	—
Capital contributions received	—	—	—	5,757	(5,757)	—
Other financing activities	—	—	—	(94)	—	(94)
Net cash (used in) provided by financing activities	(155)	550	3,957	(11,597)	(4,709)	(11,954)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	114	—	114
Net change in cash and cash equivalents	—	(33)	(4)	(1,261)	—	(1,298)
Cash and cash equivalents at beginning of period	—	33	5	4,929	—	4,967
Cash and cash equivalents at end of period	$ —	$ —	$ 1	$ 3,668	$ —	$ 3,669

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Statement of Cash Flows*
Fiscal Year Ended April 28, 2017
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Operating Activities:						
Net cash provided by operating activities	$ 842	$ 1,904	$ 302	$ 5,829	$ (1,997)	$ 6,880
Investing Activities:						
Acquisitions, net of cash acquired	—	—	—	(1,324)	—	(1,324)
Additions to property, plant, and equipment	—	—	—	(1,254)	—	(1,254)
Purchases of investments	—	—	—	(4,371)	—	(4,371)
Sales and maturities of investments	—	—	—	5,356	—	5,356
Capital contributions paid	—	(537)	—	—	537	—
Other investing activities, net	—	—	—	22	—	22
Net cash (used in) provided by investing activities	—	(537)	—	(1,571)	537	(1,571)
Financing Activities:						
Change in current debt obligations, net	—	—	901	5	—	906
Issuance of long-term debt	—	—	1,850	290	—	2,140
Payments on long-term debt	—	—	—	(863)	—	(863)
Dividends to shareholders	(2,376)	—	—	—	—	(2,376)
Issuance of ordinary shares	428	—	—	—	—	428
Repurchase of ordinary shares	(3,544)	—	—	—	—	(3,544)
Net intercompany loan borrowings (repayments)	4,650	(1,542)	(3,048)	(60)	—	—
Intercompany dividend paid	—	—	—	(1,997)	1,997	—
Capital contributions received	—	—	—	537	(537)	—
Other financing activities	—	—	—	26	—	26
Net cash (used in) provided by financing activities	(842)	(1,542)	(297)	(2,062)	1,460	(3,283)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	65	—	65
Net change in cash and cash equivalents	—	(175)	5	2,261	—	2,091
Cash and cash equivalents at beginning of period	—	208	—	2,668	—	2,876
Cash and cash equivalents at end of period	$ —	$ 33	$ 5	$ 4,929	$ —	$ 4,967

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

Not applicable.

Item 9A. Controls and Procedures

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 annual report, our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act) are effective.

Management's Annual Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company (as defined in Exchange Act Rule 13a-15(f)). Management conducted an evaluation of the effectiveness of internal control over financial reporting based on the framework in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, management concluded that the Company's internal control over financial reporting was effective at April 26, 2019. Our internal control over financial reporting at April 26, 2019, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm who has also audited our consolidated financial statements, as stated in their report in the section entitled "Report of Independent Registered Public Accounting Firm," which expresses an unqualified opinion on the effectiveness of the Company's internal control over financial reporting at April 26, 2019, which is included in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

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. During fiscal year 2019, the Company continued the deployment of this software along with other enterprise systems, which resulted in changes to the internal controls over financial reporting for the Minimally Invasive Therapies Group in Latin America. The internal controls were updated to reflect these changes. These system deployments will continue with projected completion in fiscal year 2020. There have been no other 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 Annual Report on Form 10-K that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Part III of this Annual Report on Form 10-K incorporates information by reference from the Company's 2019 definitive proxy statement, which will be filed no later than 120 days after April 26, 2019.

Item 10. Directors, Executive Officers, and Corporate Governance

The sections entitled “Proposal 1 — Election of Directors — Directors and Nominees,” “Corporate Governance — Committees of the Board and Meetings,” and “Share Ownership Information — Section 16(a) Beneficial Ownership Reporting Compliance” in the Company's Proxy Statement for our 2019 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 26, 2019, are incorporated herein by reference.

Set forth below are the names and ages of our Section 16(b) executive officers of Medtronic, as well as information regarding their positions with Medtronic, their periods of service in these capacities, and their business experiences. There are no family relationships among any of the officers named, nor is there any arrangement or understanding pursuant to which any person was selected as an officer.

Omar Ishrak, age 63, has been Chairman and Chief Executive Officer of the Company since January 2015 and of Medtronic, Inc., since June 2011. Prior to that, Mr. Ishrak served as President and Chief Executive Officer of GE Healthcare Systems, a division of GE, from 2009 to 2011. Prior to that, Mr. Ishrak was President and Chief Executive Officer of GE Healthcare Clinical Systems from 2005 to 2008 and President and Chief Executive Officer of GE Healthcare Ultrasound and BMD from 1995 to 2004. Mr. Ishrak is also a current member of the Board of Directors of Intel Corporation.

Michael J. Coyle, age 57, has been Executive Vice President and Group President, Cardiac and Vascular Group of the Company since January 2015 and of Medtronic, Inc. since December 2009. Prior to that, he served as President of the Cardiac Rhythm Management division at St. Jude from 2001 to 2007, and prior positions included serving St. Jude as President of the company’s Daig Catheter division and numerous leadership positions at Eli Lilly & Company.

Hooman C. Hakami, age 49, has been Executive Vice President and Group President, Diabetes Group of the Company since January 2015 and of Medtronic, Inc. since June 2014. Prior to that, he was President and Chief Executive Officer of Detection and Guidance Solutions at GE Healthcare from April 2012 to May 2014. Prior to that, he served as President and Chief Executive Officer of Interventional Systems from July 2009 to April 2012; Global Business Transformation leader for GE Healthcare from December 2008 to July 2009; and Vice President and General Manager, Global Ultrasound Services from June 2004 to December 2008. Mr. Hakami started his career with GE and has held the following financial roles: Chief Financial Officer for the Global Ultrasound division from 2001 to 2004; Chief Financial Officer for Clinical and Multi-vendor Services from 1999 to 2001; as well as various finance roles at GE Capital from 1994 to 1999; GE's Aerospace Division from 1992 to 1994 and GE Power Systems from 1991 to 1992.

Richard Kuntz, M.D., age 62, has been Senior Vice President and Chief Scientific, Clinical and Regulatory Officer of the Company since January 2015 and of Medtronic, Inc. since August 2009. Prior to that, he was Senior Vice President and President, Neuromodulation from October 2005 to August 2009; and prior to that, he was an interventional cardiologist and Chief of the Division of Clinical Biometrics at Brigham and Women’s Hospital and Associate Professor of Medicine and Chief Scientific Officer of the Harvard Clinical Research Institute.

Bradley E. Lerman, age 62, has been Senior Vice President, General Counsel and Corporate Secretary of the Company since January 2015 and of Medtronic, Inc. since May 2014. Prior to that, he was Executive Vice President, General Counsel and Corporate Secretary at Federal National Mortgage Association (Fannie Mae) from October 2012 to May 2014; Senior Vice President and Chief Litigation Counsel at Pfizer, Inc. from January 2009 to September 2012; Partner at Winston & Strawn from August 1998 to January 2009; partner at Kirkland & Ellis from March 1996 to July 1998; Associate Independent Counsel from October 1994 to March 1996; and Assistant U.S. Attorney in the Northern District of Illinois from February 1986 to September 1994. Mr. Lerman is also a current member of the Board of Directors of McKesson Corporation.

Geoffrey S. Martha, age 49, has been Executive Vice President and President, Restorative Therapies Group since June 2015. Mr. Martha previously served as Senior Vice President of Strategy and Business Development of the Company beginning in January 2015 and of Medtronic, Inc. beginning in August 2011. Prior to that, he served as Managing Director of Business Development at GE Healthcare from April 2007 to July 2011; General Manager for GE Capital Technology Finance Services from November 2003 to March 2007; Senior Vice President, Business Development for GE Capital Vendor Financial Services from February 2002 to October 2003; General Manager for GE Capital Colonial Pacific Leasing from February 2001 to January 2002; and Vice President, Business Development for Potomac Federal, the GE Capital federal financing investment bank from May 1998 to January 2001.

Karen L. Parkhill, age 53, joined the Company as Executive Vice President and Chief Financial Officer in June 2016. From 2011 to 2016, Ms. Parkhill served as Vice Chairman and Chief Financial Officer of Comerica Incorporated. Ms. Parkhill was a member of Comerica's Management Executive Committee and the Comerica Bank Board of Directors. Prior to joining Comerica, Ms. Parkhill worked for J.P. Morgan Chase & Co. in various capacities from 1992 to 2011, including serving as Chief Financial Officer of the Commercial Banking business from 2007 to 2011. Ms. Parkhill is also a current member of the Board of Directors for the Methodist Health System in Dallas.

Carol A. Surface, age 53, has been Senior Vice President and Chief Human Resources Officer of the Company since January 2015 and of Medtronic, Inc. since September 2013. Prior to that, she was the Executive Vice President and Chief Human Resources Officer at Best Buy Co., Inc. from March 2010 to September 2013, and held a series of HR leadership roles at PepsiCo Inc., from May 2000 to March 2010.

Robert ten Hoedt, age 58, has been Executive Vice President and President, EMEA of the Company since January 2015 and of Medtronic, Inc. since May 2014. Prior to that, he was Senior Vice President and President, EMEA and Canada from 2009 to 2014; Vice President CardioVascular Europe and Central Asia from 2006 to 2009; Vice President and General Manager, Vitatron from 1999 to 2006; Gastro-Uro leader from 1994 to 1999; and Marketing Manager, Neurological from 1991 to 1994.

Robert J. White, age 56, has been Executive Vice President and President, Minimally Invasive Therapies Group of the Company since December 2017. Prior to that, he was Senior Vice President and President, Asia Pacific from January 2015 to December 2017. He had served as President, Emerging Markets, President, Respiratory and Monitoring Solutions and Vice President and General Manager of Patient Monitoring at Covidien. He also held various leadership positions at GE Healthcare and IBM.

John Liddicoat, M.D., age 55, was named Executive Vice President and President, Americas Region in September 2018. Dr. Liddicoat joined Medtronic in 2006 as Vice President of Atrial Fibrillation Technologies. In December of 2006, John was named Vice President and General Manager of the Structural Heart Disease Business. Beginning in August 2014, Dr. Liddicoat served as Senior Vice President and President, Cardiac Rhythm and Heart Failure (CRHF) Division.

Item 11. Executive Compensation

The sections entitled "Corporate Governance — Director Compensation," "Corporate Governance — Committees of the Board and Meetings," "Compensation Discussion and Analysis," and "Executive Compensation" in Medtronic's Proxy Statement for the Company's 2019 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 26, 2019, are incorporated herein by reference. The section entitled "Compensation Committee Report" in Medtronic's Proxy Statement for the Company's 2019 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 26, 2019, is furnished herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters

The sections entitled "Share Ownership Information – Significant Shareholders," "Share Ownership Information – Beneficial Ownership of Management," and "Executive Compensation — Equity Compensation Plan Information" in Medtronic's Proxy Statement for the Company's 2019 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 26, 2019, are incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The sections entitled "Corporate Governance — Director Independence" and "Corporate Governance — Related Party Transactions and Other Matters" in Medtronic's Proxy Statement for the Company's 2019 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 26, 2019, are incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The sections entitled “Corporate Governance — Committees of the Board and Meetings” and “Audit and Non-Audit Fees” in Medtronic's Proxy Statement for the Company's 2019 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 26, 2019, are incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) 1. Financial Statement Schedules

Schedule II. Valuation and Qualifying Accounts — years ended April 26, 2019, April 27, 2018, and April 28, 2017.

All other schedules are omitted because they are not applicable or the required information is shown in the financial statements or notes thereto.

2. Exhibits

Exhibit No.	Description
3.1	Certificate of Incorporation of Medtronic plc (incorporated by reference to Exhibit 3.1 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
3.2	Amended and Restated Memorandum and Articles of Association of Medtronic plc (incorporated by reference to Exhibit 3.2 to Medtronic plc's Registration Statement on Form S-3, filed on February 6, 2017, File No. 333-215895).
4.1	Form of Indenture between Medtronic, Inc. and Wells Fargo Bank, National Association regarding 2009 offering (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Registration Statement on Form S-3, filed on March 9, 2009, File No. 333-157777).
4.2	First Supplemental Indenture, dated March 12, 2009, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 12, 2009, File No. 001-07707).
4.3	Second Supplemental Indenture, dated March 16, 2010, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 16, 2010, File No. 001-07707).
4.4	Third Supplemental Indenture, dated March 15, 2011, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current report on Form 8-K, filed on March 16, 2011, File No. 001-07707).
4.5	Fourth Supplemental Indenture, dated March 19, 2012, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.2 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 20, 2012, File No. 001-07707).
4.6	Fifth Supplemental Indenture, dated March 26, 2013, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 26, 2013, File No. 001-07707).
4.7	Sixth Supplemental Indenture, dated February 27, 2014, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Form of Global Note thereof) (incorporated by reference to Exhibit 4.2 to Medtronic, Inc.'s Current Report on Form 8-K, filed on February 27, 2014, File No. 001-07707).
4.8	Seventh Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic plc, Medtronic, Inc., Medtronic Global Holdings S.C.A. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.2 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).

4.9	Indenture, dated December 10, 2014, between Medtronic, Inc. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K filed with the Commission on December 10, 2014, File No. 001-07707).

4.10	First Supplemental Indenture, dated December 10, 2014, between Medtronic, Inc. and Wells Fargo Bank, National Association (including Form of Floating Rate Senior Notes due 2020, Form of 1.500% Senior Notes due 2018, Form of 2.500% Senior Notes due 2020, Form of 3.150% Senior Notes due 2022, Form of 3.500% Senior Notes due 2025, Form of 4.375% Senior Notes due 2035 and Form of 4.625% Senior Notes due 2045) (incorporated by reference to Exhibit 4.2 of Medtronic, Inc.'s Current Report on Form 8-K filed with the Commission on December 10, 2014, File No. 001-07707).
4.11	Second Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic plc and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.3 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.12	Third Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic Global Holdings S.C.A. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.4 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.13	Indenture, dated as of October 22, 2007, by and among Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1(a) to Covidien plc's Current Report on Form 8-K filed on October 22, 2007, File No. 001-33259).
4.14	Third Supplemental Indenture, dated as of October 22, 2007, by and among Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1(d) to Covidien plc's Current Report on Form 8-K filed on October 22, 2007, File No. 001-33259).
4.15	Fourth Supplemental Indenture, dated as of October 22, 2007, by and among Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1(e) to Covidien plc's Current Report on Form 8-K filed on October 22, 2007, File No. 001-33259).
4.16	Fifth Supplemental Indenture, dated as of June 4, 2009, by and among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K12G3 filed on June 5, 2009, File No. 001-33259).
4.17	Sixth Supplemental Indenture, dated as of June 28, 2010, among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K filed on June 28, 2010, File No. 001-33259).
4.18	Seventh Supplemental Indenture, dated as of May 30, 2012, among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K filed on May 30, 2012, File No. 001-33259).
4.19	Eighth Supplemental Indenture, dated as of May 16, 2013, among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K filed on May 16, 2013, File No. 001-33259).
4.20	Ninth Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Covidien public limited company, Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.5 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).

4.21	Senior Indenture, dated as of March 28, 2017, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Medtronic, Inc., and Wells Fargo Bank, N.A. (incorporated by reference to Exhibit 4.1 to Medtronic plc's Current Report on Form 8-K, filed on March 28, 2017, File No. 001-36820).
4.22	First Supplemental Indenture, dated as of March 28, 2017, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Medtronic, Inc., and Wells Fargo Bank, N.A. (incorporated by reference to Exhibit 4.2 to Medtronic plc's Current Report on Form 8-K, filed on March 28, 2017, File No. 001-36820).

4.23	Second Supplemental Indenture, dated as of March 7, 2019, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Medtronic, Inc., Wells Fargo Bank, N.A., and Elavon Financial Services DAC, UK Branch (incorporated by reference to Exhibit 4.1 to Medtronic plc's Current Report on Form 8-K, filed on March 7, 2019, File No. 001-36820).
#4.24	Description of Registrant's Securities
10.1	Amendment and Restatement Agreement, dated as of November 7, 2014, by and among Medtronic, Inc., Medtronic plc (formerly known as Medtronic Holdings Limited), Medtronic Global Holdings S.C.A., the lenders from time to time party thereto, and Bank of America, N.A., as administrative agent and issuing bank (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Current Report on Form 8-K, filed on November 10, 2014, File No. 001-07707).
10.2	Amendment dated September 30, 2015, to Amended and Restated Revolving Credit Agreement, dated as of November 7, 2014, by and among Medtronic, Inc., Medtronic Holdings Limited, Medtronic Global Holdings, SCA, the lenders from time to time party thereto, and Bank of America, N.A., as administrative agent and issuing bank (incorporated by reference to Exhibit 10.2 to Medtronic plc's Form 10-Q for the quarter ended October 30, 2015,filed on December 9, 2015, File No. 001-36820).
10.3	Tax Sharing Agreement, dated as of June 29, 2007, by and among Tyco International Ltd., Covidien Ltd. and Tyco Electronics Ltd. (incorporated by reference to Exhibit 10.1 to Covidien plc's Current Report on Form 8-K, filed on July 5, 2007, File No. 001-33259).
10.4	Form of Deed of Indemnification (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
10.5	Form of Indemnification Agreement (incorporated by reference to Exhibit 10.2 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
*10.6	Letter Agreement by and between Medtronic, Inc. and Omar Ishrak dated May 11, 2011 (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on May 11, 2011, File No. 001-07707).
*10.7	Change of Control Severance Plan - Section 16B Officers (as amended and restated as of January 26, 2015) (incorporated by reference to Exhibit 10.14 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.8	Amendment to Letter Agreement dated May 11, 2011 by and between Medtronic, Inc. and Omar Ishrak (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 29, 2011, filed September 7, 2011, File No. 001-07707).
*10.9	Amendment dated February 12, 2015 to the Letter Agreement by and between Medtronic, Inc. and Omar Ishrak dated May 11, 2011 (incorporated by reference to Exhibit 10.24 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.10	Letter Agreement by and between Medtronic, Inc. and Michael J. Coyle dated November 19, 2009 (incorporated by reference to Exhibit 10.55 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 27, 2012, filed on June 26, 2012, File No. 001-07707).
*10.11	Letter Agreement by and between Medtronic, Inc. and Carol Surface dated August 22, 2013 (incorporated by reference to Exhibit 10.44 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2014, filed on June 20, 2014, File No. 001-07707).
*10.12	Letter Agreement by and between Medtronic, Inc. and Hooman Hakami dated April 29, 2014 (incorporated by reference to Exhibit 10.5 of Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2014, filed on August 29, 2014, File No. 001-07707)
*10.13	Letter Agreement by and between Medtronic, Inc. and Bradley E. Lerman dated May 2, 2014 (incorporated by reference to Exhibit 10.4 of Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2014, filed on August 29, 2014, File No. 001-07707)

*10.14	Letter Agreement by and between Medtronic, Inc. and Karen Parkhill dated May 2, 2016 (incorporated by reference to Exhibit 10.1 to Medtronic, plc's Current Report on Form 8-K, filed on May 4, 2016, File No. 001-36820).
*10.15	Form of Offer Letter Amendment (incorporated by reference to Exhibit 10.25 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).

*10.16	1998 Outside Director Stock Compensation Plan (as amended and restated effective as of January 1, 2008) (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 25, 2008, filed on, filed on March 4, 2008, File No. 001-07707).
*10.17	Amendment to the 1998 Outside Director Stock Compensation Plan (incorporated by reference to Exhibit 10.2 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.18	2003 Long-Term Incentive Plan (as amended and restated effective January 1, 2008) (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2008, filed on March 4, 2008, File No. 001-07707).
*10.19	Amendment to the 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.20	Form of Restricted Stock Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2005, filed on March 7, 2005, File No. 001-07707).
*10.21	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan (four year vesting) (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2005, filed on March 7, 2005, File No. 001-07707).
*10.22	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan (immediate vesting) (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2005, filed on March 7, 2005, File No. 001-07707).
*10.23	Form of Restricted Stock Units Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.20 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 29, 2005, filed on June 29, 2005, File No. 001-07707).
*10.24	Form of Performance Share Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.21 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 29, 2005, filed on June 29, 2005, File No. 001-07707).
*10.25	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.23 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.26	Form of Restricted Stock Award Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.24 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.27	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.25 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.28	Form of Performance Award Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.26 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.29	Form of Restricted Stock Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 26, 2007, filed on December 4, 2007, File No. 001-07707).
*10.30	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 26, 2007, filed on December 4, 2007, File No. 001-07707).

*10.31	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.39 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2008, filed on June 24, 2008, File No. 001-07707).
*10.32	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.40 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2008, filed on June 24, 2008, File No. 001-07707).
*10.33	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.41 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2008, filed on June 24, 2008, File No. 001-07707).

*10.34	Israeli Amendment to the 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 25, 2008, filed on March 4, 2008, File No. 001-07707).
*10.35	2008 Stock Award and Incentive Plan (as amended and restated effective August 27, 2009) (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 30, 2009, filed on December 9, 2009, File No. 001-07707).
*10.36	Amendment to the 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.37	Form of Restricted Stock Unit Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.38	Form of Restricted Stock Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.39	Form of Restricted Stock Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.40	Form of Restricted Stock Unit Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.41	Form of Non-Qualified Stock Option Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.6 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.42	Terms of Non-Employee Director Compensation under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.42 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 27, 2012, filed on June 26, 2012, File No. 001-07707).
*10.43	Form of Non-Employee Director Initial Option Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.44	Form of Non-Employee Director Annual Option Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.45	Form of Non-Employee Director Deferred Unit Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.46	Form of Non-Employee Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.65 to Medtronic plc's Annual Report on Form 10-K for the year ended April 24, 2015, filed on June 23, 2015, File No. 001-36820).
*10.47	Israeli Amendment to the Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.10 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.48	Form of Restricted Stock Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-K for the quarter ended July 28, 2017, filed on September 1, 2017, File No. 001-36820).

*10.49	Medtronic plc Amended and Restated 2013 Stock Award and Incentive Plan (as amended and restated generally effective December 8, 2017) (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K, filed on December 12, 2017, File No. 001-36820).
*10.50	Form of Non-qualified Stock Option Agreement Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.50 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820).
*10.51	Form of Restricted Stock Unit Award Agreement Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.51 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820).

*10.52	Form of Restricted Stock Award Agreement Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.52 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820)
*10.53	Form of Long Term Performance Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.53 to Medtronic plc's Annual Report on Form 10-K, filed June 22, 2018, File No. 001-36820).
*10.54	Form of Non-Qualified Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.31 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.55	Form of Non-Employee Director Deferred Unit Award Agreement under the 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.56	Form of Non-Qualified Stock Option Agreement under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.57	Form of Restricted Stock Unit Award Agreement (U.S. Employees) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.58	Form of Restricted Stock Unit Award Agreement (Non-U.S. Employees) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.59	Form of Restricted Stock Unit Award Agreement (Time-Based) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.60	Form of Restricted Stock Unit Award Agreement (Israeli-Employees) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.8 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.61	Form of Non-Qualified Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.48 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.62	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.49 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.63	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.50 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.64	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.51 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.65	Form of Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.53 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.66	

	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.54 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.67	Medtronic plc 2014 Amended and Restated Employees Stock Purchase Plan (incorporated by reference to Exhibit 10.8 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).

*10.68	Medtronic plc Incentive Plan (as amended and restated effective January 26, 2015) (incorporated by reference to Exhibit 10.11 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.69	Medtronic plc Supplemental Executive Retirement Plan (as restated generally effective January 26, 2015) (incorporated by reference to Exhibit 10.15 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.70	Medtronic plc Savings and Investment Plan (as amended and restated generally effective January 26, 2015) (incorporated by reference to Exhibit 4.22 to Medtronic plc's Registration Statement on Form S-8 filed on January 28, 2015, File No. 333-201737).
*10.71	Medtronic plc Puerto Rico Employees' Savings and Investment Plan (as amended and restated generally effective January 26, 2015) (incorporated by reference to Exhibit 4.23 to Medtronic plc's Registration Statement on Form S-8 filed on January 28, 2015, File No. 333-201737).
*10.72	Medtronic plc Capital Accumulation Plan Deferral Program (as amended and restated generally effective January 26, 2015) (incorporated by reference to Exhibit 10.13 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.73	Capital Accumulation Plan Deferral Program (as amended and restated generally effective January 1, 2017) (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended October 28, 2016, filed on December 5, 2016, File No. 001-36820).
10.74	Amended and Restated Credit Agreement, dated as of December 12, 2018, by and among Medtronic Global Holdings, SCA, certain subsidiaries named therein, Medtronic, Inc., Medtronic PLC, the lenders from time to time party thereto, and Bank of America, N.A. as Administration Agent (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K, filed on December 13, 2018, File No. 001-36820).
#21	List of Subsidiaries of Medtronic plc.
#23	Consent of Independent Registered Public Accounting Firm.
#24	Power of Attorney.
#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.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document.
#101.SCH	XBRL Taxonomy Extension Schema Document
#101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
#101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
#101.LAB	XBRL Taxonomy Extension Label Linkbase Document
#101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

*Exhibits that are management contracts or compensatory plans or arrangements.
#Filed herewith

MEDTRONIC PLC AND SUBSIDIARIES
SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS
(in millions)

	Balance at Beginning of Fiscal Year	Additions		Deductions	Balance at End of Fiscal Year
		Charges to Income	Charges to Other Accounts	Other Changes (Debit) Credit	
Allowance for doubtful accounts:					
Fiscal year ended April 26, 2019	$ 193	$ 78	$ —	$ (81) (a)	$ 190
Fiscal year ended April 27, 2018	155	52	—	(14) (a)	193
Fiscal year ended April 28, 2017	161	39	—	(45) (a)	155
Inventory reserve:					
Fiscal year ended April 26, 2019	$ 452	$ 224	$ —	$ (155) (b)	$ 521
Fiscal year ended April 27, 2018	443	170	—	(161) (b)	452
Fiscal year ended April 28, 2017	426	155	28	(166) (b)	443
Deferred tax valuation allowance:					
Fiscal year ended April 26, 2019	$ 7,166	$ 378	$ (11) (c)	$ (770) (d)	$ 6,300
				(463) (e)	
Fiscal year ended April 27, 2018	6,311	434	21 (c)	(171) (d)	7,166
				571 (e)	
Fiscal year ended April 28, 2017	7,032	101	6 (c)	(524) (d)	6,311
				(304) (e)	

(a) Primarily consists of uncollectible accounts written off, less recoveries.
(b) Primarily reflects utilization of the inventory reserve.
(c) Reflects the impact from acquisitions.
(d) Reflects carryover attribute utilization and expiration.
(e) Primarily reflects the effects of currency fluctuations.

Item 16. Form 10-K Summary

Registrants may voluntarily include a summary of information required by Form 10-K under this Item 16. The Company has not elected to include such summary information.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

MEDTRONIC PUBLIC LIMITED COMPANY

Dated: June 21, 2019

By: /s/ **Omar Ishrak**
Omar Ishrak
Chairman and
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, the report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

MEDTRONIC PUBLIC LIMITED COMPANY

Dated: June 21, 2019

By: /s/ **Omar Ishrak**
Omar Ishrak
Chairman and
Chief Executive Officer
(Principal Executive Officer)

Dated: June 21, 2019

By: /s/ **Karen L. Parkhill**
Karen L. Parkhill
Executive Vice President and
Chief Financial Officer
(Principal Financial and Accounting Officer)

Directors

Richard H. Anderson*
Craig Arnold*
Scott C. Donnelly*
Andrea J. Goldsmith, Ph.D.*
Randall J. Hogan, III*
Omar Ishrak*
Michael O. Leavitt*
James T. Lenehan*
Elizabeth G. Nabel*
Denise M. O'Leary*
Kendall J. Powell*

*Bradley E. Lerman, by signing his name hereto, does hereby sign this document on behalf of each of the above named directors of the registrant pursuant to powers of attorney duly executed by such persons.

Dated: June 21, 2019

By: **/s/ Bradley E. Lerman**
Bradley E. Lerman

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

FORM 10-K

☒ **Annual report pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934.**
For the fiscal year ended April 27, 2018.

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

Commission File No. 1-36820

mdtlogo2a41.jpg®

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

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

20 On Hatch, Lower Hatch Street
Dublin 2, Ireland
(Address of principal executive office)
+353 1 438-1700
(Registrant's telephone number)
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Name of each exchange on which registered**
Ordinary shares, par value $0.0001 per share	**New York Stock Exchange, Inc.**

Securities registered pursuant to section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act. Yes ☐ No ☒

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§229.405 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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

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 definition of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

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

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

Aggregate market value of voting and non-voting common equity of Medtronic plc held by non-affiliates of the registrant as of October 27, 2017, based on the closing price of $81.30, as reported on the New York Stock Exchange: approximately $110.0 billion. Number of Ordinary Shares outstanding on June 20, 2018: 1,351,709,097

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for its 2018 Annual General Meeting are incorporated by reference into Part III hereof.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, and other written reports of Medtronic public limited company, organized under the laws of Ireland (together with its consolidated subsidiaries, Medtronic, the Company, or we, us, or our), 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 Annual Report on Form 10-K, 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 Annual 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 United States (U.S.) Food and Drug Administration (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 Annual Report on Form 10-K and are subject to a number of risks, uncertainties and assumptions described in the "Risk Factors" section and elsewhere in this 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 this Annual Report on Form 10-K, as well as those related to:

- competition in the medical device industry;
- reduction or interruption in our supply;
- quality problems, liquidity shortfalls;
- decreasing prices and pricing pressure;

- fluctuations in currency exchange rates;
- changes in applicable tax rates;
- 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.

PART I

Item 1. Business

OVERVIEW

Medtronic plc, headquartered in Dublin, Ireland, 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. Medtronic was founded in 1949 and today serves hospitals, physicians, clinicians, and patients in more than 150 countries worldwide. We remain committed to a mission written by our founder in 1960 that directs us “to contribute to human welfare by the application of biomedical engineering in the research, design, manufacture, and sale of products to alleviate pain, restore health, and extend life.”

With innovation and market leadership, we have pioneered advances in medical technology in all of our businesses. Our commitment to enhance our offerings by developing and acquiring new products, wrap-around programs, and solutions to meet the needs of a broader set of stakeholders is driven by the following primary strategies:

- Therapy Innovation: Delivering a strong launch cadence of meaningful therapies and procedures.
- Globalization: Addressing the inequity in health care access globally, primarily in emerging markets.
- Economic Value: Becoming a leader in value-based health care by offering new services and solutions to improve outcomes and efficiencies, lower costs by reducing hospitalizations, improve remote clinical management, and increase patient engagement.

Our primary customers include hospitals, clinics, third-party health care providers, distributors, and other institutions, including governmental health care programs and group purchasing organizations (GPOs).

Medtronic plc is the successor to Medtronic, Inc., a Minnesota corporation. Medtronic, Inc. and Covidien plc (Covidien) were combined under and became subsidiaries of Medtronic plc on January 26, 2015.

On July 29, 2017, we completed the divestiture of our Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses. Among the product lines included in the divestiture were the dental and animal health, chart paper, wound care, incontinence, electrodes, SharpSafety, thermometry, perinatal protection, blood collection, compression, and enteral feeding offerings. Prior to the divestiture, these businesses were included within the Minimally Invasive Therapies Group segment.

We have four operating and reportable segments that primarily develop, manufacture, distribute, and sell device-based medical therapies and services. Our segments and their portion of our total reported net sales for fiscal year 2018 of $30.0 billion are as follows:

- **Cardiac and Vascular Group** ($11.4 billion)
- **Minimally Invasive Therapies Group** ($8.7 billion)
- **Restorative Therapies Group** ($7.7 billion)
- **Diabetes Group** ($2.1 billion)

For more information regarding our segments, please see Note 21 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

CARDIAC AND VASCULAR GROUP

The Cardiac and Vascular Group is made up of the Cardiac Rhythm & Heart Failure, Coronary & Structural Heart, and Aortic & Peripheral Vascular divisions. The primary medical specialists who use our Cardiac and Vascular

products include electrophysiologists, implanting cardiologists, heart failure specialists, cardiovascular, cardiothoracic, and vascular surgeons, and interventional cardiologists and radiologists.

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Cardiac Rhythm & Heart Failure

Our Cardiac Rhythm & Heart Failure division develops, manufactures, and markets products for the diagnosis, treatment, and management of heart rhythm disorders and heart failure. Our products include implantable devices, leads and delivery systems, products for the treatment of atrial fibrillation (AF), products designed to reduce surgical site infections, information systems for the management of patients with Cardiac Rhythm & Heart Failure devices, ventricular assist systems, and an integrated health solutions business. Principal products and services offered include:

- Implantable cardiac pacemakers including the Azure, Adapta, Advisa MRI SureScan, and Micra Transcatheter Pacing System, which is leadless and does not have a subcutaneous device pocket like a conventional pacemaker.

- Implantable cardioverter defibrillators (ICDs), including the Visia AF and Evera MRI SureScan, which is paired with the reliable Sprint Quattro Secure lead, the only defibrillator lead with more than 12 years of proven performance with active monitoring.

- Implantable cardiac resynchronization therapy devices (CRT-Ds and CRT-Ps) including the Claria/Amplia/Compia family of MRI Quad CRT-D SureScan systems and the Percepta/Serena/Solara family of MRI Quad CRT-P SureScan systems. The Claria CRT-D MRI and Percepta CRT-P MRI devices feature EffectivCRT, which is an algorithm that verifies left ventricular pacing effectiveness and automatically tailors the therapy to individual patients, and the AdaptivCRT algorithm, which reduces a patient's odds of a 30-day heart failure readmission and has demonstrated a reduction in AF risk compared to echo-optimized biventricular pacing.

- AF ablation products including the Arctic Front Advance Cardiac Cryoballoon System, which includes the Arctic Front Advance ST Cryoablation Catheter, designed for pulmonary vein isolation in the treatment of patients with drug refractory paroxysmal AF and the second-generation Phased RF System, PVAC Gold, which uses duty cycled, phased radio frequency energy for the treatment of symptomatic paroxysmal persistent and long-standing persistent AF.

- Insertable cardiac monitor systems including the Reveal LINQ, which is used to record the heart's electrical activity before, during, and after transient symptoms such as syncope (i.e., fainting) and palpitations to assist in diagnosis.

- Mechanical circulatory support products including miniaturized implantable heart pumps, or ventricular assist devices, patient accessories and surgical tools to treat patients suffering from advanced heart failure.

- TYRX products including the Absorbable Antibacterial Envelope and the TYRX Neuro Absorbable Antibacterial Envelope, which are designed to stabilize electronic implantable devices and help prevent infection associated with implantable pacemakers, defibrillators, and spinal cord neurostimulators.

- Remote monitoring services and patient-centered software to enable efficient care coordination and specialized telehealth nurse support as well as services related to hospital operational efficiency.

Coronary & Structural Heart

Our Coronary & Structural Heart division includes therapies to treat coronary artery disease and heart valve disorders. Our products include coronary stents and related delivery systems, including a broad line of balloon angioplasty catheters, guide catheters, guide wires, diagnostic catheters, and accessories as well as products for the repair and replacement of heart valves, perfusion systems, positioning and stabilization systems for beating heart revascularization surgery, and surgical ablation products. Principal products and services offered include:

- CoreValve family of aortic valves, including our second-generation recapturable TCV system, CoreValve Evolut R, and our third-generation system, CoreValve Evolut PRO.

- Percutaneous Coronary Intervention stent products including our Resolute Integrity and Resolute Onyx drug-eluting stent systems.

- Surgical valve replacement and repair products for damaged or diseased heart valves, including both tissue and mechanical valves, blood-handling products that form a circulatory support system to maintain and monitor blood circulation and coagulation status, oxygen supply, and body temperature during arrested heart surgery, and surgical ablation systems and positioning and stabilization technologies.

Aortic & Peripheral Vascular

Our Aortic & Peripheral Vascular division is comprised of a comprehensive line of products and therapies to treat aortic disease (such as aneurysms, dissections, and transections) as well as peripheral vascular disease, and venous disease. Our products include endovascular stent graft systems, peripheral drug coated balloons, stent and angioplasty systems, and carotid embolic protection

systems for the treatment of vascular disease outside the heart, and products for superficial and deep venous disease. Principal products and services offered include:

- Endovascular stent grafts and accessories including the Endurant Abdominal Aortic Aneurysm Stent Graft System family of products, the Valiant Captivia Thoracic Aortic Aneurysm stent graft system, and the Heli-FX EndoAnchor System.

- Percutaneous angioplasty balloons including the IN.PACT family of drug-coated balloons, vascular stents, such as the Protégé and Everflex self-expanding stents and Visi-Pro balloon expandable stents, directional atherectomy products, such as the HawkOne plaque excision system, and other procedure support tools.

- Products to treat superficial venous diseases in the lower extremities including the ClosureFast RF ablation system and the VenaSeal medical adhesive closure system.

MINIMALLY INVASIVE THERAPIES GROUP

The Minimally Invasive Therapies Group is made up of the Surgical Innovations and Respiratory, Gastrointestinal, & Renal divisions. Products and therapies of this group are used primarily by hospitals, physicians' offices, ambulatory care centers, and other alternate site healthcare providers. While less frequent, some products and therapies are also used in home settings.

Surgical Innovations

Our Surgical Innovations division develops, manufactures, and markets advanced and general surgical products including surgical stapling devices, vessel sealing instruments, wound closure, electrosurgery products, hernia mechanical devices, mesh implants, and gynecology products and therapies to treat diseases and conditions that are typically, but not exclusively, addressed by surgeons. Principal products and services offered include:

- Advanced stapling products, including the Tri-Staple technology platform for endoscopic stapling, including the Endo GIA reloads and reinforced reloads with Tri-Staple Technology and the Endo GIA ultra universal stapler, the Signia and iDrive powered stapling systems, the LigaSure vessel sealing system with nano-coating, and the Sonicision cordless ultrasonic dissection system.

- Electrosurgical hardware and instruments, including the Valleylab FT10 energy platform, and the Force TriVerse electrosurgical pencil.

- Products designed for the treatment of hernias, including the AbsorbaTack absorbable mesh fixation device for hernia repair, the Symbotex composite mesh for surgical laparoscopic and open ventral hernia repair, and Parietex ProGrip, a self-gripping, biocompatible solution for inguinal hernias.

Respiratory, Gastrointestinal, & Renal

Our Respiratory, Gastrointestinal, & Renal division develops, manufactures, and markets products in the emerging fields of minimally invasive gastrointestinal diagnostics and therapies, respiratory monitoring, airway management and ventilation therapies, and for the treatment of renal disease. Principal products and services offered include:

- Gastrointestinal and endoscopy products, including the PillCam COLON, the Emprint ablation system with Thermosphere Technology, the HET Bipolar System, the Cool-tip radiofrequency ablation system, the Barrx platform with the Barrx 360 Express catheter, and the HALO ablation catheters for treatment of Barrett’s esophagus.

- Airway, ventilation, and inhalation therapies products, including the Puritan Bennett 980 ventilator, the Newport e360 and HT70 ventilators, the TaperGuard Evac tube, Shiley Endotracheal Tubes, Shiley Tracheostomy Tubes, and DAR Filters.

- Products focused on patient monitoring, including the Capnostream with Microstream technology capnography monitors, the Nellcor Bedside SpO2 patient monitoring system, the Bispectral Index (BIS) brain monitoring technology, and the INVOS Cerebral/Somatic Oximeter.

- Products providing solutions for the treatment of renal disease, including Palindrome, Mahurkar and Mahurkar Elite Dialysis Access Catheters for renal therapy, and other products designed for use in treatment of both acute and chronic renal failure conditions.

RESTORATIVE THERAPIES GROUP

The Restorative Therapies Group is made up of the Spine, Brain, Specialty Therapies and Pain Therapies divisions. The primary medical specialists who use the products of this group include spinal surgeons, neurosurgeons, neurologists, pain management specialists, anesthesiologists, orthopedic surgeons, urologists, colorectal surgeons, urogynecologists, interventional radiologists, and ear, nose, and throat specialists.

Spine

Our Spine division develops, manufactures, and markets a comprehensive line of medical devices and implants used in the treatment of the spine and musculoskeletal system. Our Spine division also provides biologic solutions for the orthopedic and dental markets and, in concert with our Neurosurgery business, offers unique and highly differentiated imaging, navigation, power instruments, nerve monitoring, and Mazor robotics integrated for our spine procedures. Principal products and services offered include:

- Products to treat a variety of conditions affecting the spine, including degenerative disc disease, spinal deformity, spinal tumors, fractures of the spine, and stenosis. These products include our CD HORIZON SOLERA and LEGACY Systems, and the CAPSTONE, CLYDESDALE, and ELEVATE interbody spacers.

- Products that facilitate less invasive thoracolumbar surgeries, including the CD HORIZON VOYAGER, SOLERA SEXTANT and LONGITUDE Percutaneous Fixation Systems.

- Products to treat conditions in the cervical region of the spine, including the ZEVO and ATLANTIS VISION ELITE Anterior Cervical Plate Systems, the VERTEX SELECT Reconstruction System, and the PRESTIGE and BRYAN Cervical Artificial Discs.

- Biologic solutions products, including our INFUSE Bone Graft (InductOs in the European Union (E.U.)), which contains a recombinant human bone morphogenetic protein, rhBMP-2, for certain spinal, trauma, and oral maxillofacial applications. Demineralized Bone Matrix products, including MagniFuse, Grafton/ Grafton Plus, and PROGENIX, and the MASTERGRAFT family of synthetic bone graft products - Matrix, Putty, and Granules.

Brain Therapies

Our Brain Therapies division develops, manufactures, and markets an integrated portfolio of devices and therapies for the treatment of neurological disorders and diseases, as well as surgical technologies designed to improve the precision and workflow of neuro procedures. Principal products and services offered include:

- Neurovascular products to treat diseases of the vasculature in and around the brain. This includes coils, neurovascular stents, and flow diversion products, as well as access and delivery products to support procedures. Products also include the Pipeline Flex Embolization Devices, endovascular treatments for large or giant wide-necked brain aneurysms, the portfolio of Solitaire revascularization devices for treatment of acute ischemic stroke, and a portfolio of access catheters.

- Brain modulation products, including those for the treatment of the disabling symptoms of Parkinson's disease, essential tremor, refractory epilepsy (outside the U.S.), severe, treatment-resistant obsessive compulsive disorder (approved under a Humanitarian Device Exemption (HDE) in the U.S.), and chronic, intractable primary dystonia (approved under a HDE in the U.S.). Specifically, this includes our family of Activa Neurostimulators, including Activa SC (single-channel primary cell battery), Activa PC (dual channel primary cell battery), and Activa RC (dual channel rechargeable battery).

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Neurosurgery products, including platform technologies and implant therapies. Our StealthStation S8 Navigation System and O-arm Imaging System are both platforms used in cranial, spinal, sinus, and orthopedic procedures. Our Midas Rex Surgical Drills are used in cranial, spinal, and orthopedic procedures. Our CSF Management Portfolio is used in treating hydrocephalus and other conditions impacting the intracranial pressure, and our Visualase MRI-guided laser ablation is used in cranial procedures. The Mazor X robotic guidance systems are used in robot-assisted spine procedures under an exclusive worldwide distributor agreement with Mazor Robotics.

Specialty Therapies

Our Specialty Therapies division develops, manufactures, and markets products and therapies to treat diseases of the ear, nose and throat (ENT), help control the systems of overactive bladder, (non-obstructive) urinary retention, and chronic fecal incontinence. Additionally, our Specialty Therapies division includes products in the emerging field of transformative solutions surgical incision technology, as well as the haemostatic sealing of soft tissue and bone. Principal products and services offered include:

- Pelvic health and gastric therapies products, including InterStim, a neurostimulator, to help control the systems of overactive bladder, (non-obstructive) urinary retention, and chronic fecal incontinence. Our percutaneous tibial

neuromodulation uses the NURO device for the treatment of overactive bladder and associated symptoms of urinary urge incontinence, urinary urgency, and urinary frequency. The Enterra gastric neurostimulator is approved as a humanitarian device and is used for the treatment of chronic, intractable nausea and vomiting due to gastroparesis.

- ENT products, including the Straightshot M5 Microdebrider Handpiece, the IPC system, NIM Nerve Monitoring Systems, ENT Navigation System, as well as products for hearing restoration and obstructive sleep apnea.

- Transformative solutions products, including our PEAK Surgery System and Aquamantys System. Our PEAK Surgery System is a tissue dissection system that consists of the PEAK PlasmaBlade and PULSAR Generator and is cleared for use in a variety of settings, including plastic reconstructive surgery, general surgery, and certain conditions of ENT. Our Aquamantys System uses patented transcollation technology to provide haemostatic sealing of soft tissue and bone and is cleared for use in a variety of surgical procedures, including orthopedic surgery, spine, solid organ resection and thoracic procedures.

Pain Therapies

Our Pain Therapies division develops, manufactures, and markets spinal cord stimulation systems, implantable drug infusion systems for chronic pain, as well as interventional products. Principal products and services offered include:

- Spinal cord stimulation products for chronic pain, including rechargeable and non-rechargeable devices and a large selection of leads used to treat chronic back and/or limb pain. This includes systems with SureScan MRI Technology and the Evolve workflow algorithm, including the Intellis (rechargeable) SureScan MRI. Products also include our RestoreSensor (rechargeable) SureScan MRI, with its proprietary AdaptiveStim technology.

- Implantable drug infusion systems, including our SynchroMed II Implantable Infusion System, that deliver small quantities of drug directly into the intrathecal space surrounding the spinal cord.

- Interventional products, including the Xpander II Balloon Kyphoplasty system, the Kyphon-V vertebroplasty system and the OsteoCool RF Tumor ablation system.

DIABETES GROUP

The Diabetes Group develops, manufactures, and markets products and services for the management of Type I and Type II diabetes. The primary medical specialists who use and/or prescribe our Diabetes products are endocrinologists and primary care physicians. Principal products and services offered include:

- Insulin pumps, including the MiniMed 670G system, featuring the first hybrid closed loop system in the world and the most advanced SmartGuard algorithm. The MiniMed 640G system, offered outside the U.S., is an integrated system with the Enhanced Enlite CGM sensor that features SmartGuard technology, which automatically suspends insulin delivery when sensor glucose levels are predicted to approach a low limit and then resumes insulin delivery once levels recover.

- Continuous glucose monitoring (CGM) systems, including the Guardian Connect standalone CGM system and the iPro2 professional CGM, is a product worn by patients to capture glucose data that is later uploaded in a physician's office to reveal glucose patterns and potential problems, such as hyperglycemic and hypoglycemic episodes.

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Therapy management software, including CareLink software for patients and for healthcare professionals, with advanced web technology to help patients and their health care providers control their diabetes and improve engagement.

OTHER FACTORS IMPACTING OUR OPERATIONS

Research and Development

The chart below illustrates our research and development (R&D) expense and R&D expense as a percentage of net sales during fiscal years 2018, 2017, and 2016:

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The markets in which we participate are subject to rapid technological advances. Constant improvement of existing products and introduction of new products are necessary to maintain market leadership. Our R&D efforts are directed toward maintaining or achieving technological leadership in each of the markets we serve in order to help ensure that patients using our devices and therapies receive the most advanced and effective treatment possible. We remain committed to developing technological enhancements and new indications for existing products, and less invasive and new technologies for new and emerging markets to address unmet patient needs. That commitment leads to our initiation and participation in many clinical trials each fiscal year as the demand for clinical and economic evidence remains high. Furthermore, our development activities are intended to help reduce patient care costs and the length of hospital stays in the future. We have not engaged in significant customer or government-sponsored research.

Our R&D activities include improving existing products and therapies, expanding their indications and applications for use, and developing new therapies and procedures. We continue to focus on optimizing innovation, improving our R&D productivity, driving growth in emerging markets, clinical evidence generation, and assessing our R&D programs based on their ability to deliver economic value to our customers.

Intellectual Property

We rely on a combination of patents, trademarks, tradenames, copyrights, trade secrets, and non-disclosure and non-competition agreements to establish and protect our proprietary technology. In addition, we have entered into exclusive and non-exclusive licenses relating to a wide array of third-party technologies. In the aggregate, these intellectual property assets and licenses are of material importance to our business; however, we believe that no single patent, technology, trademark, intellectual property asset or license is material in relation to any segment of our business or to our business as a whole.

We operate in an industry characterized by extensive patent litigation. Patent litigation may result in significant damage awards and injunctions that could prevent the manufacture and sale of affected products or result in significant royalty payments in order to continue selling the products. At any given time, we are involved as both a plaintiff and a defendant in a number of patent infringement actions, the outcomes of which may not be known for prolonged periods of time. For additional information, see Note 19 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Sales and Distribution

We sell most of our medical devices and therapies through direct sales representatives in the U.S. and a combination of direct sales representatives and independent distributors in markets outside the U.S. For certain portions of our business, we also sell through distributors in the U.S. Our medical supplies products are used primarily in hospitals, surgi-centers and alternate care facilities, such as home care and long-term care facilities, and are marketed to materials managers, GPOs and integrated delivery networks (IDNs) primarily through third-party distributors, although we also have direct sales representatives. We often negotiate with GPOs and IDNs, which enter into supply contracts for the benefit of their member facilities. Our four largest markets are the U.S., Western Europe, Japan, and China. Emerging markets are an area of increasing focus and opportunity, as we believe they remain under-penetrated.

Our marketing and sales strategy is focused on rapid, cost-effective delivery of high-quality products to a diverse group of customers worldwide. To achieve this objective, we organize our marketing and sales teams around physician specialties. This focus enables us to develop highly knowledgeable and dedicated sales representatives who are able to foster strong relationships with physicians and other customers and enhance our ability to cross-sell complementary products.

We are not dependent on any single customer for more than 10 percent of our total net sales.

Competition, Industry and Cost Containment

We compete in both the therapeutic and diagnostic medical markets in more than 150 countries throughout the world. These markets are characterized by rapid change resulting from technological advances and scientific discoveries. Our product lines face a mix of competitors ranging from large manufacturers with multiple business lines to small manufacturers offering a limited selection of products. In addition, we face competition from providers of other medical therapies, such as pharmaceutical companies.

Major shifts in industry market share have occurred in connection with product problems, physician advisories, safety alerts, and publications about our products, reflecting the importance of product quality, product efficacy and quality systems in the medical device industry. In the current environment of managed care, economically motivated customers, consolidation among health care providers, increased competition, and declining reimbursement rates, we have been increasingly required to compete on the basis of price. In order to continue to compete effectively, we must continue to create or acquire advanced technology, incorporate this technology into proprietary products, obtain regulatory approvals in a timely manner, maintain high-quality manufacturing processes, and successfully market these products.

Government and private sector initiatives to limit the growth of health care costs, including price regulation, competitive pricing, bidding and tender mechanics, coverage and payment policies, comparative effectiveness of therapies, technology assessments and managed-care arrangements are continuing in many countries where we do business, including the U.S. These changes put increased emphasis on the delivery of more cost-effective medical devices and therapies. Government programs, including Medicare and Medicaid, private health care insurance and managed-care plans have attempted to control costs by limiting the amount of reimbursement they will pay for particular procedures or treatments, tying reimbursement to outcomes, shifting to population health management, and other mechanisms. Hospitals, which purchase implants, are also seeking to reduce costs through a variety of mechanisms, including, for example, centralized purchasing, and in some cases, limiting the number of vendors that may participate in the purchasing program. Hospitals are also aligning interests with physicians through employment and other arrangements, such as gainsharing, where a hospital agrees with physicians to share any realized cost savings resulting from changes in practice patterns such as device standardization. This has created an increasing level of price sensitivity among customers for our products.

Worldwide Operations

Our global operations are accompanied by certain financial and other risks. Relationships with customers and effective terms of sale vary by country. Exchange rate fluctuations may affect revenues, earnings, and cash flows from operations. We use operational and economic hedges, as well as derivative contracts, to manage the impact of

currency exchange rate changes on earnings and cash flow. See “Item 7A. Quantitative and Qualitative Disclosures About Market Risk” and Note 9 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Net sales and property, plant, and equipment attributable to significant geographic areas are presented in Note 21 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Production and Availability of Raw Materials

We manufacture products at manufacturing facilities located in various countries throughout the world. We purchase many of the components and raw materials used in manufacturing our products from numerous suppliers in various countries. Certain components and raw materials are available only from a sole supplier. We work closely with our suppliers to help ensure continuity of supply while maintaining high quality and reliability. Generally, we have been able to obtain adequate supplies of such raw materials and components. However, due to the U.S. FDA's manufacturing requirements, we may not be able to quickly establish additional or replacement sources for certain components or materials if we experience a sudden or unexpected reduction or interruption in supply and are unable to develop alternative sources.

For additional information related to our manufacturing facilities refer to "Item 2. Properties" in this Annual Report on Form 10-K.

Quality Management and Product Liability

Our business success depends on the quality of our products, and we have global processes, procedures and programs, including our "Quality Begins with Me" program, that are intended to help us maintain the highest possible level of quality in all products. We operate in an industry susceptible to significant product liability claims. These claims may be brought by individuals seeking relief on their own behalf or purporting to represent a class.

Working Capital

Our goal is to carry sufficient levels of inventory to meet the product delivery needs of our customers. We also provide payment terms to customers in the normal course of business and rights to return product under warranty to meet the operational demands of our customers.

Employees

On April 27, 2018, we employed more than 86,000 full-time employees. Our employees are vital to our success. We believe we have been successful in attracting and retaining qualified personnel in a highly competitive labor market due to our competitive compensation and benefits and our rewarding work environment.

Seasonality

Worldwide sales do not reflect a significant degree of seasonality. However, the number of medical procedures incorporating Medtronic products is generally lower during summer months due to summer vacation schedules in the northern hemisphere, particularly in European countries.

Government Regulation

Our operations and products are subject to extensive regulation by numerous government agencies, including the U.S. FDA, European regulatory authorities such as the Medicines and Healthcare Products Regulatory Agency in the United Kingdom (U.K.) and the Federal Institute for Drugs and Medical Devices in Germany, the China Food and Drug Administration (CFDA), and other government agencies inside and outside the U.S. To varying degrees, each of these agencies requires us to comply with laws and regulations governing the development, testing, manufacturing, labeling, marketing, distribution and post-marketing surveillance of our products. Our business is also affected by patient privacy laws and government payer cost containment initiatives, as well as environmental health and safety laws and regulations.

Product Approval and Monitoring

Many countries where we sell medical devices subject such medical devices and technologies to their own approval and other regulatory requirements regarding performance, safety, and quality of our products. Authorization to

commercially distribute a new medical device in the U.S. is generally obtained in one of two ways. The first, known as pre-market notification or the 510(k) process, requires us to demonstrate that our new medical device is substantially equivalent to a legally marketed medical device. The second, more rigorous process, known as pre-market approval, requires us to independently demonstrate that a medical device is safe and effective for its intended use. This process is generally much more time-consuming and expensive than the 510(k) process.

In the E.U., a single regulatory approval process exists, and conformity with the legal requirements is represented by the CE Mark. To obtain a CE Mark, defined products must meet minimum standards of performance, safety, and quality (i.e., the essential requirements), and then, according to their classification, comply with one or more of a selection of conformity assessment routes. The competent authorities of the E.U. countries separately regulate the clinical research for medical devices and the market surveillance of products once they are placed on the market. A new Medical Device Regulation was published by the E.U. in 2017 which will impose significant additional premarket and postmarket requirements. The regulation has a three-year implementation

period to May 2020. After that time, medical devices marketed in the E.U. will require certification according to these new requirements, except that devices with valid CE certificates, issued pursuant to the Medical Device Directives before May 2020, can be placed on the market until May 2024.

The global regulatory environment is increasingly stringent and unpredictable. Several countries that did not have regulatory requirements for medical devices have established such requirements in recent years, and other countries have expanded, or plan to expand, their existing regulations. While harmonization of global regulations has been pursued, requirements continue to differ significantly among countries. We expect this global regulatory environment will continue to evolve, which could impact the cost, the time needed to approve, and ultimately, our ability to maintain existing approvals or obtain future approvals for our products. Regulations of the U.S. FDA and other regulatory agencies in and outside the U.S. impose extensive compliance and monitoring obligations on our business. These agencies review our design and manufacturing practices, labeling, record keeping, and manufacturers' required reports of adverse experiences and other information to identify potential problems with marketed medical devices. We are also subject to periodic inspections for compliance with applicable quality system regulations, which govern the methods used in, and the facilities and controls used for, the design, manufacture, packaging, and servicing of finished medical devices intended for human use. In addition, the U.S. FDA and other regulatory bodies, both in and outside the U.S. (including the Federal Trade Commission, the Office of the Inspector General of the Department of Health and Human Services, the U.S. Department of Justice, and various state Attorneys General), monitor the promotion and advertising of our products. Any adverse regulatory action, depending on its magnitude, may limit our ability to effectively market and sell our products, limit our ability to obtain future premarket approvals or result in a substantial modification to our business practices and operations. For additional information, see "Item 1A. Risk Factors" *We are subject to costly and complex laws and governmental regulations and any adverse regulatory action may materially adversely affect our financial condition and business operation*s.

In April 2015, we entered into a consent decree with the U.S. FDA relating to our Pain Therapies division's SynchroMed drug infusion system and the Neuromodulation quality system. The consent decree requires us to complete certain corrections and enhancements to the SynchroMed pump and the Neuromodulation quality system. The consent decree's limitations on our ability to manufacture and distribute the SynchroMed drug infusion system were lifted by the U.S. FDA in September 2017. Following the successful completion of the required third-party expert audits, and in coordination with the FDA, the consent decree will be vacated. The Company must undergo third-party audits and submit audit reports to the U.S. FDA through 2020.

In June 2016, TYRX received a Warning Letter from the U.S. FDA following an inspection at the TYRX facility in Monmouth Junction, New Jersey. The U.S. FDA completed its follow up inspection to the Warning Letter in March 2018 and issued a 483 with observations, although the U.S. FDA noted in its closing meeting that there had been significant improvements made since the prior inspection. We continue to make progress on our commitments and continuously report the progress to the U.S. FDA. In June 2014, HeartWare Inc. received a Warning Letter from the U.S. FDA following an inspection at the HeartWare facility in Miami Lakes, Florida. We acquired HeartWare in August 2016, and have been implementing actions and process improvements to address the items in the Warning Letter. Upon completing implementation of actions and process improvements to address the items in the Warning Letters and reinspection by the U.S. FDA, we expect that the TYRX and HeartWare Warning Letters will be lifted.

Trade Regulations

The movement of products, services, and investment across borders subject us to extensive trade regulations. A variety of laws and regulations in the countries in which we transact business apply to the sale, shipment and provision of goods, services and technology across borders. These laws and regulations govern, among other things, our import, export and other business activities. We are also subject to the risk that these laws and regulations could change in a way that would expose us to additional costs, penalties or liabilities. Some governments also impose economic sanctions against certain countries, persons or entities. In addition to our need to comply with such regulations in connection with our direct activities, we also sell and provide goods, technology and services to agents, representatives and distributors who may export such items to customers and end-users. If we, or the third parties through which we do business, are not in compliance with applicable import, export control or economic sanctions laws and regulations, we may be subject to civil or criminal enforcement action, and varying degrees of liability. Such actions may disrupt or delay sales of our products or services or result in restrictions on our distribution and sales of products or services that may materially impact our business.

Anti-Boycott Laws

Under U.S. laws and regulations, U.S. companies and their subsidiaries and affiliates outside the U.S. are prohibited from participating or agreeing to participate in unsanctioned foreign boycotts in connection with certain business activities, including the sale, purchase, transfer, shipping or financing of goods or services within the U.S. or between the U.S. and countries outside of the U.S. If we, or certain third parties through which we sell or provide goods or services, violate anti-boycott laws and regulations, we may be subject to civil or criminal enforcement action and varying degrees of liability.

Data Privacy and Security Laws and Regulations

As a business with a significant global footprint, compliance with evolving regulations and standards in data privacy and cybersecurity has resulted, and may continue to result, in increased costs, new compliance challenges, and the threat of increased regulatory enforcement activity. Our business relies on the secure electronic transmission, storage and hosting of sensitive information, including personal information, protected health information, financial information, intellectual property and other sensitive information related to our customers and workforce.

For example, in the U.S., the collection, maintenance, protection, use, transmission, disclosure and disposal of certain personal information and the security of medical devices are regulated at the U.S. federal and state, international and industry levels. U.S. federal and state laws protect the confidentiality of certain patient health information, including patient medical records, and restrict the use and disclosure of patient health information by health care providers. Privacy and Security Rules under the Health Insurance Portability and Accountability Act of 1996 (HIPAA), as amended, and the Health Information Technology for Economic and Clinical Health Act of 2009 (HITECH), govern the use, disclosure, and security of protected health information by "Covered Entities," (which are health care providers that submit electronic claims, health plans, and health care clearinghouses) and by their "Business Associates" (which is anyone that performs a service on behalf of a Covered Entity involving the use or disclosure of protected health information and is not a member of the Covered Entity's workforce). Rules under HIPAA and HITECH include specific security standards and breach notification requirements. The U.S. Department of Health and Human Services (HHS) (through the Office of Civil Rights) has direct enforcement authority against Covered Entities and Business Associates with regard to both the Security and Privacy Rules, including civil and criminal liability. With the exception of certain of its operations in its Diabetes and care management services businesses, Medtronic is generally not a Covered Entity. Medtronic also operates as a Business Associate to Covered Entities in a limited number of instances. There are comparable state laws governing the use and protection of personal health information by health care providers, and Medtronic may be subject to these laws in certain of its businesses.

In addition to the regulation of personal health information, a number of states have also adopted laws and regulations that may affect our privacy and data security practices for other kinds of personally identifiable information, such as state laws that govern the use, disclosure and protection of sensitive personal information, such as social security numbers, or that are designed to protect credit card account data. State consumer protection laws may also establish privacy and security standards for use and management of personally identifiable information, including information related to consumers and care providers.

Outside the U.S., we are impacted by the privacy and data security requirements at the international, national and regional level, and on an industry specific basis. We serve customers in more than 150 countries. Legal requirements in these countries relating to the collection, storage, handling and transfer of personal data and potentially intellectual property continue to evolve with increasingly strict enforcement regimes. More privacy and security laws and regulations are being adopted, and more are being enforced, with potential for significant financial penalties. In the E.U., increasingly stringent data protection and privacy rules that will have substantial impact on the use of patient data across the healthcare industry became effective in May 2018. The new E.U. General Data Protection Regulation (GDPR) applies uniformly across the E.U. and includes, among other things, a requirement for prompt notice of data breaches to data subjects and supervisory authorities in certain circumstances and significant fines for non-compliance. The GDPR also requires companies processing personal data of individuals residing in the E.U. to comply with E.U. privacy and data protection rules.

Because the laws and regulations continue to expand, differ from jurisdiction to jurisdiction, and are subject to evolving (and at times inconsistent) governmental interpretation, compliance with these laws and regulations may require significant additional cost expenditures or changes in products or business that increase competition or reduce revenue. Noncompliance could result in the imposition of fines, penalties, or orders to stop noncompliant activities.

Regulations Governing Reimbursement

The delivery of our devices is subject to regulation by HHS and comparable state and non-U.S. agencies responsible for reimbursement and regulation of health care items and services. U.S. laws and regulations are imposed primarily in connection with the Medicare and Medicaid programs, as well as the government's interest in regulating the

quality and cost of health care. Other governments also impose regulations in connection with their health care reimbursement programs and the delivery of health care items and services.

U.S. federal health care laws apply when we or customers submit claims for items or services that are reimbursed under Medicare, Medicaid, or other federally-funded health care programs, including laws related to kickbacks, false claims, self-referrals and health care fraud. There are often similar state false claims, anti-kickback, and anti-self-referral and insurance laws that apply to state-funded Medicaid and other health care programs and private third-party payers. In some circumstances, insurance companies can attempt to bring a private cause of action against a manufacturer for a pattern of causing false claims to be filed under the federal Racketeer Influenced and Corrupt Organizations Act, or RICO. In addition, as a manufacturer of U.S. FDA-approved

devices reimbursable by federal healthcare programs, we are subject to the Physician Payments Sunshine Act, which requires us to annually report certain payments and other transfers of value we make to U.S.-licensed physicians or U.S. teaching hospitals. Any failure to comply with these laws and regulations could subject us or our officers and employees to criminal and civil financial penalties.

Implementation of further legislative or administrative reforms to reimbursement systems, or adverse decisions relating to our products by administrators of these systems in coverage or reimbursement, could significantly reduce reimbursement or result in the denial of coverage, which could have an impact on the acceptance of and demand for our products and the prices that our customers are willing to pay for them. Further, as a result of the Patient Protection and Affordable Care Act (the "ACA"), the U.S. is implementing value-based payment methodologies and seeking to create alternate payment models, such as bundled payments, to continue to drive improved value.

Environmental Health and Safety Laws

We are also subject to various environmental health and safety laws and regulations both within and outside the U.S. Like other companies in our industry, our manufacturing and other operations involve the use and transportation of substances regulated under environmental health and safety laws including those related to the transportation of hazardous materials.

Available Information

We maintain a website at www.medtronic.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (Exchange Act) are made available under the "About Medtronic - Investors" caption and "Financial Information - SEC Filings" subcaption of our website free of charge as soon as reasonably practicable after we electronically file them with, or furnish them to, the Securities and Exchange Commission (SEC).

Information relating to our corporate governance, including our Principles of Corporate Governance, Code of Conduct (including our Code of Ethics for Senior Financial Officers), Code of Business Conduct and Ethics for Members of the Board of Directors, and information concerning our executive officers, directors and Board committees (including committee charters) is available through our website at www.medtronic.com under the "About Medtronic - Corporate Governance" caption. Information relating to transactions in Medtronic securities by directors and officers is available through our website at www.medtronic.com under the "About Medtronic - Investors" caption and the "Financial Information - SEC Filings" subcaption.

The information listed above may also be obtained upon request from the Medtronic Investor Relations Department, 710 Medtronic Parkway, Minneapolis, MN 55432 USA.

Our website and the information contained on or connected to our website are not incorporated by reference into this Form 10-K.

The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers, including the Company, that file electronically with the SEC. The public may obtain any documents that we file with the SEC at http://www.sec.gov. We file annual reports, quarterly reports, proxy statements, and other documents with the SEC under the Exchange Act. The public may read and copy any materials that we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 800-SEC-0330.

Item 1A. Risk Factors

Investing in our securities involves a variety of risks and uncertainties, known and unknown, including, among others, those discussed below. Each of the following risks should be carefully considered, together with all the other information included in this Annual Report on Form 10-K, including our consolidated financial statements and the related notes and in our other filings with the SEC. Furthermore, additional risks and uncertainty not presently known

to us or that we currently believe to be immaterial may also adversely affect our business. Our business, financial condition, operating results, cash flow and prospects could be materially and adversely affected by any of these risks or uncertainties.

Risks Relating to the Company

We operate in a highly competitive industry and we may be unable to compete effectively.

We compete in both the therapeutic and diagnostic medical markets in more than 150 countries throughout the world. These markets are characterized by rapid change resulting from technological advances and scientific discoveries. In the product lines in which we compete, we face a range of competitors from large companies with multiple business lines to small, specialized manufacturers that offer a limited selection of niche products. Development by other companies of new or improved products, processes, technologies, or the introduction of reprocessed products or generic versions when our proprietary products lose their patent protection may make our existing or planned products less competitive. In addition, we face competition from providers of alternative medical therapies, such as pharmaceutical companies.

We believe our ability to compete depends upon many factors both within and beyond our control, including:

- product performance and reliability,
- product technology and innovation,
- product quality and safety,
- breadth of product lines,
- product support services,
- customer support,
- cost-effectiveness and price, and
- reimbursement approval from health care insurance providers.

Competition may increase as additional companies enter our markets or modify their existing products to compete directly with ours. In addition, academic institutions, governmental agencies and other public and private research organizations also may conduct research, seek patent protection and establish collaborative arrangements for discovery, research, clinical development and marketing of products similar to ours. These companies and institutions compete with us in recruiting and retaining qualified scientific and management personnel, as well as in acquiring necessary product technologies. From time to time we have lost, and may in the future lose, market share in connection with product problems, physician advisories, safety alerts and publications about our products, which highlights the importance of product quality, product efficacy and quality systems to our business. In the current environment of managed care, consolidation among health care providers, increased competition, and declining reimbursement rates, we have been increasingly required to compete on the basis of price. Further, our continued growth and success depend on our ability to develop, acquire and market new and differentiated products, technologies and intellectual property, and as a result we also face competition for marketing, distribution, and collaborative development agreements, establishing relationships with academic and research institutions and licenses to intellectual property. In order to continue to compete effectively, we must continue to create, invest in or acquire advanced technology, incorporate this technology into our proprietary products, obtain regulatory approvals in a timely manner, and manufacture and successfully market our products. Given these factors, we cannot guarantee that we will be able to compete effectively or continue our level of success.

Reduction or interruption in supply or other manufacturing difficulties may adversely affect our manufacturing operations and related product sales.

The manufacture of our products requires the timely delivery of sufficient amount of quality components and materials and is highly exacting and complex, due in part to strict regulatory requirements. We manufacture the majority of our products at numerous manufacturing facilities worldwide. We purchase many of the components and raw materials used in manufacturing these products from numerous suppliers in various countries. We have generally been able to obtain adequate supplies of such raw materials and components. However, for reasons of quality assurance, cost effectiveness, or availability, certain components and raw materials used in our products are obtained from a sole supplier. Although we work closely with our suppliers to try to ensure continuity of supply while maintaining high quality and reliability, the supply of these components and raw materials may be interrupted or

insufficient. In addition, due to the stringent regulations and requirements of regulatory agencies, including the U.S. FDA, regarding the manufacture of our products, we may not be able to quickly establish additional or replacement sources. Furthermore, the prices of commodities and other materials used in our products, which are often volatile and outside of our control, could adversely impact our supply. We use resins, other petroleum-based materials and pulp as raw materials in some of our products, and the prices of oil and gas also significantly affect our costs for freight and utilities. A reduction or interruption in supply, and an inability to develop alternative sources for such supply, could adversely affect our ability to manufacture our products in a timely or cost-effective manner and could result in lost sales.

Other disruptions in the manufacturing process or product sales and fulfillment systems for any reason, including equipment malfunction, failure to follow specific protocols and procedures, defective raw materials, natural disasters such as hurricanes, tornadoes or wildfires, and other environmental factors, could lead to launch delays, product shortage, unanticipated costs, lost revenues and damage to our reputation. For example, in June 2017 we experienced a global information technology systems

interruption that affected our customer ordering, distribution, and manufacturing processes. Furthermore, any failure to identify and address manufacturing problems prior to the release of products to our customers could result in quality or safety issues.

In addition, several of our key products are manufactured at a particular manufacturing facility, with limited alternate facilities. If an event occurs that results in damage to one or more of such facilities, such as the damage caused by Hurricane Maria in Puerto Rico in September 2017, we may be unable to manufacture the relevant products at the previous levels or at all. Because of the time required to approve and license a manufacturing facility, a third-party manufacturer may not be available on a timely basis to replace production capacity in the event manufacturing capacity is lost.

We are subject to costly and complex laws and governmental regulations and any adverse regulatory action may materially adversely affect our financial condition and business operations.

Our medical devices and technologies, as well as our business activities, are subject to a complex set of regulations and rigorous enforcement, including by the U.S. FDA, U.S. Department of Justice, Health and Human Services-Office of the Inspector General, and numerous other federal, state, and non-U.S. governmental authorities. To varying degrees, each of these agencies requires us to comply with laws and regulations governing the development, testing, manufacturing, labeling, marketing and distribution of our products. As a part of the regulatory process of obtaining marketing clearance for new products and new indications for existing products, we conduct and participate in numerous clinical trials with a variety of study designs, patient populations, and trial endpoints. Unfavorable or inconsistent clinical data from existing or future clinical trials or the market's or U.S. FDA's perception of this clinical data, may adversely impact our ability to obtain product approvals, our position in, and share of, the markets in which we participate, and our business, financial condition, results of operations and cash flows. We cannot guarantee that we will be able to obtain or maintain marketing clearance for our new products or enhancements or modifications to existing products, and the failure to maintain approvals or obtain approval or clearance could have a material adverse effect on our business, results of operations, financial condition and cash flows. Even if we are able to obtain approval or clearance, it may:

- take a significant amount of time,
- require the expenditure of substantial resources,
- involve stringent clinical and pre-clinical testing, as well as increased post-market surveillance,
- involve modifications, repairs or replacements of our products, and
- limit the proposed uses of our products.

Both before and after a product is commercially released, we have ongoing responsibilities under U.S. FDA and other applicable non-U.S. government agency regulations. For instance, many of our facilities and procedures and those of our suppliers are also subject to periodic inspections by the U.S. FDA to determine compliance with applicable regulations. The results of these inspections can include inspectional observations on U.S. FDA's Form-483, warning letters, or other forms of enforcement. If the U.S. FDA were to conclude that we are not in compliance with applicable laws or regulations, or that any of our medical products are ineffective or pose an unreasonable health risk, the U.S. FDA could ban such medical products, detain or seize adulterated or misbranded medical products, order a recall, repair, replacement, or refund of such products, refuse to grant pending pre-market approval applications or require certificates of non-U.S governments for exports, and/or require us to notify health professionals and others that the devices present unreasonable risks of substantial harm to the public health. The U.S. FDA and other non-U.S. government agencies may also assess civil or criminal penalties against us, our officers or employees and impose operating restrictions on a company-wide basis. The U.S. FDA may also recommend prosecution to the U.S. Department of Justice. Any adverse regulatory action, depending on its magnitude, may restrict us from effectively marketing and selling our products and limit our ability to obtain future pre-market clearances or approvals, and could result in a substantial modification to our business practices and operations. Furthermore, we occasionally receive subpoenas or other requests for information from state and federal governmental agencies, and while these investigations typically relate primarily to financial arrangements with health care providers, regulatory compliance and product promotional practices, we cannot predict the timing, outcome or impact of any such investigations. Any adverse outcome in one or more of these investigations could include the

commencement of civil and/or criminal proceedings, substantial fines, penalties, and/or administrative remedies, including exclusion from government reimbursement programs and/or entry into Corporate Integrity Agreements (CIAs) with governmental agencies. In addition, resolution of any of these matters could involve the imposition of additional, costly compliance obligations. These potential consequences, as well as any adverse outcome from government investigations, could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

In addition, the U.S. FDA has taken the position that device manufacturers are prohibited from promoting their products other than for the uses and indications set forth in the approved product labeling, and any failure to comply could subject us to significant civil or criminal exposure, administrative obligations and costs, and/or other potential penalties from, and/or agreements with, the federal government.

Governmental regulations outside the U.S. have, and may continue to, become increasingly stringent and common. In the European Union, for example, a new Medical Device Regulation was published in 2017 which, when it enters into full force in 2020, will

include significant additional premarket and post-market requirements. Penalties for regulatory non-compliance could be severe, including fines and revocation or suspension of a company's business license, mandatory price reductions and criminal sanctions. Future laws and regulations may have a material adverse effect on us.

Our failure to comply with laws and regulations relating to reimbursement of health care goods and services may subject us to penalties and adversely impact our reputation, business, results of operations, financial condition and cash flows.

Our devices, products and therapies are purchased principally by hospitals or physicians that typically bill various third-party payers, such as governmental programs (e.g., Medicare, Medicaid and comparable non-U.S. programs), private insurance plans and managed care plans, for the healthcare services provided to their patients. The ability of our customers to obtain appropriate reimbursement for products and services from third-party payers is critical because it affects which products customers purchase and the prices they are willing to pay. As a result, our devices, products and therapies are subject to regulation regarding quality and cost by HHS, including the Centers for Medicare & Medicaid Services (CMS), as well as comparable state and non-U.S. agencies responsible for reimbursement and regulation of health care goods and services, including laws and regulations related to kickbacks, false claims, self-referrals and health care fraud. Many states have similar laws that apply to reimbursement by state Medicaid and other funded programs as well as in some cases to all payers. In certain circumstances, insurance companies can attempt to bring a private cause of action against a manufacturer for causing a false claim to be filed under the federal Racketeer Influenced and Corrupt Organizations Act. In addition, as a manufacturer of U.S. FDA-approved devices reimbursable by federal healthcare programs, we are subject to the Physician Payments Sunshine Act, which requires us to annually report certain payments and other transfers of value we make to U.S.-licensed physicians or U.S. teaching hospitals. Any failure to comply with these laws and regulations could subject us or our officers and employees to criminal and civil financial penalties.

We are also subject to risks relating to changes in government and private medical reimbursement programs and policies, and changes in legal regulatory requirements in the U.S. and around the world. Implementation of further legislative or administrative reforms to these reimbursement systems, or adverse decisions relating to coverage of or reimbursement for our products by administrators of these systems, could have an impact on the acceptance of and demand for our products and the prices that our customers are willing to pay for them.

We are substantially dependent on patent and other proprietary rights and failing to protect such rights or to be successful in litigation related to our rights or the rights of others may result in our payment of significant monetary damages and/or royalty payments, negatively impact our ability to sell current or future products, or prohibit us from enforcing our patent and other proprietary rights against others.

We are substantially dependent on patent and other proprietary rights and rely on a combination of patents, trade secrets, and non-disclosure and non-competition agreements to protect our proprietary intellectual property. We also operate in an industry characterized by extensive patent litigation. Patent litigation can result in significant damage awards and injunctions that could prevent our manufacture and sale of affected products or require us to pay significant royalties in order to continue to manufacture or sell affected products. At any given time, we are generally involved as both a plaintiff and a defendant in a number of patent infringement actions, the outcomes of which may not be known for prolonged periods of time. While it is not possible to predict the outcome of patent litigation, it is possible that the results of such litigation could require us to pay significant monetary damages and/or royalty payments, negatively impact our ability to sell current or future products, or prohibit us from enforcing our patent and proprietary rights against others, any of which could have a material adverse impact on our business, results of operations, financial condition, and cash flows.

While we intend to defend against any threats to our intellectual property, our patents, trade secrets or other agreements may not adequately protect our intellectual property. Further, pending patent applications may not result in patents being issued to us, patents issued to or licensed by us may be challenged or circumvented by competitors and such patents may be found invalid, unenforceable or insufficiently broad to protect our technology or provide us with any competitive advantage. Third parties could obtain patents that may require us to negotiate licenses to conduct our business, and these licenses may not be available on reasonable terms or at all. We also rely on non-disclosure and non-competition agreements with certain employees, consultants and other parties to protect, in part, trade secrets and other proprietary rights. We cannot be certain that these agreements will not be breached, that we

will have adequate remedies for any breach, that others will not independently develop substantially equivalent proprietary information, or that third parties will not otherwise gain access to our trade secrets or proprietary knowledge.

In addition, the laws of certain countries in which we market some of our products do not protect our intellectual property rights to the same extent as the laws of the U.S., which could make it easier for competitors to capture market position in those countries. Competitors also may harm our sales by designing products that mirror the capabilities of our products or technology without infringing our intellectual property rights. If we are unable to protect our intellectual property in these countries, it could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

Quality problems and product liability claims could lead to recalls or safety alerts, reputational harm, adverse verdicts or costly settlements, and could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Quality is extremely important to us and our customers due to the serious and costly consequences of product failure, and our business exposes us to potential product liability risks that are inherent in the design, manufacture, and marketing of medical devices. In addition, many of our products are often used in intensive care settings with seriously ill patients and some of the medical devices we manufacture and sell are designed to be implanted in the human body for long periods of time or indefinitely. Component failures, manufacturing defects, design flaws, off-label use, or inadequate disclosure of product-related risks or product-related information with respect to our products could result in an unsafe condition or injury to, or death of, a patient. These problems could lead to recall of, or issuance of a safety alert relating to, our products, and could result in product liability claims and lawsuits, including class actions, which could ultimately result, in certain cases, in the removal from the body of such products and claims regarding costs associated therewith. Due to the strong name recognition of the Medtronic and Covidien brands, a material adverse event involving one of our products could result in reduced market acceptance and demand for all products within that brand, and could harm our reputation and ability to market products in the future.

Strong product quality is critical to the success of our goods and services. If we fail to meet these standards and our products are the subject of recalls or safety alerts, our reputation could be damaged, we could lose customers and our revenue and results of operations could decline. Our success also can depend on our ability to manufacture to exact specification precision-engineered components, subassemblies and finished devices from multiple materials. If our components fail to meet these standards or fail to adapt to evolving standards, our reputation, competitive advantage and market share could be harmed. In certain situations, we may undertake a voluntary recall of products or temporarily shut down production lines based on performance relative to our own internal safety and quality monitoring and testing data.

Any of the foregoing problems, including future product liability claims or recalls, regardless of their ultimate outcome, could harm our reputation and have a material adverse effect on our business, results of operations, financial condition and cash flows.

Our research and development efforts rely upon investments and investment collaborations, and we cannot guarantee that any previous or future investments or investment collaborations will be successful.

Our mission is to provide a broad range of therapies to restore patients to fuller, healthier lives, which requires a wide variety of technologies, products and capabilities. The rapid pace of technological development in the medical industry and the specialized expertise required in different areas of medicine make it difficult for one company alone to develop a broad portfolio of technological solutions. In addition to internally generated growth through our research and development efforts, historically we have relied, and expect to continue to rely, upon investments and investment collaborations to provide us access to new technologies both in areas served by our existing businesses as well as in new areas.

We expect to make future investments where we believe that we can stimulate the development or acquisition of new technologies and products to further our strategic objectives and strengthen our existing businesses. Investments and investment collaborations in and with medical technology companies are inherently risky, and we cannot guarantee that any of our previous or future investments or investment collaborations will be successful or will not materially adversely affect our business, results of operations, financial condition and cash flows.

Health care policy changes may have a material adverse effect on us.

In response to perceived increases in health care costs in recent years, there have been and continue to be proposals by the federal government, state governments, regulators and third-party payers to control these costs and, more generally, to reform the health care system, including U.S. health care reform legislation. Certain of these proposals could, among other things, limit the prices we are able to charge for our products or the amounts of reimbursement available for our products and could limit the acceptance and availability of our products. The adoption of some or

all of these proposals could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Our insurance program may not be adequate to cover future losses.

We have elected to self-insure most of our insurable risks across the Company, and we made this decision based on cost and availability factors in the insurance marketplace. We manage and maintain a portion of our self-insured program through a wholly-owned captive insurance company. We continue to maintain a directors and officers liability insurance policy with a third-party insurer that provides coverage for the directors and officers of the Company. We continue to monitor the insurance marketplace to evaluate the value of obtaining insurance coverage for other categories of losses in the future. Although we believe, based on historical loss trends, that our self-insurance program accruals and our existing insurance coverage will be adequate to cover future losses, historical trends may not be indicative of future losses. The absence of third-party insurance coverage for other categories of losses increases our exposure to unanticipated claims and these losses could have a material adverse impact on our business, results of operations, financial condition and cash flows.

If we experience decreasing prices for our goods and services and we are unable to reduce our expenses, there may be a material adverse effect on our business, results of operations, financial condition and cash flows.

We have experienced, and may continue to experience, decreasing prices for our goods and services due to pricing pressure from managed care organizations and other third-party payers on our customers, increased market power of our customers as the medical device industry consolidates and increased competition among medical engineering and manufacturing services providers. If the prices for our goods and services decrease and we are unable to reduce our expenses, our business, results of operations, financial condition and cash flows will be adversely affected.

We are subject to a variety of risks associated with global operations that could adversely affect our profitability and operating results.

We develop, manufacture, distribute and sell our products globally. Operations in countries outside of the U.S. are accompanied by certain risks. We intend to continue to expand our operations and to pursue growth opportunities outside the U.S., especially in emerging markets, which could expose us to additional and greater risks. Our profitability and global operations are, and will continue to be, subject to a number of risks and potential costs, including:

- fluctuations in currency exchange rates,
- healthcare reform legislation,
- the need to comply with different regulatory regimes worldwide that are subject to change and that could restrict our ability to manufacture and sell our products,
- local product preferences and product requirements,
- longer-term receivables than are typical in the U.S.,
- trade protection measures, tariffs and other border taxes, and import or export licensing requirements,
- less intellectual property protection in some countries outside the U.S. than exists in the U.S.,
- different labor regulations and workforce instability,
- political and economic instability,
- the expiration and non-renewal of foreign tax rulings and/or grants,
- potentially negative consequences from changes in or interpretations of tax laws, and
- economic instability and inflation, recession or interest rate fluctuations.

On June 23, 2016, the U.K. held a referendum in which voters approved an exit from the E.U., commonly referred to as “Brexit”. As a result of the referendum, it is expected that the British government will begin negotiating the terms of the U.K.’s future relationship with the E.U. Although it is unknown what those terms will be, it is possible that there will be greater restrictions on imports and exports between the U.K. and E.U. countries and increased regulatory complexities. Similarly, from time to time proposals are made in the U.S. to significantly change existing trade agreements and relationships between the U.S. and other countries, although we cannot currently predict whether or how these changes will be implemented. Changes to trade policy may adversely affect our business, results of operations, financial condition and cash flows.

In addition, a significant amount of our trade receivables are with national health care systems in many countries. Repayment of these receivables is dependent upon the political and financial stability of those countries. In light of these global economic fluctuations, we continue to monitor the creditworthiness of customers. Failure to receive payment of all or a significant portion of these receivables could adversely affect our business, results of operations, financial condition and cash flows.

Finally, changes in currency exchange rates may impact the reported value of our revenues, expenses, and cash flows. We cannot predict changes in currency exchange rates, the impact of exchange rate changes, nor the degree to which we will be able to manage the impact of currency exchange rate changes.

The failure to comply with anti-bribery laws could materially adversely affect our business and result in civil and/ or criminal sanctions.

The U.S. Foreign Corrupt Practices Act (FCPA) and similar anti-bribery laws in non-U.S. jurisdictions generally prohibit companies and their intermediaries from making improper payments to non-U.S. government officials for the purpose of obtaining or retaining business. Because of the predominance of government-administered healthcare systems in many jurisdictions around the world, many of our customer relationships outside of the U.S. are with governmental entities and are therefore potentially subject to such laws. We also participate in public-private partnerships and other commercial and policy arrangements with governments around the globe.

Global enforcement of anti-corruption laws has increased substantially in recent years, with more frequent voluntary self-disclosures by companies, aggressive investigations and enforcement proceedings by U.S. and non-U.S. governmental agencies, and assessment of significant fines and penalties against companies and individuals. Our international operations create the risk of unauthorized payments or offers of payments by one of our employees, consultants, sales agents, or distributors. It is our policy

to implement safeguards to educate our employees and agents on these legal requirements and prohibit improper practices. However, existing safeguards and any future improvements may not always be effective, and our employees, consultants, sales agents or distributors may engage in conduct for which we could be held responsible. In addition, the government may seek to hold us liable for FCPA violations committed by companies in which we invest or that we acquire. Any alleged or actual violations of these regulations may subject us to government scrutiny, criminal or civil sanctions and other liabilities, including exclusion from government contracting, and could disrupt our business, adversely affect our reputation and result in a material adverse effect on our business, results of operations, financial condition and cash flows.

Laws and regulations governing international business operations could adversely impact our business.

The U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC), and the Bureau of Industry and Security at the U.S. Department of Commerce (BIS), administer certain laws and regulations that restrict U.S. persons and, in some instances, non-U.S. persons, in conducting activities, transacting business with or making investments in certain countries, governments, entities and individuals subject to U.S. economic sanctions. Our international operations subject us to these laws and regulations, which are complex, restrict our business dealings with certain countries and individuals, and are constantly changing. Further restrictions may be enacted, amended, enforced or interpreted in a manner that materially impacts our operations.

From time to time, certain of our subsidiaries have limited business dealings in countries subject to comprehensive sanctions, including Iran, Sudan, Syria, Cuba and the region of Crimea. Certain of our subsidiaries sell medical devices, and may provide related services, to distributors and other purchasing bodies in such countries. These business dealings represent an insignificant amount of our consolidated revenues and income, but expose us to a heightened risk of violating applicable sanctions regulations. Violations of these regulations are punishable by civil penalties, including fines, denial of export privileges, injunctions, asset seizures, debarment from government contracts and revocations or restrictions of licenses, as well as criminal fines and imprisonment. We have established policies and procedures designed to assist with our compliance with such laws and regulations. However, there can be no assurance that our policies and procedures will prevent us from violating these regulations in every transaction in which we may engage, and such a violation could adversely affect our reputation, business, financial condition, results of operations and cash flows.

Consolidation in the health care industry could have an adverse effect on our revenues and results of operations.

Many health care industry companies, including health care systems, distributors, manufacturers, providers, and insurers, are consolidating or have formed strategic alliances. As the health care industry consolidates, competition to provide goods and services to industry participants will become more intense. Further, this consolidation creates larger enterprises with greater negotiating power, which they can use to negotiate price concessions. If we must reduce our prices because of industry consolidation, or if we lose customers as a result of consolidation, our business, financial condition, results of operations and cash flows could be adversely affected.

Health care industry cost-containment measures could result in reduced sales of our medical devices and medical device components.

Most of our customers, and the health care providers to whom our customers supply medical devices, rely on third-party payers, including government programs and private health insurance plans, to reimburse some or all of the cost of the procedures in which medical devices that incorporate components we manufacture or assemble are used. The continuing efforts of governmental authorities, insurance companies and other payers of health care costs to contain or reduce these costs could lead to patients being unable to obtain approval for payment from these third-party payers. If third-party payer payment approval cannot be obtained by patients, sales of finished medical devices that include our components may decline significantly and our customers may reduce or eliminate purchases of our components. The cost-containment measures that health care providers are instituting, both in the U.S. and outside of the U.S., could harm our ability to operate profitably. For example, managed care organizations have successfully negotiated volume discounts for pharmaceuticals, and GPOs and IDNs have also concentrated purchasing decisions for some customers, which has led to downward pricing pressure for medical device companies, including us.

We are subject to environmental laws and regulations and the risk of environmental liabilities, violations and litigation.

We are subject to numerous U.S. federal, state, local and non-U.S. environmental, health and safety laws and regulations concerning, among other things, the health and safety of our employees, the generation, storage, use and transportation of hazardous materials, emissions or discharges of substances into the environment, investigation and remediation of hazardous substances or materials at various sites, chemical constituents in medical products and end-of-life disposal and take-back programs for medical devices. Our operations involve the use of substances subject to these laws and regulations, primarily those used in manufacturing and sterilization processes. If we violate these environmental laws and regulations, we could be fined, criminally charged or otherwise sanctioned. Furthermore, environmental laws outside of the U.S. are becoming more stringent, resulting in increased costs and compliance burdens.

In addition, certain environmental laws assess liability on current or previous owners or operators of real property for the costs of investigation, removal or remediation of hazardous substances or materials at their properties or at properties which they have disposed of hazardous substances. In addition to cleanup actions brought by governmental authorities, private parties could bring personal injury or other claims due to the presence of, or exposure to, hazardous substances. The ultimate cost of site cleanup and timing of future cash outflows is difficult to predict, given the uncertainties regarding the extent of the required cleanup, the interpretation of applicable laws and regulations, and alternative cleanup methods.

The costs of complying with current or future environmental protection and health and safety laws and regulations, or liabilities arising from past or future releases of, or exposures to, hazardous substances, may exceed our estimates, or have a material adverse effect on our business, results of operations, financial condition, and cash flows.

The continuing development of many of our products depends upon us maintaining strong relationships with health care professionals.

If we fail to maintain our working relationships with health care professionals, many of our products may not be developed and marketed in line with the needs and expectations of the professionals who use and support our products, which could cause a decline in our earnings and profitability. The research, development, marketing and sales of many of our new and improved products depends on our maintaining working relationships with health care professionals. We rely on these professionals to provide us with considerable knowledge and experience regarding the development, marketing and sale of our products. Physicians assist us as researchers, marketing and product consultants, inventors and public speakers. If we are unable to maintain strong relationships with these professionals, the development and marketing of our products could suffer, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We rely on the proper function, security and availability of our information technology systems and data to operate our business, and a breach, cyber-attack or other disruption to these systems or data could materially and adversely affect our business, results of operations, financial condition, cash flows, reputation or competitive position.

We are increasingly dependent on sophisticated information technology systems to operate our business, including to process, transmit and store sensitive data, and many of our products and services include integrated software and information technology that collects data regarding patients or connects to our systems. Like other large multi-national corporations, we could experience, and in the past have experienced, attempted or actual interference with the integrity of, and interruptions in, our technology systems, as well as data breaches, such as cyber-attacks, malicious intrusions, breakdowns, interference with the integrity of our products and data or other significant disruptions. Furthermore, we rely on third-party vendors to supply and/or support certain aspects of our information technology systems. These third-party systems could also become vulnerable to cyber-attack, malicious intrusions, breakdowns, interference or other significant disruptions, and may contain defects in design or manufacture or other problems that could result in system disruption or compromise the information security of our own systems. In addition, we continue to grow in part through new business acquisitions and, as a result, may face risks associated with defects and vulnerabilities in their systems, or difficulties or other breakdowns or disruptions in connection with the integration of the acquisitions into our information technology systems.

Our worldwide operations mean that we are subject to laws and regulations, including data protection and cybersecurity laws and regulations, in many jurisdictions. The variety of U.S. and international privacy and cybersecurity laws and regulations impacting our operations are described in “Item 1. Business" - *Other Factors Impacting Our Operations - Data Privacy and Cybersecurity Laws and Regulations*. For example, in the E.U. the Data Protection Directive requires us to manage individually identifiable information in the E.U., and the new General Data Protection Regulation may impose fines of up to four percent of our global revenue in the event of violations occurring after its implementation in May 2018. Furthermore, there has been a developing trend of civil lawsuits and class actions relating to breaches of consumer data held by large companies or incidents arising from other cyber-attacks. Any data security breaches, cyber-attacks, malicious intrusions or significant disruptions could result in actions by regulatory bodies and/or civil litigation, any of which could materially and adversely affect our business, results of operations, financial condition, cash flows, reputation or competitive position.

In addition, our information technology systems require an ongoing commitment of significant resources to maintain, protect, and enhance existing systems and develop new systems to keep pace with continuing changes in information processing technology, evolving legal and regulatory standards, the increasing need to protect patient and customer information, changes in the techniques used to obtain unauthorized access to data and information systems, and the information technology needs associated with our changing products and services. There can be no assurance that our process of consolidating, protecting, upgrading and expanding our systems and capabilities, continuing to build security into the design of our products, and developing new systems to keep pace with continuing changes in information processing technology will be successful or that additional systems issues will not arise in the future.

If our information technology systems, products or services or sensitive data are compromised, patients or employees could be exposed to financial or medical identity theft or suffer a loss of product functionality, and we could lose existing customers, have difficulty attracting new customers, have difficulty preventing, detecting, and controlling fraud, be exposed to the loss or misuse of confidential information, have disputes with customers, physicians, and other health care professionals, suffer regulatory sanctions or penalties under federal laws, state laws, or the laws of other jurisdictions, experience increases in operating expenses or an impairment in our ability to conduct our operations, incur expenses or lose revenues as a result of a data privacy breach, product failure, information technology outages or disruptions, or suffer other adverse consequences including lawsuits or other legal action and damage to our reputation.

Our substantial leverage and debt service obligations could adversely affect our business.

At April 27, 2018, we had approximately $2.1 billion of current debt obligations and $23.7 billion of long-term debt outstanding. We may also incur additional indebtedness in the future. Our substantial indebtedness could have adverse consequences, including:

- making it more difficult for us to satisfy our financial obligations,
- increasing our vulnerability to adverse economic, regulatory and industry conditions, and placing us at a disadvantage compared to our competitors that are less leveraged,
- limiting our ability to compete and our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate,
- limiting our ability to borrow additional funds for working capital, capital expenditures, acquisitions and general corporate or other purposes, and
- exposing us to greater interest rate risk since the interest rate on borrowings under our floating rate notes and revolving credit facility is variable.

Our debt service obligations require us to use a portion of our operating cash flow to pay interest and principal on indebtedness instead of for other corporate purposes, including funding future expansion of our business, acquisitions, and ongoing capital expenditures, which could impede our growth. If our operating cash flow and capital resources are insufficient to service our debt obligations, we may be forced to sell assets, seek additional equity or debt financing or restructure our debt, which could harm our long-term business prospects. Our failure to comply with the terms of our revolving credit facility and other indebtedness could result in an event of default which, if not cured or waived, could result in the acceleration of all of our debt.

Failure to integrate acquired businesses into our operations successfully could adversely affect our business.

As part of our strategy to develop and identify new products and technologies, we have made several significant acquisitions in recent years, and may make additional acquisitions in the future. Our integration of the operations of acquired businesses requires significant efforts, including the coordination of information technologies, research and development, sales and marketing, operations, manufacturing, and finance. These efforts result in additional expenses and involve significant amounts of management's time that cannot then be dedicated to other projects. Our failure to manage and coordinate the growth of acquired companies successfully could also have an adverse impact on our business. In addition, we cannot be certain that the businesses we acquire will become profitable or remain so. Factors that will affect the success of our acquisitions include:

- the presence or absence of adequate internal controls and/or significant fraud in the financial systems of acquired companies,
- our ability or inability to integrate information technology systems of acquired companies in a secure and reliable manner,
- adverse developments arising out of investigations by governmental entities of the business practices of acquired companies, including potential FCPA liability,
-

any decrease in customer loyalty and product orders caused by dissatisfaction with the combined companies' product lines and sales and marketing practices, including price increases,

- our ability to retain key employees, and
- the ability to achieve synergies among acquired companies, such as increasing sales of the integrated company's products, achieving cost savings, and effectively combining technologies to develop new products.

We also could experience negative effects on our business, financial condition, results of operations and cash flows from acquisition-related charges, amortization of intangible assets and asset impairment charges. These effects, individually or in the aggregate, could cause a deterioration of our credit rating and result in increased borrowing costs and interest expense.

Changes in tax laws or exposure to additional income tax liabilities could have a material impact on our business, results of operations, financial condition and cash flows.

We are subject to income taxes, as well as non-income based taxes, in the U.S., Ireland, and various other jurisdictions in which we operate. The tax laws in the U.S., Ireland and other countries in which we and our affiliates do business could change on a prospective or retroactive basis, and any such changes could materially adversely affect our business and our effective tax rate. For example, on December 22, 2017, the U.S. enacted comprehensive tax legislation, commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"), which resulted in a significant charge to tax expense during our quarter ending January 2018 associated with the U.S. taxation of accumulated foreign earnings as well as the requirement to revalue U.S. deferred tax assets and liabilities resulting from the reduction in the U.S. corporate tax rate.

Certain elements of the Tax Act impact fiscal year 2018 while other portions of the legislation are not effective until future fiscal years. The U.S. Treasury has issued additional guidance subsequent to the enactment of the Tax Act, and we expect ongoing guidance to be provided which could change the impact on our tax reserves. We made reasonable estimates of the effect of the Tax Act and recorded provisional amounts in the financial statements for fiscal year 2018. Additional guidance, as well as future changes to these rules, may result in adjustments to these estimates which could materially affect our financial results.

In 2013, the Organization for Economic Cooperation and Development (OECD) published an action plan called Base Erosion and Profit Shifting (BEPS) with a view to tackling perceived tax abuse and inconsistency between taxing authorities and their approach to International tax matters. The final BEPS Action report was published in October 2015 and subsequently many taxing authorities have adopted the guidelines provided within their local laws. The EU expanded upon these guidelines with Anti-Tax Avoidance Directives (ATAD) to be applied by its member states. We continue to monitor any and all changes to local country legislation resulting from this guidance. One specific change is a requirement for increased disclosures of financial information on a local and global basis. This information could lead to disagreements between jurisdictions associated with the proper allocation of profits between such jurisdictions.

We are subject to ongoing tax audits in the various jurisdictions in which we operate. Tax authorities may disagree with certain positions we have taken and assess additional taxes. We regularly assess the likely outcomes of these audits in order to determine the appropriateness of our tax provision. However, there can be no assurance that we will accurately predict the outcomes of these audits, and the actual outcomes of these audits could have a material impact on our business, financial condition, results of operations, and cash flows.

We have recorded reserves for potential payments of tax to various tax authorities related to uncertain tax positions. However, the calculation of such tax liabilities involves the application of complex tax regulations in many jurisdictions. Therefore, any dispute with a tax authority may result in a payment that is significantly different from current estimates. If payment of these amounts ultimately proves to be less than the recorded amounts, the reversal of the liabilities generally would result in tax benefits being recognized in the period when we determine the liabilities are no longer necessary. If our estimate of tax liabilities proves to be less than the amount for which it is ultimately liable, we would incur additional charges, and such charges could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

The Medtronic, Inc. tax court proceeding outcome could have a material adverse impact on our financial condition.

In March 2009, the IRS issued its audit report for Medtronic Inc. for fiscal years 2005 and 2006. Medtronic, Inc. reached agreements 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 our key manufacturing sites. An adverse outcome in this matter could materially and adversely affect our business, financial condition, results of operations and cash flows. See Note 19 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Future potential changes to the U.S. tax laws could result in us being treated as a U.S. corporation for U.S. federal tax purposes, and the IRS may not agree with the conclusion that we should be treated as a foreign corporation for U.S federal income tax purposes.

Because Medtronic plc is organized under the laws of Ireland, we would generally be classified as a foreign corporation under the general rule that a corporation is considered tax resident in the jurisdiction of its organization or incorporation for U.S. federal income tax purposes. Even so, the IRS may assert that we should be treated as a U.S. corporation (and, therefore, a U.S. tax resident) for U.S. federal income tax purposes pursuant to Section 7874 of the U.S. Internal Revenue Code of 1986, as amended (the Code).

Under Section 7874 of the Code, if Medtronic Inc.'s shareholders immediately prior to the Covidien transaction held 80% or more of the vote or value of our shares by reason of holding stock in Medtronic, Inc. immediately after the transaction (the ownership

test), and our expanded affiliated group after the transaction did not have substantial business activities in Ireland relative to its worldwide activities (the substantial business activities test), we would have been treated as a U.S. corporation for U.S. federal income tax purposes. Based on the rules for determining share ownership under Section 7874 of the Code, Medtronic, Inc.'s shareholders received approximately 70% of our ordinary shares (by both vote and value) by reason of holding stock in Medtronic, Inc. Therefore, under current law, we should not be treated as a U.S. corporation for U.S. federal income tax purposes. However, there is limited guidance regarding the application of Section 7874, including the application of the ownership test. If we were to be treated as a U.S. corporation for federal tax purposes, we could be subject to substantially greater U.S. tax liability than currently contemplated as a non-U.S. corporation.

Legislative or other governmental action relating to the denial of U.S. federal or state governmental contracts to U.S. companies that redomicile abroad could adversely affect our business.

Various U.S. federal and state legislative proposals that would deny governmental contracts to U.S. companies that move their corporate location abroad may affect us. We are unable to predict the likelihood that, or final form in which, any such proposed legislation might become law, the nature of the regulations that may be promulgated under any future legislative enactments, or the effect such enactments and increased regulatory scrutiny may have on our business.

Risks Relating to Our Jurisdiction of Incorporation

We are incorporated in Ireland, and Irish law differs from the laws in effect in the U.S. and may afford less protection to holders of our securities.

Our shareholders may have more difficulty protecting their interests than would shareholders of a corporation incorporated in a jurisdiction of the United States. It may not be possible to enforce court judgments obtained in the U.S. against us in Ireland based on the civil liability provisions of the U.S. federal or state securities laws. In addition, there is some uncertainty as to whether the courts of Ireland would recognize or enforce judgments of U.S. courts obtained against us or our directors or officers based on the civil liabilities provisions of the U.S. federal or state securities laws or hear actions against us or those persons based on those laws. We have been advised that the U.S. currently does not have a treaty with Ireland providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters. Therefore, a final judgment for the payment of money rendered by any U.S. federal or state court based on civil liability, whether or not based solely on U.S. federal or state securities laws, would not automatically be enforceable in Ireland.

As an Irish company, we are governed by the Irish Companies Act 2014, which differs in some material respects from laws generally applicable to U.S. corporations and shareholders, including, among others, differences relating to interested director and officer transactions and shareholder lawsuits. Likewise, the duties of directors and officers of an Irish company generally are owed to the company only. Shareholders of Irish companies generally do not have a personal right of action against directors or officers of the company and may exercise such rights of action on behalf of the company only in limited circumstances. Accordingly, holders of our securities may have more difficulty protecting their interests than would holders of securities of a corporation incorporated in the U.S.

As an Irish public limited company, certain capital structure decisions require shareholder approval, which may limit Medtronic's flexibility to manage its capital structure.

Under Irish law, our authorized share capital can be increased by an ordinary resolution of our shareholders and the directors may issue new ordinary or preferred shares up to a maximum amount equal to the authorized but unissued share capital, without shareholder approval, once authorized to do so by our articles of association or by an ordinary resolution of our shareholders. Additionally, subject to specified exceptions, Irish law grants statutory preemption rights to existing shareholders where shares are being issued for cash consideration but allows shareholders to disapply such statutory preemption rights either in our articles of association or by way of special resolution. Such disapplication can either be generally applicable or be in respect of a particular allotment of shares. Accordingly, our articles of association contain, as permitted by Irish company law, provisions authorizing the board to issue new shares, and to disapply statutory preemption rights. The authorization of the directors to issue shares and the disapplication of statutory preemption rights must both be renewed by the shareholders at least every five years, and

we cannot provide any assurance that these authorizations will always be approved, which could limit our ability to issue equity and thereby adversely affect the holders of our securities.

A transfer of our shares, other than ones effected by means of the transfer of book-entry interests in the Depository Trust Company, may be subject to Irish stamp duty.

Transfers of our shares effected by means of the transfer of book entry interests in the Depository Trust Company (DTC) will not be subject to Irish stamp duty. However, if a shareholder holds our shares directly rather than beneficially through DTC, any transfer of shares could be subject to Irish stamp duty (currently at the rate of 1% of the higher of the price paid or the market

value of the shares acquired). Payment of Irish stamp duty is generally a legal obligation of the transferee. The potential for stamp duty could adversely affect the price of shares.

In certain limited circumstances, dividends we pay may be subject to Irish dividend withholding tax and dividends received by Irish residents and certain other shareholders may be subject to Irish income tax.

In certain limited circumstances, dividend withholding tax (currently at a rate of 20%) may arise in respect of dividends paid on our shares. A number of exemptions from dividend withholding tax exist such that shareholders resident in the U.S. and other specified countries may be entitled to exemptions from dividend withholding tax.

Shareholders resident in the U.S. that hold their shares through DTC will not be subject to dividend withholding tax, provided the addresses of the beneficial owners of such shares in the records of the brokers holding such shares are recorded as being in the U.S. (and such brokers have further transmitted the relevant information to a qualifying intermediary appointed by us). However, other shareholders may be subject to dividend withholding tax, which could adversely affect the price of their shares.

Shareholders entitled to an exemption from Irish dividend withholding tax on dividends received from us will not be subject to Irish income tax in respect of those dividends unless they have some connection with Ireland other than their shareholding in our Company (for example, they are resident in Ireland). Shareholders who receive dividends subject to Irish dividend withholding tax generally have no further liability to Irish income tax on those dividends.

Our shares received by means of a gift or inheritance could be subject to Irish capital acquisitions tax.

Irish capital acquisitions tax (CAT) could apply to a gift or inheritance of our shares irrespective of the place of residence, ordinary residence or domicile of the parties. This is because our shares will be regarded as property situated in Ireland. The person who receives the gift or inheritance has primary liability for CAT. Gifts and inheritances passing between spouses are exempt from CAT. Children have a tax-free threshold which Irish Revenue typically updates annually in respect of taxable gifts or inheritances received from their parents.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Medtronic's principal executive office is located in Dublin, Ireland and is leased by the Company, while its main operational offices are located in the Minneapolis, Minnesota metropolitan area and are owned by the Company.

The Company's total manufacturing and research space is approximately 10 million square feet. Approximately 36 percent of the manufacturing and research facilities are owned by Medtronic and the balance is leased. The following is a summary of the Company's largest manufacturing and research facilities by location:

Location Country or State	Square Feet (in thousands)
Connecticut	1,098
China	985
Minnesota	969
Puerto Rico	831
Mexico	762
California	495
Italy	454
Ireland	446
Texas	431
Dominican Republic	304
Arizona	294
Switzerland	283
Colorado	276

Medtronic also maintains sales and administrative offices in the U.S. at 12 locations in 10 states and outside the U.S. at 168 locations in 70 countries. Most of these locations are leased. The Company is using substantially all of its currently available productive space to develop, manufacture, and market products. The Company's facilities are well-maintained, suitable for their respective uses, and adequate for current needs.

Item 3. Legal Proceedings

A discussion of the Company’s legal proceedings is contained in Note 19 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Medtronic's Common Equity, Related Shareholder Matters, and Issuer Purchases of Equity Securities

The Company's ordinary shares are listed on the New York Stock Exchange under the symbol "MDT."

The following table provides information about the shares repurchased by the Company during the fourth quarter of fiscal year 2018:

Fiscal Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as a Part of Publicly Announced Program	Maximum Approximate Dollar Value of Shares that may yet be Purchased Under the Program
1/27/2018 - 2/23/2018	232,323	$ 86.09	232,323	$ 4,166,826,968
2/24/2018 - 3/30/2018	1,007,445	79.58	1,007,445	4,086,673,551
3/31/2018 - 4/27/2018	1,270,691	78.70	1,270,691	3,986,698,992
Total	2,510,459	$ 79.74	2,510,459	$ 3,986,698,992

In June 2015, the Company's Board of Directors authorized, subject to the ongoing existence of sufficient distributable reserves, the repurchase of 80 million of the Company's ordinary shares. As authorized by the Board of Directors, the Company's share repurchase program expires when the total number of authorized shares have been repurchased. This repurchase authorization was replaced in June 2017 with the repurchase authorization described below. As such, the maximum number of shares that may yet be purchased under the June 2015 share repurchase program is no longer applicable to the repurchase program in place.

In June 2017, the Company's Board of Directors authorized the repurchase of $5.0 billion of the Company's ordinary shares. This authorization replaces the June 2015 authorization described above. There is no specific time-period associated with this repurchase authorization.

On June 20, 2018, there were approximately 29,965 shareholders of record of the Company's ordinary shares. Ordinary cash dividends declared and paid totaled 46.0 cents per share for each quarter of fiscal year 2018 and 43.0 cents per share for each quarter of fiscal year 2017. The following prices are the high and low market sales quotations per share of the Company's ordinary shares for the fiscal years and quarters indicated:

Fiscal Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2018 High	$ 89.72	$ 85.07	$ 87.93	$ 87.30
2018 Low	81.50	76.52	77.06	76.41
2017 High	89.27	88.65	85.09	84.00
2017 Low	78.63	80.71	69.35	74.27

Stock Performance Graph

The following graph compares the cumulative total shareholder return on Medtronic's ordinary shares with the cumulative total shareholder return on the Standard & Poor's (S&P) 500 Index and the S&P 500 Health Care Equipment Index for the last five fiscal years. The graph assumes that $100 was invested at market close on April 26, 2013 in Medtronic's ordinary shares, the S&P 500 Index, and the S&P 500 Health Care Equipment Index and that all dividends were reinvested.

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Company/Index	April 2013	April 2014	April 2015	April 2016	April 2017	April 2018
Medtronic, Inc. / Medtronic plc	$ 100.00	$ 128.10	$ 173.85	$ 180.96	$ 194.03	$ 194.16
S&P 500 Index	100.00	120.27	139.48	139.05	163.96	187.24
S&P 500 Health Care Equipment Index	100.00	119.09	156.85	166.19	194.71	234.34

For information on the Company's equity compensation plans, see "Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters" in this Annual Report on Form 10-K.

Irish Restrictions on Import and Export of Capital

Except as indicated below, there are no restrictions on non-residents of Ireland dealing in Irish domestic securities, which includes ordinary shares of Irish companies. Except as indicated below, dividends and redemption proceeds also continue to be freely transferable to non-resident holders of such securities. The Financial Transfers Act, 1992, provides that the Irish Minister for Finance can make provision for the restriction of financial transfers between Ireland and other countries. For the purposes of this Act, "financial transfers" include all transfers which would be movements of capital or payments within the meaning of the treaties governing the EU if they had been made between Member States of the EU. This Act has been used by the Minister for Finance to implement European Council Directives, which provide for the restriction of financial transfers to certain countries, organizations and people including the Al-Qaeda network and the Taliban, Afghanistan, Belarus, Burma (Myanmar), Democratic People's Republic of Korea, Democratic Republic of Congo, Egypt, Eritrea, Iran, Iraq, Ivory Coast, Lebanon, Liberia, Libya, Republic of Guinea, Somalia, Sudan, Syria, Tunisia and Ukraine.

Any transfer of, or payment in respect of, a share or interest in a share involving the government of any country that is currently the subject of United Nations sanctions, any person or body controlled by any of the foregoing, or by any person acting on behalf of the foregoing, may be subject to restrictions pursuant to such sanctions as implemented into Irish law.

Irish Taxes Applicable to U.S. Holders

Dividends paid by Medtronic will generally be subject to Irish dividend withholding tax at the standard rate of income tax (currently 20 percent) unless an exemption applies.

Dividends paid to U.S. residents will not be subject to Irish dividend withholding tax provided that:

- in the case of a beneficial owner of Medtronic shares held in the Depository Trust Company (DTC), the address of the beneficial owner in the records of his or her broker is in the United States and this information is provided by the broker to the Company's qualifying intermediary; or

- in the case of a record owner, the record owner has provided to the Company's transfer agent a valid U.S Certification of Residence (Form 6166) or valid Irish Non-Resident Form V2.

Irish income tax may also arise with respect to dividends paid on Medtronic's ordinary shares. A U.S. resident who meets one of the exemptions from dividend withholding tax described above and who does not hold Medtronic shares through a branch or agency in Ireland through which a trade is carried on generally will not have any Irish income tax liability on a dividend paid by Medtronic. In addition, if a U.S. shareholder is subject to the dividend withholding tax, the withholding payment discharges any Irish income tax liability, provided the shareholder furnishes to the Irish Revenue authorities a statement of the dividend withholding tax imposed.

While the U.S./Ireland Double Tax Treaty contains provisions regarding withholding, due to the wide scope of the exemptions from dividend withholding tax available under Irish domestic law, it would generally be unnecessary for a U.S. resident shareholder to rely on the treaty provisions.

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Item 6. Selected Financial Data

Our fiscal year-end is the last Friday in April, and therefore, the total weeks in a fiscal year fluctuates between 52 and 53 weeks. Fiscal years 2018, 2017, 2015, and 2014 were 52-week years. Fiscal year 2016 was a 53-week year, with the additional week occurring in the first quarter. The table below illustrates operating results and other selected financial data for fiscal years 2014 to 2018:

	Fiscal Year				
(in millions, except per share data and additional information)	2018	2017	2016	2015[1]	2014
Operating Results:					
Net sales	$ 29,953	$ 29,710	$ 28,833	$ 20,261	$ 17,005
Cost of products sold	9,055	9,291	9,142	6,309	4,333
Research and development expense	2,253	2,193	2,224	1,640	1,477
Selling, general, and administrative expense	9,974	9,711	9,469	6,904	5,847
Amortization of intangible assets	1,823	1,980	1,931	733	349
Restructuring charges, net	30	363	290	237	78
Acquisition-related items	104	220	283	550	117
Certain litigation charges	61	300	26	42	770
Divestiture-related items	114	—	—	—	—
Gain on sale of businesses	(697)	—	—	—	—
Special charge (gain), net	80	100	—	(38)	40
Other expense, net	505	222	107	118	181
Operating profit	6,651	5,330	5,361	3,766	3,813
Operating profit margin percent	22.2%	17.9%	18.6%	18.6%	22.4%
Investment loss	227	—	70	—	—
Interest expense, net	749	728	955	280	108
Income before income taxes	5,675	4,602	4,336	3,486	3,705
Income tax provision	2,580	578	798	811	640
Net income	3,095	4,024	3,538	2,675	3,065
Net loss attributable to noncontrolling interests	9	4	—	—	—
Net income attributable to Medtronic	$ 3,104	$ 4,028	$ 3,538	$ 2,675	$ 3,065
Per Ordinary Share:					
Basic - Net income attributable to Medtronic	$ 2.29	$ 2.92	$ 2.51	$ 2.44	$ 3.06
Diluted - Net income attributable to Medtronic	2.27	2.89	2.48	2.41	3.02
Cash dividends declared per ordinary share	1.84	1.72	1.52	1.22	1.12
Financial Position at Fiscal Year-end:					
Working capital[2]	$ 12,896	$ 10,272	$ 16,391	$ 21,627	$ 15,607
Current ratio[2][3]	2.3:1.0	1.7:1.0	3.3:1.0	3.3:1.0	3.8:1.0
Total assets[2]	91,393	99,857	99,685	106,726	37,984
Long-term debt	23,699	25,921	30,109	33,752	10,315
Shareholders' equity[2]	50,720	50,208	51,977	53,144	19,357
Additional Information:					
Full-time employees at year-end	86,368	91,267	88,063	85,573	43,305
Full-time equivalent employees at year-end	98,003	102,688	98,017	92,500	49,247

(1)

Covidien plc was acquired on January 26, 2015. As such, for the fiscal year ended April 24, 2015, the results of operations of Covidien are reflected in Medtronic's results of operations for only the fourth quarter due to the timing of the acquisition, which affects comparability.

(2) Amounts and ratios have been immaterially revised as necessary for prior periods, as discussed in Note 1 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

(3) The ratio of current assets to current liabilities. The current ratio at April 28, 2017 excludes current assets and current liabilities held for sale.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis provides information management believes to be relevant to understanding the financial condition and results of operations of the Company. You should read this discussion and analysis along with our consolidated financial statements and related notes thereto at April 27, 2018 and April 28, 2017 and for each of the three fiscal years ended April 27, 2018 (fiscal year 2018), April 28, 2017 (fiscal year 2017), and April 29, 2016 (fiscal year 2016), which are presented within "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K. Our fiscal year-end is the last Friday in April, and therefore, the total weeks in a fiscal year fluctuates between 52 and 53 weeks. Fiscal years 2018 and 2017 were 52-week years. Fiscal year 2016 was a 53-week year, with the additional week occurring in the first quarter.

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 generally accepted accounting principles in the 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 diluted earnings per share for fiscal years 2018, 2017, and 2016:

	Fiscal Year			Percent Change	
(in millions, except per share data)	2018	2017	2016	2018	2017
Net income attributable to Medtronic	$ 3,104	$ 4,028	$ 3,538	(23) %	14 %

Diluted earnings per share	$ 2.27	$ 2.89	$ 2.48	(21%)	17%

Diluted earnings per share (EPS) for fiscal year 2018 as compared to fiscal year 2017 was unfavorably affected by the net $2.4 billion tax charge related to the enactment of U.S. comprehensive tax legislation, commonly referred to as the Tax Cuts and Jobs Act (the Tax Act), which had a significant effect on the income tax provision in fiscal year 2018. Further, diluted EPS for fiscal year 2018 was unfavorably affected by an investment loss related to the impairment of certain cost and equity method investments of $227 million, along with impairments of IPR&D of $68 million. Additionally, for fiscal year 2018, diluted EPS was unfavorably affected by the July 29, 2017 sale of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses within the Minimally Invasive Therapies Group. Net sales of these businesses for fiscal years 2018 and 2017 were $0.6 billion and $2.4

billion, respectively. For fiscal year 2018, diluted EPS was partially offset by a $697 million gain on the sale of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses.

Diluted EPS for fiscal year 2017 as compared to 2016 was favorably affected by the recognition of certain tax adjustments of $417 million, including a charge of $442 million in fiscal year 2016 primarily related to the U.S. income tax expense resulting from our completion of an internal reorganization of the ownership of certain legacy Covidien businesses that reduced the cash and investments held by our U.S. controlled non-U.S. subsidiaries, partially offset by a benefit related to the establishment of a deferred tax asset on the tax basis in excess of book basis of a wholly owned U.S. subsidiary of which we disposed. Further, diluted EPS was also affected by a $226 million charge in fiscal year 2016 related to the recognition of the fair value step-up of acquired Covidien inventory.

GAAP to Non-GAAP Reconciliations The tables below present reconciliations of our Non-GAAP financial measures to the most directly comparable financial measures prepared in accordance with U.S. GAAP for fiscal years 2018, 2017, and 2016:

	Fiscal year ended April 27, 2018				
(in millions, except per share data)	Income before income taxes	Income tax provision (benefit)	Net income attributable to Medtronic	Diluted EPS [1]	Effective tax rate
GAAP	$ 5,675	$ 2,580	$ 3,104	$ 2.27	45.5 %
Non-GAAP Adjustments:					
Restructuring and associated costs [2]	107	20	87	0.06	18.7
Acquisition-related items	132	42	90	0.07	31.8
Debt redemption premium [3]	38	12	26	0.02	31.6
Divestiture-related items [4]	115	12	103	0.08	10.4
Certain litigation charges	61	8	53	0.04	13.1
Investment loss [5]	227	(1)	228	0.17	(0.4)
IPR&D impairment	46	5	41	0.03	10.9
Gain on sale of businesses [6]	(697)	—	(697)	(0.51)	—
Hurricane Maria [7]	34	1	33	0.02	2.9
Special charge [8]	80	26	54	0.04	32.5
Amortization of intangible assets	1,823	322	1,501	1.10	17.7
Certain tax adjustments, net [9]	—	(1,907)	1,907	1.39	—
Non-GAAP	$ 7,641	$ 1,120	$ 6,530	$ 4.77	14.7 %

	Fiscal year ended April 28, 2017				
(in millions, except per share data)	Income before income taxes	Income tax provision (benefit)	Net income attributable to Medtronic	Diluted EPS [1]	Effective tax rate
GAAP	$ 4,602	$ 578	$ 4,028	$ 2.89	12.6 %
Non-GAAP Adjustments:					
Restructuring charges, net	373	101	272	0.20	27.1
Acquisition-related items	230	74	156	0.11	32.2
Certain litigation charges	300	110	190	0.14	36.7
Special charge [8]	100	37	63	0.05	37.0
Impact of inventory step-up [10]	38	14	24	0.02	36.8
Amortization of intangible assets	1,980	520	1,460	1.05	26.3
Certain tax adjustments, net [11]	—	(202)	202	0.15	—
Non-GAAP	$ 7,623	$ 1,232	$ 6,395	$ 4.60	16.2 %

(in millions, except per share data)	Fiscal year ended April 29, 2016				
	Income before income taxes	Income tax provision (benefit)	Net income attributable to Medtronic	Diluted EPS [1]	Effective tax rate
GAAP	$ 4,336	$ 798	$ 3,538	$ 2.48	18.4%
Non-GAAP Adjustments:					
Restructuring charges, net	299	78	221	0.15	26.1
Acquisition-related items	283	71	212	0.15	25.1
Debt tender premium	183	65	118	0.08	35.5
Certain litigation charges	26	9	17	0.01	34.6
Investment loss [12]	70	26	44	0.03	37.1
Impact of inventory step-up [13]	226	61	165	0.12	27.0
Loss on previously held forward starting interest rate swaps	45	16	29	0.02	35.6
Amortization of intangible assets	1,931	464	1,467	1.03	24.0
Certain tax adjustments, net [14]	—	(417)	417	0.29	—
Non-GAAP	$ 7,399	$ 1,171	$ 6,228	$ 4.37	15.8%

(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 charge, included within *interest expense, net* in our consolidated statements of income, was recognized in connection with the early redemption of approximately $1.2 billion of Medtronic Inc. senior notes.

(4) The transaction expenses incurred in connection with the divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses.

(5) The charge was recognized in connection with the impairment of certain cost and equity method investments.

(6) The gain on the divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses.

(7) The charges represent idle facility costs, asset write-downs, and humanitarian efforts related to Hurricane Maria.

(8) The charge represents a contribution to the Medtronic Foundation.

(9) The net charge primarily relates to the impact of U.S. tax reform, inclusive of the transition tax, remeasurement of deferred tax assets and liabilities, and the decrease in the U.S. statutory tax rate. Additionally, the net charge includes the impacts from the divestiture of our Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses, and the tax cost associated with an internal reorganization, which were partially offset by the tax effects from the intercompany sale of intellectual property.

(10) The charge represents the amortization of step-up in fair value of inventory acquired in connection with the HeartWare acquisition.

(11) The net charge primarily relates to the tax effect from the recognition of the outside basis of certain subsidiaries which were included in the divestiture of our Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses completed during the second quarter of fiscal year 2018, along with certain tax charges recorded in connection with the redemption of an intercompany minority interest, and the resolution of various tax matters from prior periods.

(12) The charge represents the impairment of a debt investment.

(13) The charge represents the amortization of step-up in fair value of inventory acquired in connection with the Covidien acquisition.

(14) The net charge primarily relates to U.S. income tax expense resulting from our completion of an internal reorganization of the ownership of certain legacy Covidien businesses that reduced the cash and investments held by Medtronic's U.S.-controlled non-U.S. subsidiaries, partially offset by a benefit related to the establishment of a deferred tax asset on the tax basis in excess of book basis of a wholly owned U.S. subsidiary of which we disposed.

NET SALES

Segment and Division

The table below illustrates net sales by segment and division for fiscal years 2018, 2017, and 2016:

	Net Sales by Fiscal Year			Percent Change	
(in millions)	2018	2017	2016	2018	2017
Cardiac Rhythm & Heart Failure	$ 5,947	$ 5,649	$ 5,465	5 %	3 %
Coronary & Structural Heart	3,562	3,113	3,093	14	1
Aortic & Peripheral Vascular	1,845	1,736	1,638	6	6
Cardiac and Vascular Group	11,354	10,498	10,196	8	3
Surgical Innovations[1]	5,537	5,145	4,851	8	6
Respiratory, Gastrointestinal, & Renal[1]	3,179	4,774	4,712	(33)	1
Minimally Invasive Therapies Group	8,716	9,919	9,563	(12)	4
Spine	2,668	2,641	2,629	1	—
Brain Therapies	2,354	2,098	1,980	12	6
Specialty Therapies	1,556	1,491	1,419	4	5
Pain Therapies	1,165	1,136	1,182	3	(4)
Restorative Therapies Group	7,743	7,366	7,210	5	2
Diabetes Group	2,140	1,927	1,864	11	3
Total	$ 29,953	$ 29,710	$ 28,833	1 %	3 %

(1) During the second quarter of fiscal year 2018, the Surgical Solutions and Patient Monitoring & Recovery divisions of the Minimally Invasive Therapies Group were realigned into the Surgical Innovations and Respiratory, Gastrointestinal, & Renal divisions. Refer to the "Minimally Invasive Therapies Group" discussion within this Management's Discussion and Analysis for more information on the composition of the Surgical Innovations and Respiratory, Gastrointestinal, & Renal divisions.

For fiscal year 2018, total net sales were unfavorably affected by the divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses within the Minimally Invasive Therapies Group which closed on the first day of the second quarter of fiscal year 2018. Our performance continues to be fueled by our three growth strategies: therapy innovation, globalization, and economic value. We are creating competitive advantages and capitalizing 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. In our therapy innovation growth strategy, we continue to see clear acceleration in our innovation cycle, with several meaningful new product launches during fiscal year 2018 across all of our segments. We advanced a pipeline of groundbreaking medical technology, and we are creating new markets, disrupting existing markets, and leading in several of the fastest growth markets. In globalization, net sales in emerging markets grew 12% during fiscal year 2018 as compared to fiscal year 2017. Our consistent emerging market performance continues to benefit from geographic diversification, with strong, balanced results around the world. 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 across each of our segments. We remain focused on leading the shift to healthcare payment systems that reward value and improved patient outcomes over volume.

Segment and Market Geography

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The tables below include net sales by market geography for each of our segments for fiscal years 2018, 2017, and 2016:

	U.S.[1]			Non-U.S. Developed Markets[2]			Emerging Markets[3]		
(in millions)	Fiscal Year 2018	Fiscal Year 2017	% Change	Fiscal Year 2018	Fiscal Year 2017	% Change	Fiscal Year 2018	Fiscal Year 2017	% Change
Cardiac and Vascular Group	$ 5,681	$ 5,454	4 %	$ 3,790	$ 3,393	12 %	$ 1,883	$ 1,651	14 %
Minimally Invasive Therapies Group	3,804	5,049	(25)	3,378	3,479	(3)	1,534	1,391	10
Restorative Therapies Group	5,164	5,012	3	1,720	1,588	8	859	766	12
Diabetes Group	1,226	1,148	7	739	625	18	175	154	14
Total	$ 15,875	$ 16,663	(5 %)	$ 9,627	$ 9,085	6 %	$ 4,451	$ 3,962	12 %

	U.S.[1]			Non-U.S. Developed Markets[2]			Emerging Markets[3]		
(in millions)	Fiscal Year 2017	Fiscal Year 2016	% Change	Fiscal Year 2017	Fiscal Year 2016	% Change	Fiscal Year 2017	Fiscal Year 2016	% Change
Cardiac and Vascular Group	$ 5,454	$ 5,347	2 %	$ 3,393	$ 3,283	3 %	$ 1,651	$ 1,566	5 %
Minimally Invasive Therapies Group	5,049	5,014	1	3,479	3,299	5	1,391	1,250	11
Restorative Therapies Group	5,012	4,921	2	1,588	1,542	3	766	747	3
Diabetes Group	1,148	1,140	1	625	584	7	154	140	10
Total	$ 16,663	$ 16,422	1 %	$ 9,085	$ 8,708	4 %	$ 3,962	$ 3,703	7 %

(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 of 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.

For fiscal year 2018, net sales for the U.S. decreased 5 percent, developed markets outside the U.S. increased 6 percent, and emerging markets increased 12 percent as compared to fiscal year 2017. Net sales declines in the U.S. were impacted by the July 29, 2017 divestiture of our Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses within the Minimally Invasive Therapies Group, partially offset by growth in the other segments. Net sales growth in non-U.S. developed markets was led by strong performance in Western Europe. Emerging market sales growth was driven by solid performance in all of our segments, with strong performance in China, Latin America, Eastern Europe and the Middle East & Africa. Currency had a favorable effect of $494 million on net sales for fiscal year 2018.

For fiscal year 2017, net sales for the U.S. increased 1 percent, non-U.S. developed markets increased 4 percent, and emerging markets increased 7 percent as compared to fiscal year 2016. Net sales growth across all markets was driven by meaningful product

launches and introduction of groundbreaking new technologies, partially offset by an unfavorable impact of an additional selling week during the first quarter of fiscal year 2016. Net sales growth in the U.S. was led by strong growth in the Cardiac and Vascular Group and Minimally Invasive Therapies Group and solid growth in the Restorative Therapies Group and Diabetes Group. In Emerging Markets, net sales growth was also attributable to the expansion of access to our therapies.

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, the 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, 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 fiscal year 2018 were $11.4 billion, an increase of 8 percent as compared to fiscal year 2017. Currency had a favorable impact on net sales for fiscal year 2018 of $215 million. Cardiac and Vascular Group's net sales for fiscal year 2018, as compared to fiscal year 2017, benefited from strong net sales in all three divisions. See the more detailed discussion of each division's performance below.

Cardiac Rhythm & Heart Failure net sales for fiscal year 2018 were $5.9 billion, an increase of 5 percent as compared to fiscal year 2017. Cardiac Rhythm & Heart Failure net sales growth for fiscal year 2018 was driven by strong growth in Arrhythmia Management and Heart Failure. The strong growth in Arrhythmia Management was largely due to growth in AF Solutions, driven by the continued global acceptance of our Arctic Front Advance Cardiac CryoAblation Catheter (Arctic Front) system, growth in Diagnostics, driven by the continued adoption of the Reveal LINQ insertable cardiac monitor, as well as strong adoption of the Micra transcatheter pacing system and TYRX absorbable antibacterial envelope. The strong growth in Heart Failure was driven by growth in Mechanical Circulatory Support from sales of the HVAD system, as well as continued demand for the CRT-P quadripolar pacing system, which launched in the U.S. in the first quarter of fiscal year 2018.

Coronary & Structural Heart net sales for fiscal year 2018 were $3.6 billion, an increase of 14 percent as compared to fiscal year 2017. Coronary & Structural Heart net sales growth for fiscal year 2018 was largely driven by the continued strong customer adoption of the Evolut PRO Transcatheter Aortic Valve system (Evolut PRO) and the Evolut R 34mm transcatheter aortic heart valve, as well as continued penetration into intermediate risk in the U.S., which received approval late in the first quarter of fiscal year 2018. Net sales growth was also driven by the continued strong demand for the Resolute Onyx drug-eluting stent in the U.S. and Japan, which launched in the first quarter of fiscal year 2018.

Aortic & Peripheral Vascular net sales for fiscal year 2018 were $1.8 billion, an increase of 6 percent as compared to fiscal year 2017. Aortic & Peripheral Vascular net sales growth for fiscal year 2018 was driven by growth in Valiant Captivia Thoracic stent grafts, Percutaneous Transluminal Angioplasty (PTA) balloons and drug-coated balloons, as well as success of the Heli-FX EndoAnchor System. Net sales growth was further driven by strong performance in EndoVenous due to accelerated growth of the VenaSeal vein closure system, for which approval for reimbursement payment in the U.S. from the Centers for Medicare & Medicaid Services (CMS) was initiated in January 2018.

The Cardiac and Vascular Group's net sales for fiscal year 2017 were $10.5 billion, an increase of 3 percent as compared to fiscal year 2016. The Cardiac and Vascular Group's net sales for fiscal year 2017 were unfavorably affected by an additional selling week during the first quarter fiscal year 2016. The Cardiac and Vascular Group's net sales for fiscal year 2017, as compared to fiscal year 2016, benefited from strong net sales in Arrhythmia

Management within Cardiac Rhythm & Heart Failure, largely due to growth in AF Solutions and Diagnostics, Coronary & Structural Heart, largely due to the transcatheter aortic heart valve in the U.S. and Europe, and in Aortic & Peripheral Vascular, as well as the acquisition of HeartWare in the second quarter of fiscal year 2017. See the more detailed discussion of each division's performance below.

Cardiac Rhythm & Heart Failure net sales for fiscal year 2017 were $5.6 billion, an increase of 3 percent as compared to fiscal year 2016. Cardiac Rhythm & Heart Failure net sales growth for fiscal year 2017 was driven by strong growth in Arrhythmia Management, largely due to growth in AF Solutions and Diagnostics. The strong growth in AF Solutions was driven by the continued global acceptance of our Arctic Front Advance Cardiac CryoAblation Catheter (Arctic Front) system, including strong growth in Japan. The strong growth in Diagnostics was driven by the continued adoption of the Reveal LINQ insertable cardiac

monitor. Cardiac Rhythm & Heart Failure also benefited from the acquisition of HeartWare, which was acquired during the second quarter of fiscal year 2017.

Coronary & Structural Heart net sales for fiscal year 2017 were $3.1 billion, an increase of 1 percent as compared to fiscal year 2016. Coronary & Structural Heart net sales growth for fiscal year 2017 was largely driven by the continued launch of the Evolut R 34mm transcatheter aortic heart valve in the U.S. and Europe. Net sales growth was partially offset by challenges with drug-eluting stents in both the U.S. and Japan due to competitive pressures related to the anticipated approval of the Resolute Onyx drug-eluting stents in these countries, which received U.S. FDA approval, as well as approval in Japan, during the first quarter of fiscal year 2018. Net sales growth was also partially offset by continued pricing pressures and competition worldwide in our Coronary business.

Aortic & Peripheral Vascular net sales for fiscal year 2017 were $1.7 billion, an increase of 6 percent as compared to fiscal year 2016. Aortic & Peripheral Vascular net sales growth for fiscal year 2017 was driven by the continued strong worldwide growth of the IN.PACT Admiral drug-coated balloon as well as success of the Heli-FX EndoAnchor System and the Endurant IIs aortic stent graft. Net sales growth as compared to fiscal year 2016 was also driven by the launch of the HawkOne 6 French directional atherectomy system in the third quarter of fiscal year 2017.

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

- Continued acceptance and growth of the CRT-P quadripolar pacing system, which received CE Mark approval in February 2017 and launched in Europe during the fourth quarter of fiscal year 2017. In the U.S., we received Food and Drug Administration (FDA) approval in May 2017, and launched in the first quarter of fiscal year 2018.

- Continued acceptance and growth of the Claria MRI CRT-D system with EffectivCRT Diagnostic and Effective CRT during AF algorithm, which launched in Japan during the third quarter of fiscal year 2018.

- Continued growth from the Reveal LINQ insertable cardiac monitor.

- Continued growth of our Micra transcatheter pacing system. Micra is a miniaturized single chamber pacemaker system that is delivered through the femoral vein and is implanted in the right ventricle of the heart. The system does not use a lead and does not have a subcutaneous device pocket underneath the skin as with conventional pacemaker systems. We received final approval for reimbursement in the U.S. from the CMS and in Japan from the Ministry of Health, Labour, and Welfare during the fourth quarter of fiscal year 2017 and during the second quarter of fiscal year 2018, respectively, for this transformative therapy, which we expect will continue to accelerate sales in the U.S. and in Japan.

- Acceptance and growth from the Azure XT and S SureScan pacing systems, which launched in the U.S. during the third quarter of fiscal year 2018. Azure pacemakers feature Medtronic-exclusive BlueSync technology, which enables automatic, secure wireless remote monitoring with increased device longevity.

- Continued acceptance and growth 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 in September 2017 for this Destination Therapy indication, and expect to receive thoracotomy indication during fiscal year 2019. Further, we expect to launch the HVAD system in Japan during fiscal year 2019.

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Continued acceptance and growth from 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 Evolut R 34mm transcatheter aortic heart valve, our next-generation recapturable system with differentiated 16 French equivalent delivery system, which was launched in the U.S. in the third quarter of fiscal year 2017.

- Acceptance and growth from penetration of the self-expanding CoreValve Evolut Transcatheter Aortic Valve Replacement platform into intermediate risk indication in the U.S., which received FDA approval during the first quarter of fiscal year 2018.

- Continued acceptance and growth from Evolut PRO, which provides control during deployment to assist with accurate positioning with the ability to recapture and reposition the valve. Evolut PRO received U.S. FDA approval and launched in the fourth quarter of fiscal year 2017. Evolut PRO also received CE Mark approval at the end of the first quarter of fiscal year 2018 and launched in Europe during the second quarter of fiscal year 2018. Further, Evolut PRO is expected to launch in Japan during the first half of fiscal year 2019.

- Continued acceptance and growth from the market release of Resolute Onyx, which launched in the first quarter of fiscal year 2018 in the U.S. and in Japan. Resolute Onyx builds on the Resolute Integrity drug-eluting coronary stent with thinner struts to improve deliverability and is the first stent to feature our CoreWire technology, allowing greater visibility during procedures.

- Continued acceptance and growth of the IN.PACT Admiral drug-coated balloon for the treatment of peripheral artery disease in the upper leg.

- 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. Building on the success of Valiant Captivia, we expect to launch the next generation Valiant Navion in the United States and Europe during fiscal year 2019.

- Continued acceptance and growth from the expansion of the Endurant II used with the Heli-FX EndoAnchor for the short neck indication in the U.S., which received FDA approval in October 2017.

Minimally Invasive Therapies Group

The Minimally Invasive Therapies Group's products span the entire continuum of patient care 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. Net sales for the three months ended July 28, 2017 and fiscal years 2017 and 2016 also include sales of dental and animal health, chart paper, wound care, incontinence, electrodes, SharpSafety, thermometry, perinatal protection, blood collection, compression, and enteral feeding offerings, which were divested on July 29, 2017.

The Minimally Invasive Therapies Group's net sales for fiscal year 2018 were $8.7 billion, a decrease of 12 percent as compared to fiscal year 2017. Currency had a favorable impact on net sales of $147 million for fiscal year 2018. The Minimally Invasive Therapies Group's net sales for fiscal year 2018 were affected by the divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses on July 29, 2017.

Subsequent to the divestiture, during the second quarter of fiscal year 2018, the Surgical Solutions and Patient Monitoring & Recovery divisions were realigned into the Surgical Innovations and Respiratory, Gastrointestinal, & Renal divisions. The Surgical Innovations division consists of the Advanced Surgical and General Surgical businesses. The Advanced Surgical business includes the Advanced Stapling, Advanced Energy, Hernia, Gynecology, and Interventional Lung product lines. The General Surgical business includes the Wound Closure, Electrosurgery, and Instrument product lines.

The Respiratory, Gastrointestinal, & Renal division consists of the Respiratory & Monitoring Solutions and Renal Care Solutions businesses. The Respiratory & Monitoring Solutions business includes the Patient Monitoring, Respiratory Solutions, Advanced Ablation, and GI Solutions product lines. The Renal Care Solutions business includes the Renal Access and Dialyzers product lines.

Surgical Innovations net sales for fiscal year 2018 were $5.5 billion, an increase of 8 percent as compared to fiscal year 2017. Surgical Innovations net sales growth was driven by new products in Advanced Stapling and Advanced Energy, including the Signia powered surgical stapling system and endo stapling specialty reloads. Also driving net sales was our Valleylab FT10 energy platform and new iterations of our LigaSure vessel sealing instruments, and growth in emerging markets.

Respiratory, Gastrointestinal, & Renal net sales for fiscal year 2018 were $3.2 billion, a decrease of 33 percent as compared to fiscal year 2017. Respiratory, Gastrointestinal, & Renal net sales declined as a result of the July 29, 2017 divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses. Apart from the decline in net sales due to the divestiture, net sales performance in Respiratory, Gastrointestinal, & Renal benefited from growth in GI Solutions, the strength in Nellcor

pulse oximetry products due to the intensity of the flu season in the U.S., the continued adoption of MicroStream capnography monitoring product, and growth in Airway and Ventilation net sales.

Surgical Innovations net sales for fiscal year 2017 were $5.1 billion, an increase of 6 percent as compared to fiscal year 2016. Surgical Innovations net sales growth was driven by Advanced Stapling and Advanced Energy. Advanced Stapling growth resulted from strong adoption of endo stapling specialty reloads with Tri-Staple technology, growth in emerging markets, and the release of the Signia power stapling system. Advanced Energy growth resulted from the launch of the LigaSure vessel sealing instruments and continued adoption of the Valleylab FT10 energy platform. The launch of the LigaSure vessel sealing instruments along with the Valleylab FT10 energy platform helped mitigate the negative impact of reprocessing. Surgical Innovations also benefited from the acquisition of Smith & Nephew's gynecology business, which was acquired during the second quarter of fiscal year 2017.

Respiratory, Gastrointestinal, & Renal net sales for fiscal year 2017 were $4.8 billion, an increase of 1 percent as compared to fiscal year 2016. Respiratory, Gastrointestinal, & Renal net sales growth was driven by strong Respiratory & Monitoring Services sales of the Puritan Bennett 980 and Nellcor pulse oximetry products, along with growth in emerging markets. Respiratory, Gastrointestinal, & Renal also benefited from the acquisition of Bellco, which was acquired during the fourth quarter of fiscal year 2016.

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

- Continued acceptance and growth of Open-to-Minimally Invasive Surgery (MIS) techniques and tools supported by our efforts to transition open surgery to MIS. The Open-to-MIS initiative focuses on establishing 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. To achieve this transition, we are focused on product training, surgical skill training and continued therapy innovation to advance MIS.

- Our ability to execute ongoing strategies to develop, gain regulatory approval, and commercialize new products, including our surgical robotics platform.

- The July 29, 2017 divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses. Net sales of the businesses included in the divestiture were $2.4 billion for fiscal years 2017 and 2016. 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.

- Continued acceptance and growth of the powered stapling and energy platform.

- 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 will 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. The system is expected to launch in late fiscal year 2020, but timing may shift depending on regulatory requirements.

- Continued elevation of the standard of care for respiratory compromise, a progressive condition impacting a patient's ability to breathe effectively.

- Continued acceptance and growth in respiratory care, airway and ventilation management, and Patient Monitoring. Key products in this area include the Puritan Bennett 980 ventilator, Microstream Capnography bedside capnography monitor, portable monitor with Nellcor pulse oximetry system with OxiMax technology and the Nellcor Respiratory Compromise monitor with vital signs of SpO2, pulse rate, End-Tidal CO2, and Respiratory Rate.

- Continued acceptance of less invasive standards of care, including the areas of GI Solutions and Advanced Ablation. Recently launched products include the PillCam COLON capsule endoscopy, the Barrx platform through ablation with the Barrx 360 Express catheter, and the Emprint ablation system with Thermosphere Technology, which maintains predictable spherical ablation zones throughout procedures reducing procedure time and cost.

- Continued 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 with our fiscal year 2017 acquisition of Smith & Nephew's gynecology business. The addition expanded and strengthened the surgical offerings and complemented 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, obsessive-compulsive disorder (OCD), overactive bladder, urinary retention, fecal incontinence and gastroparesis, as well as products to treat conditions of the ear, nose, and throat, and systems that incorporate advanced energy surgical instruments. The Restorative Therapies Group also manufactures and sells image-guided surgery and intra-operative imaging systems 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 fiscal year 2018 were $7.7 billion, an increase of 5 percent as compared to fiscal year 2017. Currency had a favorable impact on net sales for fiscal year 2018 of $85 million. The Restorative Therapies Group’s performance for fiscal year 2018 was driven by strong growth in Brain Therapies and solid growth in Specialty Therapies and Pain Therapies. See the more detailed discussion of each division's performance below.

Spine net sales for fiscal year 2018 were $2.7 billion, an increase of 1 percent as compared to fiscal year 2017. Spine net sales growth was driven by growth in bone morphogenetic protein (composed of INFUSE bone graft (InductOs in the European Union)), partially offset by a slight decline in Core Spine. Core Spine net sales declined due to continued overall market softness in the U.S. and Europe, partially offset by the 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, and our "Speed-to-Scale" initiative, which involves faster innovation cycles and the launching of a steady cadence of new products at scale with sets immediately available for the entire market.

Brain Therapies net sales for fiscal year 2018 were $2.4 billion, an increase of 12 percent as compared to fiscal year 2017. Brain Therapies net sales growth was driven by strong growth in both Neurovascular and Neurosurgery. Neurovascular net sales growth was driven by strength across our stroke portfolio, specifically in stents, as a result of our leading role in the development of the endovascular therapy market for treatment of ischemic stroke. Neurosurgery net sales growth was driven by strong sales of the StealthStation S8 surgical navigation system, O-arm O2 surgical imaging system, Visualase MRI-guided laser ablation system, Midas disposables, as well as disposables revenue from placement of capital equipment through our distributor agreement with Mazor. Net sales growth in Neurovascular and Neurosurgery for fiscal year 2018 was partially offset by slight declines in Brain Modulation due to competitive pressures in major markets.

Specialty Therapies net sales for fiscal year 2018 were $1.6 billion, an increase of 4 percent as compared to fiscal year 2017. Specialty Therapies net sales growth was driven by growth in ENT, Pelvic Health, and Transformative Solutions.

Pain Therapies net sales for fiscal year 2018 were $1.2 billion, an increase of 3 percent as compared to fiscal year 2017. Pain Therapies net sales growth was driven by Interventional from the OsteoCool RF Spinal Tumor ablation system. Within Spinal Cord Stimulation, the Intellis Platform launch and ongoing roll-out of the Evolve workflow algorithm contributed to net sales in fiscal year 2018 and helped mitigate competitive pressures in the U.S. and Europe.

Spine net sales for fiscal year 2017 were $2.6 billion, flat as compared to fiscal year 2016. Spine net sales were driven by growth in BMP due to strong U.S. sales, offset by declines in Europe due to the InductOs stop shipment due to suspension in the E.U. Core Spine had net sales growth in the U.S due to new product launches including the Solera Voyager and Elevate expandable cage in conjunction with the "Speed to Scale" initiative, offset by market softness in Europe and the Middle East driven by the macro-economic conditions. Inductos returned to the European market in the first quarter of fiscal year 2018.

Brain Therapies net sales for fiscal year 2017 were $2.1 billion, an increase of 6 percent as compared to fiscal year 2016. The increase in net sales was driven by strong growth in both Neurovascular and Neurosurgery. Neurovascular net sales growth was driven by growth in coils from the Axium Prime Extra Soft detachable coil, growth in flow diversion from the Pipeline Flex embolization device, and growth in stents due to the Solitaire revascularization device, partially offset by declines due to a voluntary recall of certain product lines in the second quarter. Neurosurgery net sales growth was driven by strong sales of navigation capital equipment, disposables, and the O-arm O2 surgical imaging system. Despite competitive pressure, Brain Modulation drove net sales growth with U.S. sales of the MR Conditional Activa DBS portfolio and through updated Parkinson's Disease labeling for patients with Recent Onset of Motor Complications.

Specialty Therapies net sales for fiscal year 2017 were $1.5 billion, an increase of 5 percent as compared to fiscal year 2016. The increase in net sales was driven by strong growth in Transformative Solutions and Pelvic Health and growth in ENT. Net sales growth in Transformative Solutions was driven by the sales of the Aquamantys Transcollation and PEAK PlasmaBlade products. Net sales growth in Pelvic Health was driven by strong InterStim implant growth in the U.S. Net sales growth in ENT benefited from strong adoption of new products, including NuVent balloons and Fusion Compact navigation.

Pain Therapies net sales for fiscal year 2017 were $1.1 billion, a decrease of 4 percent as compared to fiscal year 2016. The decrease in net sales was driven by declines in sales of spinal cord stimulation products due to competitive pressures in the U.S., partially offset by growth in Interventional from the OsteoCool RF Spinal Tumor ablation system.

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 growth from Neurosurgery StealthStation and O-Arm Imaging Systems, Midas, and ENT power systems.

- Continued sales of robotic units and associated market adoption of robot-assisted spine procedures, under an exclusive worldwide distributor agreement with Mazor Robotics.

- Continued market acceptance of our new 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.

- Continued success of our "Speed-to-Scale" program launches, which involves faster innovation cycles and launching a steady cadence of new products at scale with sets immediately available for the entire market.

- Market acceptance and continued global adoption of innovative new Spine products, such as our CD Horizon Solera Voyager system, our ELEVATE expandable interbody cages, and our OLIF25 and OLIF51 procedural solutions.

- 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 acceptance and adoption rates of stimulators and leads approved to treat chronic pain in major markets around the world. Our Intellis spinal cord stimulator and Evolve workflow algorithm have received positive customer reaction since their launch in the second quarter of fiscal year 2018.

- 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 distributor requirements on our implantable drug pump in October and its warning letter in November 2017.

- Continued acceptance of our devices for the treatment of Parkinson's Disease and other movement disorders.

- 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 Transformative Solutions products and strategies to focus on its four core markets of orthopedic, spine, breast surgery, and Cardiac Rhythm Disease Management device replacements.

Diabetes Group

The Diabetes Group's products include insulin pumps, continuous glucose monitoring (CGM) systems, insulin pump consumables, and therapy management software. The Diabetes Group's net sales for fiscal year 2018 were $2.1 billion, an increase of 11 percent as compared to fiscal year 2017. The Diabetes Group's net sales increased for fiscal year 2018, primarily as a result of an increase in sales in the U.S. due to continued growth in our customer base through the continued adoption of the MiniMed 670G hybrid closed loop system. Further, we experienced continued growth in international markets due to strong sales of the MiniMed 640G system in Europe and Asia Pacific.

The Diabetes Group's net sales for fiscal year 2017 were $1.9 billion, an increase of 3 percent as compared to fiscal year 2016. The Diabetes Group's net sales for fiscal year 2017 benefited from growth in both the U.S. and international markets due to strong U.S. sales of the MiniMed 630G system and interest in the Priority Access Program for the MiniMed 670G hybrid closed loop system, as well as strong international sales in Europe, Latin America, and Asia Pacific of the MiniMed 640G system with the Enhanced Enlite sensor.

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

- Continued increases in sensor manufacturing capacity to benefit from rapidly growing demands. In the fourth quarter of 2018, sensor expansion efforts were met with unconstrained capacity and completed with no back orders. We expect to keep sensor utilization strong and continue commercial expansion into the new fiscal year.

- Continued acceptance and growth of the MiniMed 670G system, the first hybrid closed loop system in the world. The system features our most advanced SmartGuard algorithm, which enables improved glucose control with reduced user input. The MiniMed 670G system received U.S. FDA approval during the second quarter of fiscal year 2017 and launched in the U.S. in June 2017.

- Changes in medical reimbursement policies and programs, along with payor coverage of the MiniMed 670G system.

- Continued acceptance and growth of the MiniMed 640G system with SmartGuard Suspend before Low technology, which has launched in Europe, Australia, and select countries in Latin America and Asia, and the MiniMed 620G system, the first integrated system customized for the Japanese market. The MiniMed 640G system received regulatory approval in Japan in the fourth quarter of fiscal year 2018.

- Continued acceptance and growth of Guardian Connect CGM system which displays information directly to a smartphone. This system received CE mark in 2016 and has launched both internationally and now in the U.S. after receiving FDA approval in the fourth quarter of fiscal year 2018.

- Continued partnership with UnitedHealthcare as the preferred in-network provider of insulin pumps, giving their members access to our advanced diabetes technology and comprehensive support services.

- Continued partnership and growth of our outcomes-based agreement with Aetna, where a component of our pump reimbursement is based on successfully meeting clinical improvement thresholds as part of our value-based healthcare solutions.

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 in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

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 19 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Income Tax Reserves and U.S. Tax Reform 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.

On December 22, 2017, the U.S. government enacted the Tax Act, which significantly revises U.S. corporate income taxation by, among other things, lowering the U.S. corporate income tax rate, broadening the base of taxation, and implementing a territorial tax system. We have a measurement period of up to one year after the enactment date of the Tax Act to finalize the recognition of the related tax impacts. The final impact of the Tax Act may differ from the provisional amounts recognized in the current period, possibly materially, due to, among other things, changes in our interpretation of the Tax Act, legislative or administrative actions to clarify the intent of the statutory language provided that differ from our current interpretation, any changes in accounting standards for income taxes or related interpretations in response to the Tax Act, or any updates or changes to estimates we have utilized to calculate the impacts, including changes to current year earnings estimates and applicable foreign exchange rates.

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 consideration 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, including projected future cash flows. 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 intangibles 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 intangibles require us to make several estimates to determine fair value, including projected future cash flows and discount rates.

ACQUISITIONS AND DIVESTITURES

Information regarding acquisitions and divestitures is included in Notes 2 and 3, respectively, to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

NEW ACCOUNTING PRONOUNCEMENTS

Information regarding new accounting pronouncements is included in Note 1 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

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:

	Fiscal Year		
	2018	2017	2016
Cost of products sold	30.2 %	31.3 %	31.7 %
Research and development expense	7.5 %	7.4 %	7.7 %
Selling, general, and administrative expense	33.3 %	32.7 %	32.8 %

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 was $9.1 billion, $9.3 billion, and $9.1 billion during fiscal years 2018, 2017, and 2016, respectively. The decrease in cost of products sold as a percentage of sales from fiscal year 2018 as compared to 2017 was due primarily to the divestiture of lower-margin products in conjunction with the divestiture of our Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses during fiscal year 2018 and a $38 million charge during fiscal year 2017 related to the recognition of the fair value step-up taken on inventory acquired in connection with the HeartWare acquisition. The decrease in cost of products sold as a percentage of sales due to the divestiture and fair-value step-up on HeartWare inventory was partially offset by $17 million of costs recognized in relation to restoring operations at four Puerto Rico manufacturing sites after Hurricane Maria, including idle facility costs, asset write-downs, and other facility-related costs, and the infusion set recall in our Diabetes Group. The decrease in fiscal year 2017 as compared to fiscal year 2016 was largely due to a $226 million charge in fiscal year 2016 related to the recognition of the fair value step-up of acquired Covidien inventory.

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 was $2.3 billion, $2.2 billion, and $2.2 billion during fiscal years 2018, 2017, and 2016, respectively. Research and development expense remained fairly consistent as a percentage of net sales with a slight decrease from fiscal year 2016 to 2018 due, in part, to the timing of clinical trials and product approvals, as well as our sales increasing at a slower rate than the increase in research and development following the divestiture of our Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses.

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 consist of salaries and wages, as well as other administrative costs, such as professional fees and marketing expenses.

Selling, general, and administrative expense was $10.0 billion, $9.7 billion, and $9.5 billion during fiscal years 2018, 2017, and 2016, respectively. Selling, general, and administrative expense increased a percentage of net sales from

fiscal year 2017 to 2018, as we incurred expenses associated with new product launches and Transition Service Agreements (TSAs). In conjunction with the divestiture of our Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses on July 29, 2017, we entered into TSAs with Cardinal to ensure and facilitate an orderly transfer of business operations. Expenses associated with the TSA agreements are recognized in selling, general, and administrative expenses; however, TSA revenue is recognized in *other expense, net*, thereby contributing to an increase in selling, general, and administrative expense as a percentage of revenue.

Selling, general, and administrative expense remained fairly flat as a percentage of net sales from fiscal year 2016 to 2017, with a slight decrease due to cost savings associated with selling, general, and administrative expense initiatives.

The following is a summary of other costs and expenses:

(in millions)	Fiscal Year 2018	2017	2016
Amortization of intangible assets	$ 1,823	$ 1,980	$ 1,931
Restructuring charges, net	30	363	290
Acquisition-related items	104	220	283
Certain litigation charges	61	300	26
Divestiture-related items	114	—	—
Gain on sale of businesses	(697)	—	—
Special charge	80	100	—
Other expense, net	505	222	107
Investment loss	227	—	70
Interest expense, net	749	728	955

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 $1.8 billion, $2.0 billion, and $1.9 billion in fiscal years 2018, 2017, and 2016, respectively. The decrease in amortization expense from fiscal year 2017 to fiscal year 2018 is primarily attributable to the discontinuation of amortization on the definite-lived intangible assets classified as assets held for sale at April 28, 2017 and through the first quarter of fiscal year 2018 related to the divestiture of our Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses. This divestiture was completed during the second quarter of fiscal year 2018.

Restructuring

Enterprise Excellence

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 restructuring charges are related to employee termination benefits. The remaining restructuring 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.

During fiscal year 2018, we recognized restructuring charges of $96 million. For fiscal year 2018, restructuring charges included $35 million of employee termination benefits recognized within *restructuring charges, net* in the consolidated statements of income. For fiscal year 2018, restructuring 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 $28 million recognized within *cost of products sold* and $33 million recognized within *selling, general and administrative expense* in the consolidated statements of income.

Cost Synergies

In the third quarter of fiscal year 2018, we achieved $850 million in cost synergies related to the acquisition of Covidien. The cost synergies related to administrative office optimization, manufacturing and supply chain infrastructure, and certain general and administrative savings. Cash outlays for the cost synergies program are scheduled to be substantially complete by the end of fiscal year 2019.

During fiscal year 2018, we recognized restructuring charges of $45 million, partially offset by accrual adjustments of $34 million. Accrual adjustments relate to certain employees identified for termination finding other positions within Medtronic, cancellations of employee terminations, and employee termination benefits being less than initially estimated. For fiscal year 2018, restructuring charges included $29 million of employee termination benefits and contract termination costs recognized within *restructuring charges, net* in the consolidated statements of income. Restructuring charges also included other costs of $12 million recognized within *cost of products sold* and $4 million recognized within *selling, general and administrative expense.*

For fiscal years 2017 and 2016, we recognized restructuring charges of $441 million and $332 million, respectively, partially offset by accrual adjustments of $68 million and $18 million, respectively. Accrual adjustments relate to certain employees identified for termination finding other positions within Medtronic, cancellations of employee terminations, and employee termination benefits being less than initially estimated. For fiscal years 2017 and 2016, restructuring charges included asset write-downs of $17 million and $14 million, respectively, related to property, plant, and equipment impairments, and $10 million and $9 million, respectively, related to inventory write-offs recognized within *cost of products sold* in the consolidated statements of income. Additionally, fiscal year 2017 restructuring charges included $73 million of incremental defined benefit pension and post-retirement related expenses for employees that accepted voluntary early retirement packages.

For additional information, see Note 4 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Acquisition-Related Items Acquisition-related items includes expenses incurred in connection with the integration of Covidien, our $50.0 billion acquisition completed in the fourth quarter of fiscal year 2015, transaction expenses incurred in connection with business combinations, and changes in fair value of contingent consideration. During fiscal year 2018, we recognized acquisition-related items expense of $132 million, including $28 million recognized within *cost of products sold* in the consolidated statements of income. During fiscal year 2018, acquisition-related items expense includes $172 million of costs associated with the integration of Covidien manufacturing, distribution, and administrative facilities as well as information technology system implementation and benefits harmonization, partially offset by the change in fair value of contingent consideration as a result of revised revenue forecasts and the timing of anticipated regulatory milestones.

During fiscal year 2017, we recognized acquisition-related items expense of $230 million, including $10 million recognized within *cost of products sold* in the consolidated statements of income. During fiscal year 2017, acquisition-related items expense primarily includes $225 million of costs associated with the integration of Covidien manufacturing, distribution, and administrative facilities as well as information technology system implementation and benefits harmonization, $23 million of accelerated or incremental stock compensation expense, and expenses incurred in connection with the HeartWare acquisition and planned divestiture of the Patient Care, Deep Vein, Thrombosis, and Nutritional Insufficiency businesses, partially offset by the change in fair value of contingent consideration as a result of revised revenue forecasts and the timing of anticipated regulatory milestones.

During fiscal year 2016, we recognized acquisition-related items expense of $283 million, including $219 million of costs associated with the integration of Covidien manufacturing, distribution, and administrative facilities as well as information technology system implementation and benefits harmonization and $58 million of accelerated or incremental stock compensation expense.

Certain Litigation Charges We classify litigation charges and gains related to significant legal matters as certain litigation charges. During fiscal years 2018, 2017, and 2016, we recognized $61 million, $300 million, and $26 million, respectively, of certain litigation charges related to probable and estimable damages for significant legal matters.

Divestiture-Related Items Divestiture-related items include expenses incurred in connection with the divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses. During fiscal year 2018, we recognized divestiture-related items expense of $114 million, primarily comprised of expenses incurred for professional services, including banker, legal, tax, and advisory fees, and $16 million of accelerated stock compensation expense related to the acceleration of the vesting period for employees that transferred with the divestiture. There was no divestiture-related items expense for fiscal years 2017 and 2016.

Gain on Sale of Businesses We recognized a pre-tax gain of $697 million on the sale of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses during fiscal year 2018. No businesses were sold during fiscal years 2017 or 2016.

Special Charge Continuing our commitment to improve the health of people and communities throughout the world, we recognized a charge of $80 million in fiscal year 2018 and $100 million in fiscal year 2017 for charitable contributions to the Medtronic Foundation.

Other Expense, Net Other expense, net includes royalty income and expense, realized equity security gains and losses, TSA income, intangible asset impairments, currency transaction and derivative gains and losses, and Puerto Rico excise tax. In fiscal year 2018, other expense, net was $505 million as compared to $222 million in fiscal year 2017. The increase from fiscal year 2017 to fiscal year 2018 was primarily attributable to remeasurement and our hedging programs, which resulted in a $176 million loss for fiscal year 2018 as compared to an $81 million gain in fiscal year 2017, losses of $68 million related to the impairment of IPR&D assets in fiscal year 2018, and $15 million of humanitarian aid provided to our employees affected by Hurricane Maria in fiscal year 2018. The increase from fiscal year 2017 to 2018 was partially offset by $74 million of TSA income.

In fiscal year 2017, other expense, net was $222 million as compared to $107 million in fiscal year 2016. The increase from fiscal year 2016 to 2017 was primarily attributable to remeasurement and our hedging programs, which resulted in an $81 million gain for fiscal year 2017 as compared to a $314 million gain in fiscal year 2018, partially offset by the decrease in U.S. medical device tax due to the suspension of the U.S. medical device tax beginning January 1, 2016.

Investment Loss We recognized losses of $227 million and $70 million during fiscal years 2018 and 2016, respectively, related to the impairment of certain cost and equity method investments. We remain committed to future strategic and focused investments in the areas of medical device technologies, services, and solutions.

Interest Expense, Net Interest expense, net includes interest earned on our cash, cash equivalents and investments, 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, charges recognized in connection with the early redemption of senior notes, and ineffectiveness on interest rate derivative instruments. In fiscal year 2018, interest expense, net was $749 million as compared to $728 million in fiscal year 2017. The increase in interest expense, net for fiscal year 2018 was primarily driven by modestly higher average interest rates on total debt obligations outstanding and a $38 million charge recognized in connection with the early redemption of approximately $1.2 billion of Medtronic Inc. senior notes, partially offset by a slight increase in interest income as compared to fiscal year 2017.

In fiscal year fiscal year 2017, interest expense, net was $728 million as compared to $955 million in fiscal year 2016. The decrease in interest expense, net for fiscal year 2017 was the result of a $183 million charge recorded in connection with the cash tender offer and redemption of certain debt securities in fiscal year 2016 and a $45 million loss on interest rate swaps which were entered into in advance of a planned debt issuance that was no longer anticipated in fiscal year 2016.

INCOME TAXES

	Fiscal Year		
(in millions)	**2018**	**2017**	**2016**
Income tax provision	$ 2,580	$ 578	$ 798
Income before income taxes	5,675	4,602	4,336
Effective tax rate	45.5 %	12.6 %	18.4 %
Non-GAAP income tax provision	$ 1,120	$ 1,232	$ 1,171
Non-GAAP income before income taxes	7,641	7,623	7,399
Non-GAAP Nominal Tax Rate	14.7 %	16.2 %	15.8 %
	(30.8	3.6 %	(2.6

Difference between the effective tax rate and Non-GAAP Nominal Tax Rate	) %	) %

On December 22, 2017, the U.S. government enacted the Tax Act, which significantly revises U.S. corporate income taxation by, among other things, lowering the U.S. corporate income tax rate from 35.0 percent to 21.0 percent, broadening the base of taxation, implementing a territorial tax system, and imposing a repatriation tax on deemed repatriated earnings of foreign subsidiaries. The decrease in the U.S. federal corporate tax rate from 35.0 percent to 21.0 percent results in a blended statutory tax rate of 30.5 percent for our fiscal year ended April 27, 2018.

Many of the countries we operate in have statutory tax rates lower than our blended U.S. statutory rate, thereby resulting in an overall effective tax rate less than the U.S. statutory rate of 30.5 percent for fiscal year 2018. 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 expire between fiscal years 2019 and 2029. The tax incentive grants which expired during fiscal year 2018 did not have a material impact on our financial results. See Note 14 to the consolidated financial statements for additional information.

Our effective tax rate for fiscal year 2018 was 45.5 percent, as compared to 12.6 percent in fiscal year 2017. The increase in the effective tax rate was primarily due to the impacts from U.S. tax reform, the divestiture of our Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses, the utilization of non-U.S. special deductions, the net tax cost associated with an internal reorganization, excess tax benefits associated with stock-based compensation, and the tax effect from the intercompany sales of certain intellectual property.

Our Non-GAAP Nominal Tax Rate for fiscal year 2018 was 14.7 percent, as compared to 16.2 percent in fiscal year 2017. The decrease in our Non-GAAP Nominal Tax Rate for fiscal year 2018 as compared to fiscal year 2017 was primarily due to operational tax benefits and year-over-year changes in operational results by jurisdiction.

During fiscal year 2018, we recognized $135 million of operational tax benefits. The operational tax benefits included a $61 million benefit from excess tax benefits associated with stock-based compensation and a $74 million net benefit associated with the resolution of certain income tax audits, finalization of certain tax returns, changes to uncertain tax position reserves, and changes to certain deferred income tax balances.

Our effective tax rate for fiscal year 2017 was 12.6 percent, as compared to 18.4 percent in fiscal year 2016. The decrease in our effective tax rate for fiscal year 2017 as compared to fiscal year 2016 was due to the net tax impact of inventory step-up, debt tender premium, certain litigation payments, certain tax adjustments, operational tax benefits described below, and year-over-year changes in operational results by jurisdiction.

Our Non-GAAP Nominal Tax Rate for fiscal year 2017 was 16.2 percent, as compared to 15.8 percent in fiscal year 2016. The increase in our Non-GAAP Nominal Tax Rate for fiscal year 2017 as compared to fiscal year 2016 was primarily due to operational tax benefits and year-over-year changes in operational results by jurisdiction.

During fiscal year 2017, we recognized $95 million of operational tax benefits. The operational tax benefits included a $44 million benefit from the reversal of a valuation allowance associated with foreign net operating losses and a $51 million net benefit associated with the resolution of certain income tax audits, finalization of certain tax returns, changes to uncertain tax position reserves, and changes to certain deferred income tax balances.

An increase in our Non-GAAP Nominal Tax Rate of 1 percent would result in an additional income tax provision for fiscal years 2018, 2017, and 2016 of approximately $77 million, $76 million, and $74 million, respectively.

Certain Tax Adjustments

During fiscal year 2018, certain tax adjustments of $1.9 billion, recognized in *income tax provision* in the consolidated statement of income, included the following:

- A net charge of $2.4 billion associated with U.S. tax reform, inclusive of the transition tax, remeasurement of U.S. Federal deferred tax assets and liabilities, and the decrease in the U.S. statutory tax rate. Our income tax provision associated with the impact of the Tax Act for fiscal year 2018 is based on a reasonable estimate and will be finalized within the measurement period in accordance with U.S. GAAP. See Note 14 to the consolidated financial statements for additional information.

- A charge of $73 million associated with an internal reorganization of certain foreign subsidiaries.

- A net benefit of $579 million associated with the intercompany sale of intellectual property.

During fiscal year 2017, certain tax adjustments of $202 million, recognized in *income tax provision* in the consolidated statement of income, included the following:

- A charge of $404 million associated with the IRS resolution for the Ardian, CoreValve, Inc., Ablation Frontiers, Inc., PEAK Surgical, Inc. and Salient Surgical Technologies, Inc. acquisition-related issues and the allocation of income between Medtronic, Inc. and its wholly owned subsidiary operating in Puerto Rico for certain businesses. This resolution does not include the businesses that are the subject of the Medtronic, Inc. U.S. Tax Court case for fiscal years 2005 and 2006.

- A net charge of $125 million associated with the divestiture of our Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses to Cardinal. The net charge primarily relates to the tax effect from the recognition of the outside basis difference of certain subsidiaries which were included in the divestiture.

- A charge of $86 million associated with the IRS's disallowance of the utilization of certain net operating losses, along with the recognition of a valuation allowance against the net operating loss deferred tax asset, was recognized during the year.

- A charge of $18 million as a result of the redemption of an intercompany minority interest during the year.

- A benefit of $431 million as the result of the resolution of Covidien's previously disclosed Tyco International plc intercompany debt issues with the U.S. Tax Court and the Appeals Division of the IRS.

During fiscal year 2016, certain tax adjustments of $417 million, recognized in *income tax provision* in the consolidated statement of income, included the following:

- A charge of $442 million primarily related to the U.S. income tax expense resulting from our completion of an internal reorganization of the ownership of certain legacy Covidien businesses that reduced the cash and investments held by our U.S.-controlled non-U.S. subsidiaries. As a result of this internal reorganization, approximately $9.7 billion of cash, cash equivalents and investments in marketable debt and equity securities previously held by U.S.-controlled non-U.S. subsidiaries became available for general corporate purposes.

- A $25 million tax benefit associated with the disposition of a wholly-owned U.S. subsidiary.

Certain tax adjustments will affect the comparability of our operating results between periods. Therefore, we consider these Non-GAAP Adjustments. Refer to the "Executive Level Overview" section of this Management's Discussion and Analysis for further discussion of these adjustments.

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:

	Fiscal Year		
(in millions)	2018	2017	2016
Cash provided by (used in):			
Operating activities	$ 4,684	$ 6,880	$ 5,218
Investing activities	5,858	(1,571)	2,245
Financing activities	(11,954)	(3,283)	(9,543)
Effect of exchange rate changes on cash and cash equivalents	114	65	113

Net change in cash and cash equivalents	$ (1,298)	$ 2,091	$ (1,967)

Operating Activities The $2.2 billion decrease in net cash provided in fiscal year 2018 as compared to fiscal year 2017 was primarily driven by an increase in cash paid for taxes of $1.5 billion, an increase in net cash outflows for collateral related to our derivative instruments of $145 million, cash paid for divestiture-related expenses of approximately $100 million, an increase in certain litigation payments of $60 million, and a decrease in cash collected from customers. The increase in cash paid for income taxes was primarily a result of a $1.1 billion pre-payment we elected to make to the U.S. IRS related to in-process litigation on Puerto Rico transfer pricing, tax payments related to the intercompany sale of intellectual property and sale of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses as well as settlement payments for U.S. federal income taxes for fiscal years 2012 to 2014 and audit settlements outside of the U.S.

The $1.7 billion increase in net cash provided in fiscal year 2017 as compared to fiscal year 2016 was primarily attributable to an increase in cash collected from customers, as well as a decrease in cash paid for income taxes and interest of $350 million and

$132 million, respectively, and a $191 million payment in fiscal year 2016 related to the Covidien Tax Sharing Agreement. The increase in cash collected from customers was primarily attributable to an increase in revenue. The decrease in cash paid for income taxes was primarily a result of payments made for the resolution of the Kyphon acquisition-related matters, as well as Covidien income tax extension payments in fiscal year 2016. We did not make any significant tax audit settlement payments or significant extension payments in fiscal year 2017. The decrease in cash paid for interest was the result of less debt, on average, in fiscal year 2017 as compared to fiscal year 2016.

Investing Activities The $7.4 billion increase in net cash provided in fiscal year 2018 as compared to fiscal year 2017 was primarily attributable to the sale of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses on July 29, 2017, resulting in net proceeds of $6.1 billion, a decrease in cash paid for acquisitions of $1.2 billion, primarily due to the acquisition of Heartware during fiscal year 2017, and a decrease in additions to property, plant, and equipment.

The $3.8 billion increase in net cash used in fiscal year 2017 as compared to fiscal year 2016 was primarily attributable to a decrease in net proceeds from purchases and sales and maturities of investments in fiscal year 2017.

Financing Activities The $8.7 billion increase in net cash used in fiscal year 2018 as compared to fiscal year 2017 was primarily attributable to the repayment of our senior unsecured term loan, including accrued interest, for $3.0 billion in August 2017, the repayment of our 6.000 percent ten-year 2008 CIFSA senior notes, including accrued interest, for $1.2 billion in October 2017, the repayment of our 3.500 percent seven-year 2010 HTWR senior notes, including accrued interest, for $43 million in December 2017, the repayment of our 1.500 percent three-year 2015 senior notes, including accrued interest, for $1.0 billion in March 2018, repayment of our 1.375 percent five-year 2013 senior notes, including accrued interest, for $1.0 billion in April 2018, repayment of our 4.450 percent ten-year 2010 senior notes, including accrued interest and early redemption premium, for $795 million in April 2018, and repayment of our 5.600 percent ten-year 2009 senior notes, including accrued interest and early redemption premium, for $413 million in April 2018. The increase in net cash used was also due to the issuance of $2.0 billion of Senior Notes in fiscal year 2017 and a reduction of commercial paper borrowings in fiscal year 2018 as compared to fiscal year 2017, partially offset by a decrease in share repurchases of $1.4 billion.

The $6.3 billion decrease in net cash used in financing activities in fiscal year 2017 as compared to fiscal year 2016 was primarily attributable to the issuance of $2.0 billion of Senior Notes in fiscal year 2017, an increase in commercial paper borrowings, and lower payments on maturing and extinguished debt, partially offset by increases in dividends to shareholders and repurchases of ordinary shares.

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:

	Fiscal Year		
(in millions)	**2018**	**2017**	**2016**
Net cash provided by operating activities	$ 4,684	$ 6,880	$ 5,218
Net cash provided by (used in) investing activities	5,858	(1,571)	2,245
Net cash used in financing activities	(11,954)	(3,283)	(9,543)
Net cash provided by operating activities	4,684	6,880	5,218
Additions to property, plant, and equipment	(1,068)	(1,254)	(1,046)
Free cash flow	$ 3,616	$ 5,626	$ 4,172

Dividends to shareholders	$ 2,494	$ 2,376	$ 2,139
Repurchase of ordinary shares	2,171	3,544	2,830
Issuances of ordinary shares	(403)	(428)	(491)
Return to shareholders	$ 4,262	$ 5,492	$ 4,478
Return of operating cash flow percentage	91%	80%	86%
Return of free cash flow percentage	118%	98%	107%

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 April 27, 2018 was $2.1 billion as compared to $7.5 billion at April 28, 2017. Historically, we have issued Senior Notes to meet our long-term financing needs. Long-term debt at April 27, 2018 was $23.7 billion as compared to $25.9 billion at April 28, 2017.

Total debt at April 27, 2018 was $25.8 billion, as compared to $33.4 billion at April 28, 2017. The decrease in total debt was primarily driven by the repayment of our senior unsecured term loan and senior notes detailed below, along with a reduction in our commercial paper borrowings of $203 million.

During fiscal year 2018, we repaid our senior unsecured term loan, including accrued interest, for $3.0 billion, our 6.000 percent ten-year 2008 CIFSA senior notes, including accrued interest, for $1.2 billion, our 3.500 percent seven-year 2010 HTWR senior notes, including interest, for $43 million, our 1.500 percent three-year 2015 senior notes, including accrued interest, for $1.0 billion, our 1.375 percent five-year 2013 senior notes, including accrued interest, for $1.0 billion, our 4.450 percent ten-year 2010 senior notes, including accrued interest and early redemption premium, for $795 million, and our 5.600 percent ten-year 2009 senior notes, including accrued interest and early redemption premium, for $413 million.

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 April 27, 2018, we had $698 million of commercial paper outstanding as compared to $901 million at April 28, 2017. During fiscal years 2018 and 2017, the weighted average original maturity of the commercial paper outstanding was approximately 28 and 39 days, respectively, and the weighted average interest rate was 1.46 percent and 0.89 percent, respectively. 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 syndicated line of credit facility (Credit Facility) which expires in January 2020. 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 $500 million 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 April 27, 2018 and April 28, 2017, no amounts were outstanding on the committed line of credit.

Interest rates on advances of our Credit Facility are determined by a pricing matrix, based on our long-term debt ratings assigned by S&P and 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 April 27, 2018.

We repurchase our ordinary shares from time to time as part of our focus on returning value to our shareholders. In June 2015, our Board of Directors authorized, subject to the ongoing existence of sufficient distributable reserves, the repurchase of 80 million of our ordinary shares. At April 28, 2017, we had used 51 million of the 80 million shares authorized under the June 2015 share repurchase program. In June 2017, our Board of Directors authorized the expenditure of up to $5.0 billion for new share repurchases, replacing the previous 2015 repurchase authorization to redeem up to an aggregate number of ordinary shares. During fiscal years 2018 and 2017, we repurchased a total of 25 million and 43 million shares, respectively, under these programs at an average price of $83.71 and $83.03, respectively. At April 27, 2018, we had approximately $4.0 billion remaining under the share repurchase program authorized by our Board of Directors.

For more information on credit arrangements, see Note 8 of the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

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Liquidity

The following table is a summary of our cash, cash equivalents, and current investments, working capital, and current ratio:

(in millions)	April 27, 2018	April 28, 2017
Cash, cash equivalents, and current investments	$ 11,227	$ 13,708
Working capital	12,896	10,272
Current ratio[1]	2.3:1.0	1.7:1.0

(1) The ratio of current assets to current liabilities. The current ratio at April 28, 2017 excludes current assets and current liabilities held for sale.

Our liquidity sources at April 27, 2018 include $3.7 billion of cash and cash equivalents and $7.6 billion of current investments. Additionally, we maintain a commercial paper program ($698 million of commercial paper outstanding at April 27, 2018) and Credit Facility. See discussion above regarding changes in our cash and cash equivalents and commercial paper program and Credit Facility.

Our current investments include marketable debt and equity securities that are classified and accounted for as available-for-sale. Our debt and equity securities include U.S. and non-U.S. government and agency securities, corporate debt securities, mortgage-backed securities, other asset-backed securities, debt funds, equity securities, and auction rate securities. Some of our investments may experience reduced liquidity due to changes in market conditions and investor demand. Our auction rate security holdings continue to experience reduced liquidity due to low investor demand. Although our auction rate securities are currently illiquid and other securities could become illiquid, we believe we could liquidate a substantial amount of our portfolio without incurring a material impairment loss.

For fiscal year 2018, the total other-than-temporary impairment losses on available-for-sale debt securities and funds 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 April 27, 2018, we have $321 million of gross unrealized losses on our aggregate available-for-sale debt securities and funds of $7.6 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. See Note 6 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K for additional information.

Our working capital and current ratio at April 27, 2018 increased as compared to April 28, 2017, primarily due to the receipt of $6.1 billion of cash proceeds from the sale of our Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses on July 29, 2017, partially offset by repayments of current and long-term debt obligations and a $1.1 billion income tax pre-payment we elected to make to the U.S. IRS related to in-process litigation on Puerto Rico transfer pricing in fiscal year 2018.

The following table is a summary of our Standard and Poor's Rating Services (S&P) and Moody's Investors Service (Moody's) long-term debt ratings and short-term debt ratings:

	Agency Rating [1]	
	April 27, 2018	April 28, 2017
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 is 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 April 27, 2018 were unchanged as compared to the ratings at April 28, 2017. 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 19 to the consolidated financial statements in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K 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. As a result of the Tax Act, we have removed our permanently reinvested assertion on the historical earnings through April 27, 2018 for legal entities with accumulated earnings subject to the transition tax. We continue to evaluate our permanently reinvested assertion for certain legal entities. 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 $3.5 billion revolving credit facility and related commercial paper program ($698 million of commercial paper outstanding at April 27, 2018), 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

In the normal course of business, we periodically enter into agreements that require us to indemnify customers or suppliers for specific risks, such as claims for injury or property damage arising as a result of our products or the negligence of our personnel or claims alleging that our products infringe third-party patents or other intellectual property. Our maximum exposure under these indemnification provisions is unable to be estimated, and we have not accrued any liabilities within our consolidated financial statements or included any indemnification provisions in the table below. Historically, we have not experienced significant losses on these types of indemnification agreements.

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Presented below is a summary of our off-balance sheet contractual obligations and other minimum commercial commitments at April 27, 2018, as well as long-term contractual obligations reflected in the balance sheet at April 27, 2018.

	Maturity by Fiscal Year						
(in millions)	Total	2019	2020	2021	2022	2023	Thereafter
Contractual obligations related to off-balance sheet arrangements:							
Operating leases	$ 753	$ 234	$ 182	$ 133	$ 87	$ 43	$ 74
Commitments to fund minority investments, milestone payments, and royalty obligations[1]	252	75	76	59	38	3	1
Interest payments[2]	12,331	914	901	806	773	662	8,275
Other[3]	608	355	146	44	16	6	41
Contractual obligations related to off-balance sheet arrangements subtotal	$ 13,944	$ 1,578	$ 1,305	$ 1,042	$ 914	$ 714	$ 8,391
Contractual obligations reflected in the balance sheet:							
Debt obligations[4]	$ 25,026	$ 1,355	$ 3,005	$ 1,120	$ 3,275	$ 1,180	$ 15,091
Capital leases	21	4	4	3	2	2	6
Contingent consideration[5]	173	108	41	14	6	1	3
Tax obligations[6]	2,145	198	160	160	160	160	1,307
Contractual obligations reflected in the balance sheet subtotal[7]	27,365	1,665	3,210	1,297	3,443	1,343	16,407
Total contractual obligations	$ 41,309	$ 3,243	$ 4,515	$ 2,339	$ 4,357	$ 2,057	$ 24,798

(1) Includes commitments related to the funding of cost or equity method investments, estimated milestone payments, and royalty obligations. While it is not certain if and/or when payments will be made, the maturity dates included in the table reflect our best estimates.

(2) Includes the contractual interest payments on our outstanding debt and excludes the impacts of debt premium and discount amortization and interest rate swap agreements. See Note 8 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for additional information on our debt agreements.

(3) Includes inventory purchase commitments and research and development arrangements which are legally binding and specify minimum purchase quantities or spending amounts. These purchase commitments do not exceed our projected requirements and are in the normal course of business. Excludes open purchase orders with a remaining term of less than one year.

(4) Includes the current and non-current portion of our Senior Notes and bank borrowings. Excludes debt premium and discount, the fair value impact of outstanding interest rate swap agreements, unamortized gains from terminated interest rate swap agreements, and commercial paper. See Notes 8 and 9 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for additional information on our debt agreements and interest rate swap agreements, respectively.

(5) Includes the fair value of our current and non-current portions of contingent consideration. While it is not certain if and/or when payments will be made, the maturity dates included in this table reflect our best estimates.

(6) Represents the tax obligations associated with the transition tax that resulted from U.S. Tax Reform. The transition tax will be paid over an eight-year period and will not accrue interest. See Note 14 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for further information.

(7) Excludes defined benefit plan obligations, guarantee obligations, uncertain tax positions, non-current tax liabilities, and litigation settlements for which we cannot make a reliable estimate of the period of cash settlement. For further

information, see Notes 14, 16, and 19 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for further information.

Item 7A. 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, as well as 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 April 27, 2018 and April 28, 2017 was $11.5 billion and $10.8 billion, respectively. At April 27, 2018, these contracts were in a net unrealized loss position of $159 million. A sensitivity analysis of changes in the fair value of all currency exchange rate derivative contracts at April 27, 2018 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 $879 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.

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 April 27, 2018 was comprised of debt predominately denominated in U.S. dollars, of which approximately 95% is fixed rate debt and approximately 5% is floating-rate debt. We are also exposed to interest rate changes affecting our investments in interest rate sensitive instruments, which include our marketable debt securities, fixed-to-floating interest rate swap agreements, and forward starting interest rate swap agreements.

A sensitivity analysis of the impact on our interest rate-sensitive financial instruments of a hypothetical 10 basis point change in interest rates, as compared to interest rates at April 27, 2018, indicates that the fair value of these instruments would correspondingly change by $81 million.

For a discussion of current market conditions and the impact on our financial condition and results of operations, please see the “Liquidity and Capital Resources” section of the Management's Discussion and Analysis in "Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations" in this Annual Report on Form 10-K. For additional discussion of market risk, see Notes 6 and 9 to the consolidated financial statements in “Item 8. Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Medtronic plc:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Medtronic plc and its subsidiaries as of April 27, 2018 and April 28, 2017, and the related consolidated statements of income, comprehensive income, equity and cash flows for each of the three years in the period ended April 27, 2018, including the related notes and schedule of valuation and qualifying accounts for each of the three years in the period ended April 27, 2018 appearing under Item 15(a)(1) (collectively referred to as the “consolidated financial statements”). We also have audited the Company's internal control over financial reporting as of April 27, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of April 27, 2018 and April 28, 2017, and the results of its operations and its cash flows for each of the three years in the period ended April 27, 2018 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of April 27, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Annual Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly

reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the

company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP
Minneapolis, Minnesota
June 22, 2018

We have served as the Company's auditor since 1963.

Medtronic plc
Consolidated Statements of Income

(in millions, except per share data)	Fiscal Year 2018	2017	2016
Net sales	$ 29,953	$ 29,710	$ 28,833
Costs and expenses:			
Cost of products sold	9,055	9,291	9,142
Research and development expense	2,253	2,193	2,224
Selling, general, and administrative expense	9,974	9,711	9,469
Amortization of intangible assets	1,823	1,980	1,931
Restructuring charges, net	30	363	290
Acquisition-related items	104	220	283
Certain litigation charges	61	300	26
Divestiture-related items	114	—	—
Gain on sale of businesses	(697)	—	—
Special charge	80	100	—
Other expense, net	505	222	107
Operating profit	6,651	5,330	5,361
Investment loss	227	—	70
Interest income	(397)	(366)	(431)
Interest expense	1,146	1,094	1,386
Interest expense, net	749	728	955
Income before income taxes	5,675	4,602	4,336
Income tax provision	2,580	578	798
Net income	3,095	4,024	3,538
Net loss attributable to noncontrolling interests	9	4	—
Net income attributable to Medtronic	$ 3,104	$ 4,028	$ 3,538
Basic earnings per share	$ 2.29	$ 2.92	$ 2.51
Diluted earnings per share	$ 2.27	$ 2.89	$ 2.48
Basic weighted average shares outstanding	1,356.7	1,378.9	1,409.6
Diluted weighted average shares outstanding	1,368.2	1,391.4	1,425.9
Cash dividends declared per ordinary share	$ 1.84	$ 1.72	$ 1.52

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

Medtronic plc
Consolidated Statements of Comprehensive Income

(in millions)	Fiscal Year 2018	2017	2016
Net income	$ 3,095	$ 4,024	$ 3,538
Other comprehensive gain (loss), net of tax:			
Unrealized (loss) gain on available-for-sale securities	(103)	38	(121)
Translation adjustment	1,184	(977)	(197)
Net change in retirement obligations	167	68	(66)
Unrealized (loss) gain on derivatives	(218)	127	(300)
Other comprehensive gain (loss)	1,030	(744)	(684)
Comprehensive income including noncontrolling interests	4,125	3,280	2,854
Comprehensive loss attributable to noncontrolling interests	9	3	—
Comprehensive income attributable to Medtronic	$ 4,134	$ 3,283	$ 2,854

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

Medtronic plc
Consolidated Balance Sheets

(in millions)	April 27, 2018	April 28, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 3,669	$ 4,967
Investments	7,558	8,741
Accounts receivable, less allowances of $193 and $155, respectively	5,987	5,591
Inventories, net	3,579	3,338
Other current assets	2,187	1,865
Current assets held for sale	—	371
Total current assets	22,980	24,873
Property, plant, and equipment, net	4,604	4,361
Goodwill	39,543	38,515
Other intangible assets, net	21,723	23,407
Tax assets	1,465	1,550
Other assets	1,078	1,232
Noncurrent assets held for sale	—	5,919
Total assets	$ 91,393	$ 99,857
LIABILITIES AND EQUITY		
Current liabilities:		
Current debt obligations	$ 2,058	$ 7,520
Accounts payable	1,628	1,555
Accrued compensation	1,988	1,904
Accrued income taxes	979	633
Other accrued expenses	3,431	2,618
Current liabilities held for sale	—	34
Total current liabilities	10,084	14,264
Long-term debt	23,699	25,921
Accrued compensation and retirement benefits	1,425	1,724
Accrued income taxes	3,051	2,405
Deferred tax liabilities	1,423	2,978
Other liabilities	889	1,515
Noncurrent liabilities held for sale	—	720
Total liabilities	40,571	49,527
Commitments and contingencies (Notes 2, 17, and 19)		
Shareholders' equity:		
Ordinary shares— par value $0.0001, 2.6 billion shares authorized, 1,354,218,154 and 1,369,424,818 shares issued and outstanding, respectively	—	—
Additional paid-in capital	28,127	29,551
Retained earnings	24,379	23,270
Accumulated other comprehensive loss	(1,786)	(2,613)
Total shareholders' equity	50,720	50,208
Noncontrolling interests	102	122
Total equity	50,822	50,330
Total liabilities and equity	$ 91,393	$ 99,857

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

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Medtronic plc
Consolidated Statements of Equity

(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 24, 2015	1,422	$ —	$ 34,109	$ 20,219	$ (1,184)	$ 53,144	$ —	$ 53,144
Net income	—	—	—	3,538	—	3,538	—	3,538
Other comprehensive loss	—	—	—	—	(684)	(684)	—	(684)
Dividends to shareholders	—	—	—	(2,139)	—	(2,139)	—	(2,139)
Issuance of shares under stock purchase and award plans	15	—	491	—	—	491	—	491
Repurchase of ordinary shares	(38)	—	(2,830)	—	—	(2,830)	—	(2,830)
Tax benefit from exercise of stock-based awards	—	—	82	—	—	82	—	82
Stock-based compensation		—	375	—	—	375	—	375
April 29, 2016	1,399	$ —	$ 32,227	$ 21,618	$ (1,868)	$ 51,977	$ —	$ 51,977
Net income (loss)	—	—	—	4,028	—	4,028	(4)	4,024
Other comprehensive (loss) income	—	—	—	—	(745)	(745)	1	(744)
Dividends to shareholders	—	—	—	(2,376)	—	(2,376)	—	(2,376)
Issuance of shares under stock purchase and award plans	13	—	428	—	—	428	—	428
Repurchase of ordinary shares	(43)	—	(3,544)	—	—	(3,544)	—	(3,544)
Tax benefit from exercise of stock-based awards	—	—	92	—	—	92	—	92
Stock-based compensation	—	—	348	—	—	348	—	348
Changes to noncontrolling ownership interests	—	—	—	—	—	—	125	125
April 28, 2017	1,369	$ —	$ 29,551	$ 23,270	$ (2,613)	$ 50,208	$ 122	$ 50,330
Net income (loss)	—	—	—	3,104	—	3,104	(9)	3,095
Other comprehensive income	—	—	—	—	1,030	1,030	—	1,030
Dividends to shareholders	—	—	—	(2,494)	—	(2,494)	—	(2,494)
Issuance of shares under stock purchase and award plans	10	—	329	—	—	329	—	329
Repurchase of ordinary shares	(25)	—	(2,097)	—	—	(2,097)	—	(2,097)
Stock-based compensation	—	—	344	—	—	344	—	344
Changes to noncontrolling ownership interests	—	—	—	—	—	—	(11)	(11)
Cumulative effect of change in accounting principle [1]	—	—	—	499	(203)	296	—	296

April 27, 2018	1,354	$ —	$ 28,127	$ 24,379	$ (1,786)	$ 50,720	$ 102	$ 50,822

(1) See Note 1 to the consolidated financial statements for discussion regarding the adoption of accounting standards during fiscal year 2018.

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

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Medtronic plc
Consolidated Statements of Cash Flows

	Fiscal Year		
(in millions)	**2018**	**2017**	**2016**
Operating Activities:			
Net income	$ 3,095	$ 4,024	$ 3,538
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	2,644	2,917	2,820
Amortization of debt premium, discount, and issuance costs	(13)	11	29
Acquisition-related items	(31)	(46)	218
Provision for doubtful accounts	52	39	49
Deferred income taxes	(919)	(459)	(460)
Stock-based compensation	344	348	375
Loss on debt extinguishment	38	—	163
Gain on sale of businesses	(697)	—	—
Investment loss	227	—	70
Other, net	117	(93)	(181)
Change in operating assets and liabilities, net of acquisitions and divestitures:			
Accounts receivable, net	(275)	(75)	(435)
Inventories, net	(192)	(227)	(186)
Accounts payable and accrued liabilities	65	356	(379)
Other operating assets and liabilities	229	85	(403)
Net cash provided by operating activities	4,684	6,880	5,218
Investing Activities:			
Acquisitions, net of cash acquired	(137)	(1,324)	(1,213)
Proceeds from sale of businesses	6,058	—	—
Additions to property, plant, and equipment	(1,068)	(1,254)	(1,046)
Purchases of investments	(3,200)	(4,371)	(5,406)
Sales and maturities of investments	4,227	5,356	9,924
Other investing activities, net	(22)	22	(14)
Net cash provided by (used in) investing activities	5,858	(1,571)	2,245
Financing Activities:			
Acquisition-related contingent consideration	(48)	(69)	(22)
Change in current debt obligations, net	(249)	906	7
Repayment of short-term borrowings (maturities greater than 90 days)	(45)	(2)	(139)
Proceeds from short-term borrowings (maturities greater than 90 days)	1	12	139
Issuance of long-term debt	21	2,140	—
Payments on long-term debt	(7,370)	(863)	(5,132)
Dividends to shareholders	(2,494)	(2,376)	(2,139)
Issuance of ordinary shares	403	428	491
Repurchase of ordinary shares	(2,171)	(3,544)	(2,830)
Other financing activities	(2)	85	82
Net cash used in financing activities	(11,954)	(3,283)	(9,543)
Effect of exchange rate changes on cash and cash equivalents	114	65	113
Net change in cash and cash equivalents	(1,298)	2,091	(1,967)
Cash and cash equivalents at beginning of period	4,967	2,876	4,843
Cash and cash equivalents at end of period	$ 3,669	$ 4,967	$ 2,876
Supplemental Cash Flow Information			
Cash paid for:			

Income taxes	$ 2,542	$ 1,029	$ 1,379
Interest	1,147	1,134	1,266

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

Medtronic plc
Notes to Consolidated Financial Statements

1. Summary of Significant Accounting Policies

Nature of Operations Medtronic plc (Medtronic or the Company) is a global leader in medical technology – alleviating pain, restoring health, and extending life for millions of people around the world. The Company provides innovative products and therapies to serve hospitals, physicians, clinicians, and patients. Medtronic was founded in 1949 and is headquartered in Dublin, Ireland.

Principles of Consolidation The 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 fully eliminated in consolidation. Certain reclassifications have been made to prior year financial statements to conform to classifications used in the current year.

Certain consolidated balance sheet amounts related to prior periods have been revised to correct the Company's application of Accounting Standards Codification (ASC) 605, Revenue Recognition, with respect to its accrual for the costs of post-implant support services which are inconsequential deliverables within the arrangements. In accordance with Securities and Exchange Commission Staff Accounting Bulletin (SAB) No. 99, Materiality, and ASC 250, Presentation of Financial Statements, the Company assessed the materiality of this correction and concluded that the accrual for the costs of post-implant support services was not material to prior periods, and therefore, amendments of previously filed reports are not required.

As such, in accordance with ASC 250, the Company revised the previously reported consolidated balance sheets and consolidated statements of equity. The correction had no impact on the previously reported consolidated statements of income, consolidated statements of comprehensive income, or consolidated statements of cash flows for the periods presented, as this error originates in periods prior to those presented. The table below presents the impact of the revision on the Company's previously reported consolidated balance sheets, consolidated statements of equity, and related amounts disclosed in Notes 14, 21, and 22 as follows:

	April 28, 2017		
(in millions)	As Reported	Adjustments	As Revised
Tax assets	$ 1,509	$ 41	$ 1,550
Total assets	99,816	41	99,857
Accrued compensation	1,860	44	1,904
Current liabilities	14,220	44	14,264
Accrued compensation and retirement benefits	1,641	83	1,724
Total liabilities	49,400	127	49,527
Retained earnings	23,356	(86)	23,270
Total shareholders' equity	50,294	(86)	50,208
Total equity	50,416	(86)	50,330
Total liabilities and equity	99,816	41	99,857

As this error originates in periods prior to those presented, previously reported amounts at April 24, 2015 and April 29, 2016 of retained earnings ($20,305 million and $21,704 million, respectively), total shareholders' equity ($53,230 million and $52,063 million, respectively) and total equity ($53,230 million and $52,063 million, respectively), have been reduced by $86 million to reflect the correction above within the consolidated statements of equity.

Use of Estimates The preparation of the consolidated financial statements in conformity with generally accepted accounting principles in the United States (U.S.) (U.S. GAAP) requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes.

Estimates are used when accounting for items such as income taxes, contingencies, intangible asset, and liability valuations. Actual results may or may not differ from those estimates.

Fiscal Year-End The Company utilizes a 52/53-week fiscal year, ending the last Friday in April, for the presentation of its consolidated financial statements and related notes thereto at April 27, 2018 and April 28, 2017 and for each of the three fiscal years ended April 27, 2018 (fiscal year 2018), April 28, 2017 (fiscal year 2017), and April 29, 2016 (fiscal year 2016). Fiscal years 2018 and 2017 were 52-week years. Fiscal year 2016 was a 53-week year, with the additional week occurring in the first quarter.

Cash Equivalents The Company considers highly liquid investments with maturities of three months or less from the date of purchase to be cash equivalents. These investments are carried at cost, which approximates fair value.

Investments Investments in marketable equity securities and certain debt securities, which include corporate debt securities, government and agency securities, mortgage-backed securities, other asset-backed securities, debt funds, and auction rate securities, are classified and accounted for as available-for-sale. These investments are recorded at fair value in the consolidated balance sheets. The change in fair value for available-for-sale securities is recorded, net of taxes, as a component of *accumulated other comprehensive loss* on the consolidated balance sheets. Management determines the appropriate classification of its investments in debt and equity securities at the time of purchase and reevaluates such determinations at each balance sheet date. The classification of marketable securities as current or long-term is based on the nature of the securities and the availability for use in current operations consistent with the Company's management of its capital structure and liquidity.

Certain of the Company's investments in equity and other securities are long-term, strategic investments in companies that are in various stages of development. These investments are included in *other assets* on the consolidated balance sheets. If an investment has no quoted market price, the Company accounts for these investments under the cost or the equity method of accounting. Certain of these investments are publicly traded companies and are accounted for as available-for-sale. The valuation of equity and other securities accounted for under the cost method considers all available financial information related to the investee, including valuations based on recent third-party equity investments in the investee. If an unrealized loss for any investment is considered to be other-than-temporary, the loss is recognized in the consolidated statement of income in the period the determination is made. Equity securities accounted for under the equity method are initially recorded at the amount of the Company's investment and are adjusted each period for the Company's share of the investee's income or loss and dividends paid. Securities accounted for under the cost and equity methods are reviewed quarterly for changes in circumstance or the occurrence of events that suggest the Company's investment may not be recoverable. See Note 6 for a discussion of the gains and losses recognized on equity and other securities.

Accounts Receivable and Allowance for Doubtful Accounts The Company grants credit to customers in the normal course of business and maintains an allowance for doubtful accounts for potential credit losses. When evaluating allowances for doubtful accounts, the Company considers various factors, including historical experience and customer-specific information. Uncollectible accounts are written-off against the allowance when it is deemed that a customer account is uncollectible.

Inventories Inventories are stated at the lower of cost or net realizable value, with cost determined on a first-in, first-out basis. The Company reduces the carrying value of inventories for items that are potentially excess, obsolete, or slow-moving based on changes in customer demand, technology developments, or other economic factors.

Property, Plant, and Equipment Property, plant, and equipment is stated at cost. Additions and improvements that extend the lives of the assets are capitalized, while expenditures for repairs and maintenance are expensed as incurred. The Company assesses property, plant, and equipment for impairment whenever events or changes in circumstances indicate that the carrying amount of property, plant, and equipment asset groupings may not be recoverable. The Company utilizes the straight-line method of depreciation over the estimated useful lives of the various assets. The cost of interest that is incurred in connection with ongoing construction projects is capitalized using a weighted average interest rate. These costs are included in property, plant, and equipment and amortized over the useful life of the related asset.

Goodwill and Intangible Assets Goodwill is the excess of the purchase price over the estimated fair value of net assets of acquired businesses. In accordance with U.S. GAAP, goodwill is not amortized. 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 the carrying amount may be impaired. Impairment testing for goodwill is performed at a reporting unit level. There were no changes in reporting units during fiscal year 2018. 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 calculated the excess of each reporting unit's fair value over its carrying amount, including goodwill, utilizing a discounted cash flow analysis. An impairment loss is recognized when the carrying amount of the reporting unit's net assets exceeds the estimated fair value of the reporting unit.

Intangible assets include patents, trademarks, tradenames, customer relationships, purchased technology, and in-process research and development (IPR&D). Intangible assets with a definite life are amortized on a straight-line basis with estimated useful lives ranging from three to 20 years. Amortization is recognized within *amortization of intangible assets* in the consolidated statements of income. Intangible assets with a definite life are tested for impairment whenever events or changes in circumstances indicate that the carrying amount of an intangible asset (asset group) may not be recoverable. When events or changes in circumstances indicate that the carrying amount 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. Indefinite-lived intangible assets are tested for impairment annually in the third quarter of the fiscal year and whenever events or changes in

circumstances indicate that the carrying amount may be impaired. Impairment is calculated as the excess of the asset's carrying value over its fair value. Fair value is generally determined using a discounted future cash flow analysis.

Acquired IPR&D represents the fair value assigned to those research and development (R&D) projects in development that were acquired in a business combination for which the related products have not received regulatory approval and have no alternative future use. IPR&D is capitalized at its fair value as an indefinite-lived intangible asset, and any development costs incurred after the acquisition are expensed as incurred. The fair value of IPR&D is determined by estimating the future cash flows of each R&D project or technology and discounting the net cash flows back to their present values. Upon achieving regulatory approval or commercial viability for the related technology or product, the indefinite-lived intangible asset is accounted for as a definite-lived asset and is amortized on a straight-line basis over the estimated useful life of the related technology or product. If the R&D project is not completed or the related R&D project is terminated or abandoned, the Company may have an impairment related to the IPR&D which is charged to expense.

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. The Company records contingent consideration at fair value at the date of acquisition based on the consideration expected to be transferred, estimated as the probability-weighted future cash flows, discounted back to present value. The fair value of contingent consideration is measured using projected payment dates, discount rates, probabilities of payment, and projected revenues (for revenue-based considerations). Projected revenues are based on the Company's most recent internal operational budgets and long-range strategic plans. The discount rate used is determined at the time of measurement in accordance with accepted valuation methodologies. Changes in projected revenues, probabilities of payment, discount rates, and projected payment dates may result in adjustments to the fair value measurements. Contingent consideration is remeasured each reporting period using Level 3 inputs, and the change in fair value, including accretion for the passage of time, is recognized as income or expense within *acquisition-related items* 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.

Derivatives The Company recognizes all derivative financial instruments in its consolidated financial statements at fair value in accordance with authoritative guidance on derivatives and hedging, and presents assets and liabilities associated with derivative financial instruments on a gross basis in the consolidated financial statements. For derivative instruments that are designated and qualify as hedging instruments, the hedging instrument must be designated, based upon the exposure being hedged, as a fair value hedge or a cash flow hedge. See Note 9 for more information on the Company's derivative instruments and hedging programs.

Fair Value Measurements The Company follows the authoritative guidance on fair value measurements and disclosures with respect to assets and liabilities that are measured at fair value on both a recurring and nonrecurring basis. Fair value is defined as the exit price, or the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. The authoritative guidance also establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs market participants would use in valuing the asset or liability, based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the factors market participants would use in valuing the asset or liability developed based upon the best information available in the circumstances. The categorization of financial assets and financial liabilities within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The hierarchy is broken down into three levels defined as follows:

- Level 1 - Inputs are quoted prices in active markets for identical assets or liabilities.

- Level 2 - Inputs include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, and inputs (other than quoted prices) that are observable for the asset or liability, either directly or indirectly.

- Level 3 - Inputs are unobservable for the asset or liability.

Financial assets that are classified as Level 1 securities include highly liquid government bonds within U.S. government and agency securities and marketable equity securities for which quoted market prices are available. In addition, the Company classifies currency forward contracts as Level 1 since they are valued using quoted market prices in active markets which have identical assets or liabilities.

The valuation for most fixed maturity securities are classified as Level 2. Financial assets that are classified as Level 2 include corporate debt securities, government and agency securities, other asset-backed securities, debt funds, and mortgage-backed securities whose value is determined using inputs that are observable in the market or may be derived principally from, or corroborated by, observable market data such as pricing for similar securities, recently executed transactions, cash flow models with yield curves, and benchmark securities. In addition, interest rate swaps and total return swaps are included in Level 2 as the Company uses inputs other than quoted prices that are observable for the asset. The Level 2 derivative instruments are primarily valued using standard calculations and models that use readily observable market data as their basis.

Financial assets are considered Level 3 when their fair values are determined using pricing models, discounted cash flow methodologies, or similar techniques, and at least one significant model assumption or input is unobservable. Financial assets that are classified as Level 3 financial assets include certain investment securities for which there is limited market activity such that the determination of fair value requires significant judgment or estimation, certain corporate debt securities and auction rate securities. With the exception of auction rate securities, these securities are valued using third-party pricing sources that incorporate transaction details such as contractual terms, maturity, timing, and amount of expected future cash flows, as well as assumptions about liquidity and credit valuation adjustments by market participants. The fair value of auction rate securities is estimated by the Company using a discounted cash flow model, which incorporates significant unobservable inputs. The significant unobservable inputs used in the fair value measurement of the Company's auction rate securities are years to principal recovery and the illiquidity premium that is incorporated into the discount rate.

Certain investments for which the fair value is measured using the net asset value per share (or its equivalent) practical expedient are excluded from the fair value hierarchy. Financial assets for which the fair value is measured using the net asset value per share practical expedient include certain debt funds, equity and fixed income commingled trusts, and registered investment companies.

Self-Insurance The Company self-insures the majority of its insurable risks, including medical and dental costs, disability coverage, physical loss to property, business interruptions, workers' compensation, comprehensive general, and product liability. Insurance coverage is obtained for risks required to be insured by law or contract. The Company uses claims data and historical experience, as applicable, to estimate liabilities associated with the exposures that the Company has self-insured.

Retirement Benefit Plan Assumptions 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. See Note 16 for assumptions used in determining pension and post-retirement benefit costs.

The Company utilizes a full yield curve approach methodology to estimate the service and interest cost components of net periodic pension cost and net periodic post-retirement benefit cost for the Company's pension and other post-retirement benefits. The full yield curve approach applies specific spot rates along the yield curve to their underlying projected cash flows in estimation of the cost components.

Revenue Recognition The Company sells its products through direct sales representatives and independent distributors. Additionally, a portion of the Company's revenue is generated from consignment inventory maintained at hospitals or with field representatives. The Company recognizes revenue when control is transferred to a customer. For products sold through direct sales representatives and independent distributors, control is transferred upon shipment or upon delivery, based on the contract terms and legal requirements. For consignment inventory, revenue is recognized at the time the product has been used or implanted.

The amount of revenue recognized reflects estimated sales rebates and returns, which are estimated based on sales terms, historical experience, and trend analysis. In estimating rebates, the Company considers the lag time between the point of sale and the payment of the rebate claim, contractual commitments, including stated rebate rates, and

other relevant information. The Company adjusts reserves to reflect differences between estimated and actual experience, and records such adjustment as increases or decrease of revenue in the period of adjustment.

In certain circumstances, the Company enters into arrangements in which multiple deliverables are provided to customers. Under multiple deliverable arrangements, the Company recognizes revenue in accordance with the principles described above and allocates the revenue based on the relative selling price of each deliverable, which is based on vendor specific objective evidence.

Shipping and Handling Shipping and handling costs incurred to physically move product from the Company's premises to the customer's premises are recognized in *selling, general, and administrative expense* in the consolidated statements of income and were $363 million, $370 million, and $316 million in fiscal years 2018, 2017, and 2016, respectively. Other shipping and handling costs incurred to store, move, and prepare products for shipment are recognized in *cost of products sold* in the consolidated statements of income.

Research and Development Research and development costs are expensed when incurred. Research and development costs include costs of other research, engineering, and technical activities to develop a new product or service or make significant improvement to an existing product or manufacturing process. Research and development costs also include pre-approval regulatory and clinical trial expenses.

Contingencies The Company records a liability in the consolidated financial statements for loss contingencies 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. Insurance recoveries related to potential claims are recognized up to the amount of the recorded liability when coverage is confirmed and the estimated recoveries are probable of payment. These recoveries are not netted against the related liabilities for financial statement presentation.

Income Taxes The Company has deferred taxes that arise as a result of the different treatment of transactions for U.S. GAAP and income tax accounting, known as temporary differences. The Company records the tax effect of these temporary differences as deferred tax assets and deferred tax liabilities. Deferred tax assets generally represent items that may be used as a tax deduction or credit in a tax return in future years for which the Company has already recognized the tax benefit in the consolidated statements of income. The Company establishes valuation allowances for deferred tax assets when the amount of expected future taxable income is not likely to support the use of the deduction or credit. Deferred tax liabilities generally represent tax expense for which payment has been deferred or expense has already been taken as a deduction on the Company’s tax return but has not yet been recognized as an expense in the consolidated statements of income.

Other Expense, Net *Other expense, net* includes royalty income and expense, realized equity security gains and losses, intangible asset impairments, currency transaction and derivative gains and losses, Puerto Rico excise tax, and other income not central to the Company's operations.

Currency Translation Assets and liabilities of non-U.S. dollar functional currency entities are translated to U.S. dollars at period-end exchange rates, and the currency impacts arising from the translation of the assets and liabilities are recorded as a cumulative translation adjustment, a component of *accumulated other comprehensive loss,* on the consolidated balance sheets. Elements of the consolidated statements of income are translated at the average monthly currency exchange rates in effect during the period. Currency transaction gains and losses are included in *other expense, net* in the consolidated statements of income.

Stock-Based Compensation The Company measures stock-based compensation expense at the grant date based on the fair value of the award and recognizes the compensation expense over the requisite service period, which is generally the vesting period. The amount of stock-based compensation expense recognized during a period is based on the portion of the awards that are expected to vest. The Company estimates pre-vesting forfeitures at the time of grant and revises the estimates in subsequent periods.

New Accounting Standards

Recently Adopted

In March 2016, the Financial Accounting Standards Board (FASB) issued guidance to simplify the accounting for share-based payment transactions by requiring all excess tax benefits and deficiencies to be recognized in income tax expense or benefit in earnings; eliminating the requirement to classify the excess tax benefits and deficiencies as additional paid-in capital. Cash flows related to excess tax benefits are to be classified in operating activities in the statement of cash flows rather than financing. Under the new guidance, an entity makes an accounting policy election to either estimate the expected forfeiture awards or account for forfeitures as they occur. The standard also allows an entity to withhold up to the maximum statutory tax rate and classify the awards as equity. The Company

prospectively adopted this guidance in the first quarter of fiscal year 2018. The Company has elected to continue to estimate forfeitures.

In October 2016, the FASB issued guidance that requires the tax effect of intra-entity transactions, other than sales of inventory, to be recognized when the transaction occurs. Previously, U.S. GAAP prohibited the recognition of current and deferred income taxes associated with an intra-entity asset transfer until an asset had been sold to a third-party. This update requires an entity to recognize the income tax consequences of an intra-entity transfer of an asset, such as equipment or intangibles, when the transfer occurs. The adoption of this guidance is to be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. The Company has early-adopted this guidance, as permitted, in the first quarter of fiscal year 2018. As a result of this adoption, the Company increased its beginning retained earnings by $296 million.

In February 2018, the FASB issued accounting guidance which allows for reclassification from accumulated other comprehensive income (AOCI) to retained earnings for stranded tax effects resulting from the enactment of comprehensive U.S. tax legislation, commonly referred to as the Tax Cuts and Jobs Act (the Tax Act), and can be applied either in the period of adoption or retrospectively to all applicable periods. The Company early-adopted this guidance in the fourth quarter of fiscal year 2018 and reclassified the stranded income tax effects of the Tax Act, increasing the accumulated other comprehensive loss by $203 million with a corresponding increase to retained earnings. The reclassification was primarily comprised of amounts relating to retirement benefit plans and available-for-sale securities. In accordance with its accounting policy, the Company releases other disproportionate income tax effects from accumulated other comprehensive loss once the reason the tax effects were established ceases to exist.

In March 2018, the FASB issued accounting guidance which incorporates Securities and Exchange Commission Staff Accounting Bulletin No. 118 into U.S. GAAP, allowing a measurement period, not to exceed one year, to finalize the accounting for the income tax impacts of the Tax Act. This guidance is effective immediately and requires adjustments to provisional amounts that were previously recorded as new information becomes available. The Company has adopted this standard and will continue to evaluate indicators that may give rise to a change in the tax provision as a result of the Tax Act.

Not Yet Adopted

In May 2014, the FASB issued amended revenue recognition guidance to clarify the principles for recognizing revenue from contracts with customers. The guidance requires an entity to recognize revenue in an amount that reflects the consideration to which an entity expects to be entitled in exchange for the transfer of goods or services. The guidance also requires expanded disclosures relating to the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. Additionally, qualitative and quantitative disclosures are required about customer contracts, significant judgments and changes in judgments, and assets recognized from the costs to obtain or fulfill a contract. This accounting guidance is effective for the Company beginning in the first quarter of fiscal year 2019, and may be applied either retrospectively to each prior reporting period presented (full retrospective method), or retrospectively with the cumulative effect of the change recognized at the date of initial application (modified retrospective method). The Company will adopt this guidance under the modified retrospective method. The Company does not expect the adoption of the amended guidance to have a material impact on the Company's consolidated financial statements. The Company will make additional revenue related disclosures in the footnotes to the Company’s consolidated financial statements upon adoption in the first quarter of fiscal year 2019.

In January 2016, the FASB issued guidance which 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. The guidance also includes a simplified impairment assessment of equity investments without readily determinable fair values and presentation and disclosure changes. This accounting guidance is effective for the Company beginning in the first quarter of fiscal year 2019. The Company expects a reclassification of approximately $83 million, net of taxes, from accumulated other comprehensive loss to the opening balance of retained earnings upon adoption in the first quarter of fiscal year 2019.

In February 2016, the FASB issued guidance which requires lessees to recognize right-of-use assets and lease liabilities on the balance sheet. The guidance is to be applied using a modified retrospective approach and is effective for the Company beginning in the first quarter of fiscal year 2020. Early adoption is permitted. The Company is evaluating the impact of the lease guidance on the Company's consolidated financial statements and anticipates recording additional assets and corresponding liabilities on its consolidated balance sheets related to operating leases within its lease portfolio upon adoption of the guidance.

2. Acquisitions and Acquisition-Related Items

The Company accounts for acquisitions of businesses using the acquisition method of accounting. The assets and liabilities of businesses acquired are 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 the business. The pro forma impact of acquisitions during fiscal year 2018 was not significant, either individually or in the aggregate, to the results of the Company. 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.

On August 23, 2016, the Company's Cardiac and Vascular Group acquired HeartWare International, Inc. (HeartWare), a medical device company that develops and manufactures miniaturized implantable heart pumps, or ventricular assist devices, to treat patients around the world suffering from advanced heart failure. Total consideration for the transaction was approximately $1.1 billion. Based upon an acquisition valuation, the Company acquired $602 million of technology-based and customer-related intangible assets and $23 million of tradenames, with estimated useful lives of 15 and 5 years, respectively, and $481 million of goodwill. The acquired goodwill is not deductible for tax purposes. In addition, the Company acquired $245 million of debt through the acquisition, of which the Company redeemed $203 million as part of a cash tender offer in August 2016, and the remaining $42 million of debt acquired was repaid in December 2017. During the measurement period, which ended on August 22, 2017, adjustments were made to finalize the allocation of purchase price related to other assets, goodwill, and contingent liabilities.

The acquisition date fair values of the assets acquired and liabilities acquired were as follows:

(in millions)	HeartWare International, Inc.	All Other
Other current assets	$ 351	$ 3
Property, plant, and equipment	14	6
Other intangible assets	625	95
Goodwill	481	52
Other assets	84	—
Total assets acquired	1,555	156
Current liabilities	143	2
Deferred tax liabilities	6	2
Long-term debt	245	—
Other liabilities	89	—
Total liabilities assumed	483	4
Net assets acquired	$ 1,072	$ 152

For additional information on acquisitions in fiscal year 2017, see Note 2 to the consolidated financial statements included in the Company's Annual report on Form 10-K for the fiscal year ended April 28, 2017.

Acquisition-Related Items

Acquisition-related items includes expenses incurred in connection with the integration of Covidien, the Company's $50.0 billion acquisition completed in the fourth quarter of fiscal year 2015, transaction expenses incurred in connection with business acquisitions, and changes in the fair value of contingent consideration. During fiscal year 2018, the Company recognized acquisition-related items expense of $132 million, including $28 million recognized within *cost of products sold*, in the consolidated statements of income. During fiscal year 2018, acquisition-related items expense includes $172 million of costs associated with the integration of Covidien manufacturing, distribution, and administrative facilities, as well as information technology system implementation and benefits harmonization, partially offset by changes in fair value of contingent consideration as a result of revised revenue forecasts and the timing of anticipated regulatory milestones.

During fiscal year 2017, the Company recognized acquisition-related items expense of $230 million, including $10 million recognized within *cost of products sold*, in the consolidated statements of income. During fiscal year 2017, acquisition-related items expense includes $225 million of costs associated with the integration of Covidien manufacturing, distribution, and administrative facilities, as well as information technology system implementation and benefits harmonization, $23 million of accelerated or incremental stock compensation expense, and expenses incurred in connection with the HeartWare acquisition and planned divestiture of the Patient Care, Deep Vein, Thrombosis, and Nutritional Insufficiency businesses, partially offset by changes in fair value of contingent consideration as a result of revised revenue forecasts and the timing of anticipated regulatory milestones.

During fiscal year 2016, the Company recognized acquisition-related items expense of $283 million, including $219 million of costs associated with the integration of Covidien manufacturing, distribution, and administrative facilities, as well as information technology system implementation and benefits harmonization, and $58 million of accelerated or incremental stock compensation expense.

Contingent Consideration

The fair value of contingent consideration at April 27, 2018 and April 28, 2017 was $173 million and $246 million, respectively. At April 27, 2018, $65 million was reflected in *other liabilities* and $108 million was reflected in *other accrued expenses* in the consolidated balance sheets. At April 28, 2017, $180 million was reflected in *other liabilities* and $66 million was reflected in *other accrued expenses* in the consolidated balance sheets.

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

	Fiscal Year	
(in millions)	**2018**	**2017**
Beginning Balance	$ 246	$ 377
Purchase price contingent consideration	28	28
Contingent consideration payments	(72)	(76)
Change in fair value of contingent consideration	(29)	(83)
Ending Balance	$ 173	$ 246

The recurring Level 3 fair value measurements of contingent consideration include the following significant unobservable inputs:

(in millions)	**Fair Value at April 27, 2018**	**Valuation Technique**	**Unobservable Input**	**Range**
			Discount rate	11.5% - 32.5%
Revenue-based payments	$ 90	Discounted cash flow	Probability of payment	30% - 100%
			Projected fiscal year of payment	2019 - 2026

			Discount rate	5.5%
Product development-based payments	$ 83	Discounted cash flow	Probability of payment	75% - 100%
			Projected fiscal year of payment	2019 - 2026

3. Divestiture and Divestiture-Related Items

Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency Businesses

In April 2017, the Company entered into a definitive agreement for the sale of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses within the Minimally Invasive Therapies Group segment to Cardinal Health, Inc. (Cardinal). The divestiture was completed on July 29, 2017. As a result of the transaction, the Company received proceeds of $6.1 billion, which was recorded in *proceeds from sale of businesses* in the consolidated statements of cash flows and recognized a before-tax gain of $697 million, which was recognized within *gain on sale of businesses* in the consolidated statements of income. Among the product lines included in the divestiture were the dental and animal health, chart paper, wound care, incontinence, electrodes, SharpSafety, thermometry, perinatal protection, blood collection, compression, and enteral feeding offerings. The divestiture also included 17 dedicated manufacturing sites. In connection with the transaction, the Company entered into Transition Service Agreements (TSAs) and Transition Manufacturing Agreements (TMAs) with Cardinal designed to ensure and facilitate an orderly transfer of business operations. The TSAs are primarily related to administrative services and continue for 12 months from the divestiture date, with some TSAs extendable beyond the original 12 month period per the original agreement. Certain of the TSAs have been extended beyond the initial 12 month period in accordance with the provisions of the original agreement. Under the TMAs, both the Company and Cardinal will manufacture and supply certain products to each other for a transition period of up to 5 years.

The divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses did not meet the criteria to be classified as discontinued operations, and as such, the results of operations of these businesses were included within net income through the date of the divestiture. The Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses met the criteria to be classified as held for sale in the fourth quarter of fiscal year 2017, at which time the Company ceased depreciation and amortization of property, plant, and equipment and intangible assets classified as held for sale. The following table presents information related to the assets and liabilities that were classified as held for sale in the consolidated balance sheets:

(in millions)	April 28, 2017
Inventories, net	$ 371
Property, plant, and equipment, net	689
Goodwill	2,910
Other intangible assets, net	2,320
Total assets held for sale	$ 6,290
Other accrued expenses	$ 34
Accrued compensation and retirement benefits	12
Deferred tax liabilities	707
Other liabilities	1
Total liabilities held for sale	$ 754

Divestiture-Related Items

Divestiture-related items include expenses incurred in connection with the divestiture of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses. During fiscal year 2018, the Company recognized divestiture-related items expense of $114 million, primarily comprised of expenses incurred for professional services, including banker, legal, tax, and advisory fees, and $16 million of accelerated stock compensation expense related to the

acceleration of the vesting period for employees that transferred with the divestiture. There was no divestiture-related items expense for fiscal years 2017 or 2016.

4. Restructuring Charges

Enterprise Excellence

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 associated with the restructuring program 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 restructuring 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. During fiscal year 2018, the Company recognized $96 million in charges.

The following table summarizes the activity related to the Enterprise Excellence restructuring program for fiscal year 2018:

(in millions)	Employee Termination Benefits	Associated Costs[1]	Total
April 28, 2017	$ —	$ —	$ —
Charges	35	61	96
Cash payments	(8)	(59)	(67)
April 27, 2018	$ 27	$ 2	$ 29

(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. For fiscal year 2018, $28 million was recognized within *cost of products sold* and $33 million was recognized within *selling, general, and administrative expense* in the consolidated statements of income.

Cost Synergies

The cost synergies program related to administrative office optimization, manufacturing and supply chain infrastructure, and certain general and administrative savings was achieved as part of the Covidien integration and completed in the third quarter of fiscal year 2018. Restructuring charges incurred throughout the life of the initiative affecting all segments were primarily related to employee termination costs and costs related to manufacturing and facility closures.

A summary of the restructuring accrual and related activity is presented below:

(in millions)	Employee Termination Benefits	Asset Write-downs	Other Costs	Total
April 24, 2015	$ 136	$ —	$ 7	$ 143
Charges	248	23	61	332
Cash payments	(153)	—	(31)	(184)
Settled non-cash	—	(23)	—	(23)
Accrual adjustments	(18)	—	—	(18)
April 29, 2016	$ 213	$ —	$ 37	$ 250
Charges	287	27	54	368
Cash payments	(179)	—	(53)	(232)
Settled non-cash	—	(27)	$ —	(27)
Accrual adjustments	(60)	—	(8)	(68)
April 28, 2017	$ 261	$ —	$ 30	$ 291
Charges	25	—	20	45
Cash payments	(132)	—	(32)	(164)
Accrual adjustments	(38)	—	4	(34)
April 27, 2018	$ 116	$ —	$ 22	$ 138

For fiscal year 2018, the Company recognized $45 million in charges, partially offset by accrual adjustments of $34 million. Accrual adjustments related to certain employees identified for termination finding other positions within the Company, cancellations of employee terminations, and employee termination benefits being less than initially estimated. For fiscal year 2018, charges included $12 million recognized within *cost of products sold* and $4 million recognized within *selling, general and administrative expense* in the consolidated statements of income.

For fiscal year 2017, the Company recognized $441 million in charges, which included $73 million of incremental defined benefit pension and post-retirement related expenses for employees that accepted voluntary early retirement packages. These costs are not included in the table summarizing the restructuring costs above, because they are associated with costs that are accounted for under the pension and post-retirement rules. See Note 16 for further discussion on the incremental defined benefit pension and post-retirement related expenses. The charges recognized during fiscal year 2017 were partially offset by accrual adjustments of $68 million. Accrual adjustments relate to certain employees identified for termination finding other positions within the Company, cancellations of employee terminations, and employee termination benefits being less than initially estimated. For fiscal year 2017, asset write-downs included $17 million of property, plant, and equipment impairments. Fiscal year 2017 asset write-downs also included $10 million of inventory write-offs of discontinued product lines recognized within *cost of products sold* in the consolidated statements of income.

For fiscal year 2016, the Company recognized $332 million in charges, partially offset by accrual adjustments of $18 million. Accrual adjustments relate to certain employees identified for termination finding other positions within the Company, cancellations of employee terminations, and employee termination benefits being less than initially estimated. For fiscal year 2016, asset write-downs included $14 million of property, plant, and equipment impairments. Fiscal year 2016 assets write-downs also included $9 million of inventory write-offs of discontinued product lines recognized within *cost of products sold* in the consolidated statements of income.

5. Special Charge

Continuing the Company's commitment to improve the health of people and communities throughout the world, the Company recognized a charge of $80 million in fiscal year 2018 and $100 million in fiscal year 2017 for charitable contributions to the Medtronic Foundation.

6. Financial Instruments

The Company holds investments, including marketable debt and equity securities, that are classified and accounted for as available-for-sale and are remeasured on a recurring basis. The Company also holds cost method, equity method, and other investments which are measured at fair value on a nonrecurring basis. Refer to Note 1 for information regarding valuation techniques and inputs used in the fair value measurements.

The following table summarizes the Company's investments by significant investment category and consolidated balance sheet classification at April 27, 2018:

	Valuation				Balance Sheet Classification	
(in millions)	Cost	Unrealized Gains	Unrealized Losses	Fair Value	Investments	Other Assets
Available-for-sale securities						
Level 1:						
U.S. government and agency securities	$ 732	$ —	$ (26)	$ 706	$ 706	$ —
Marketable equity securities	63	99	—	162	—	162
Total Level 1	795	99	(26)	868	706	162
Level 2:						
Corporate debt securities	4,179	20	(75)	4,124	4,124	—
U.S. government and agency securities	848	—	(24)	824	824	—
Mortgage-backed securities	725	2	(34)	693	693	—
Non-U.S. government and agency securities	74	—	(1)	73	73	—
Other asset-backed securities	358	—	(2)	356	356	—
Debt funds	739	—	(154)	585	585	—
Total Level 2	6,923	22	(290)	6,655	6,655	—
Level 3:						
Auction rate securities	47	—	(3)	44	—	44
Total Level 3	47	—	(3)	44	—	44
Investments measured at net asset value[1]:						
Debt funds	199	—	(2)	197	197	—
Total available-for-sale securities	7,964	121	(321)	7,764	7,558	206
Cost method, equity method, and other investments:						
Level 3:						
Cost method, equity method, and other investments	353	—	—	N/A	—	353
Total Level 3:	353	—	—	N/A	—	353
Total cost method, equity method, and other investments	353	—	—	N/A	—	353
Total investments	$ 8,317	$ 121	$ (321)	$ 7,764	$ 7,558	$ 559

(1) Certain investments that are measured at the net asset value per share (or its equivalent) as a practical expedient are excluded from the fair value hierarchy. The fair value amounts presented herein are intended to permit reconciliation to the consolidated balance sheets.

The following table summarizes the Company's investments by significant investment category and consolidated balance sheet classification at April 28, 2017:

	Valuation				Balance Sheet Classification	
(in millions)	Cost	Unrealized Gains	Unrealized Losses	Fair Value	Investments	Other Assets
Available-for-sale securities:						
Level 1:						
U.S. government and agency securities	$ 613	$ 2	$ (5)	$ 610	$ 610	$ —
Marketable equity securities	58	49	(4)	103	—	103
Total Level 1	671	51	(9)	713	610	103
Level 2:						
Corporate debt securities	4,643	62	(23)	4,682	4,682	—
U.S. government and agency securities	860	—	(10)	850	850	—
Mortgage-backed securities	766	9	(16)	759	759	—
Non-U.S. government and agency securities	49	—	—	49	49	—
Other asset-backed securities	228	1	(1)	228	228	—
Debt funds	1,246	4	(178)	1,072	1,072	—
Total Level 2	7,792	76	(228)	7,640	7,640	—
Level 3:						
Auction rate securities	47	—	(3)	44	—	44
Corporate debt securities	1	—	—	1	—	1
Total Level 3	48	—	(3)	45	—	45
Investments measured at net asset value[1]:						
Debt funds	497	—	(6)	491	491	—
Total available-for-sale securities	9,008	127	(246)	8,889	8,741	148
Cost method, equity method, and other investments:						
Level 3:						
Cost method, equity method, and other investments	589	—	—	N/A	—	589
Total Level 3	589	—	—	N/A	—	589
Total cost method, equity method, and other investments	589	—	—	N/A	—	589
Total investments	$ 9,597	$ 127	$ (246)	$ 8,889	$ 8,741	$ 737

(1) Certain investments that are measured at the net asset value per share (or its equivalent) as a practical expedient are excluded from the fair value hierarchy. The fair value amounts presented herein are intended to permit reconciliation to the consolidated balance sheets.

Marketable Debt and Equity Securities

The following tables present the gross unrealized losses and fair values of the Company's available-for-sale securities that have been in a continuous unrealized loss position deemed to be temporary, aggregated by investment category, at April 27, 2018 and April 28, 2017:

	April 27, 2018			
	Less than 12 months		More than 12 months	
(in millions)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Corporate debt securities	$ 2,620	$ (58)	$ 272	$ (17)
U.S. government and agency securities	762	(33)	374	(17)
Mortgage-backed securities	442	(15)	102	(19)
Non-U.S. government and agency securities	32	—	36	(1)
Other asset-backed securities	238	(1)	63	(1)
Debt funds	7	—	775	(156)
Auction rate securities	—	—	44	(3)
Total	$ 4,101	$ (107)	$ 1,666	$ (214)

	April 28, 2017			
	Less than 12 months		More than 12 months	
(in millions)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Corporate debt securities	$ 1,263	$ (19)	$ 46	$ (4)
U.S. government and agency securities	896	(15)	—	—
Mortgage-backed securities	276	(4)	95	(12)
Other asset-backed securities	127	(1)	—	—
Debt funds	173	(1)	1,125	(183)
Auction rate securities	—	—	44	(3)
Marketable equity securities	14	(3)	2	(1)
Total	$ 2,749	$ (43)	$ 1,312	$ (203)

The following table presents the unobservable inputs utilized in the fair value measurement of the auction rate securities classified as Level 3 at April 27, 2018:

	Valuation Technique	Unobservable Input	Range (Weighted Average)
Auction rate securities	Discounted cash flow	Years to principal recovery	2 yrs. - 12 yrs. (3 yrs.)
		Illiquidity premium	6%

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 fiscal years 2018 or 2017. 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.

The following tables provide a reconciliation of the beginning and ending balances of items measured at fair value on a recurring basis that used significant unobservable inputs (Level 3):

(in millions)	Total Level 3 Investments	Corporate Debt Securities	Auction Rate Securities
April 29, 2016	$ 45	$ 1	$ 44
Settlements	—	—	—
April 28, 2017	45	1	44
Settlements	(1)	(1)	—
April 27, 2018	$ 44	$ —	$ 44

Activity related to the Company's investment portfolio was as follows:

	Fiscal Year					
	2018		2017		2016	
(in millions)	Debt[1]	Equity[2]	Debt[1]	Equity[2]	Debt[1]	Equity[2]
Proceeds from sales	$ 4,114	$ 113	$ 5,224	$ 132	$ 9,881	$ 42
Gross realized gains	30	15	75	49	36	38
Gross realized losses	(25)	—	(56)	—	(53)	—
Recognized impairment losses	—	(231)	—	(30)	—	(114)

(1) Includes available-for-sale debt securities and debt funds.

(2) Includes marketable equity securities, cost method, equity method, exchange-traded funds, and other investments.

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 April 27, 2018 and April 28, 2017, the credit loss portion of other-than temporary impairments on debt securities was not significant. The total reductions for available-for-sale debt securities sold during fiscal years 2018 and 2017 were not significant.

The April 27, 2018 balance of available-for-sale debt securities, excluding debt funds which have no single maturity date, 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)	April 27, 2018
Due in one year or less	$ 887
Due after one year through five years	2,687
Due after five years through ten years	3,138
Due after ten years	108
Total debt securities	$ 6,820

The Company holds investments in marketable equity securities, which are classified as *other assets* in the consolidated balance sheets. At April 27, 2018 and April 28, 2017, the aggregate carrying amount of these investments was $162 million and $103 million, respectively. The Company did not recognize any significant impairment charges related to marketable equity securities during fiscal years 2018, 2017, or 2016.

Cost Method, Equity Method, and Other Investments

The Company holds investments in equity and other securities that are accounted for using the cost or equity method, which are classified as *other assets* in the consolidated balance sheets. At April 27, 2018 and April 28, 2017, the aggregate carrying amount of equity and other securities accounted for using the cost or equity method was $353 million and $589 million, respectively. Cost and equity method investments are measured at fair value on a nonrecurring basis. Changes in circumstance or the occurrence of events that suggest the Company's investment may not be recoverable are assessed quarterly. If events or changes in circumstances are identified that may have a material adverse effect on the fair value of the investment, the investment is assessed for impairment. Cost and equity method investments 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.

During fiscal year 2018, the Company received bids from potential buyers and investors for some or all of its ownership in a portfolio of selected investments, which indicated that the fair values of certain of the underlying cost and equity method investments in the portfolio may be below the respective carrying values. The Company determined that the decline in the fair values was other-than-temporary given the uncertainty regarding the Company's intent to hold the investments for a period of time that would be sufficient to recover the carrying values. As a result, the Company recognized impairment charges of $227 million during fiscal year 2018, which were recognized within *investment loss* in the consolidated statements of income. The fair values of the investments were determined based on Level 3 inputs. The carrying value of the investments prior to recognizing the impairment charges was $317 million. In April 2018, the Company transferred the portfolio of investments into a newly created, wholly-owned entity. In a subsequent transaction, the Company sold a significant interest in the new entity in exchange for cash proceeds of $72 million. The Company's remaining investment in the entity of $18 million is accounted for using the equity method. No gain or loss was recognized on the transaction.

During fiscal year 2016, the Company recognized an impairment charge of $70 million related to the impairment of a debt investment accounted for using the cost method, which was recognized within *investment loss* in the consolidated statements of income. There were no other significant impairment charges recognized during fiscal years 2018, 2017, and 2016.

7. 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 29, 2016	$ 6,243	$ 23,784	$ 9,620	$ 1,853	$ 41,500
Goodwill as a result of acquisitions	457	242	33	—	732
Currency translation	(49)	(705)	(53)	—	(807)
Goodwill reclassified to noncurrent assets held for sale	—	(2,910)	—	—	(2,910)
April 28, 2017	6,651	20,411	9,600	1,853	38,515
Goodwill as a result of acquisitions	6	10	9	27	52
Purchase accounting adjustments	54	—	—	—	54
Currency translation	80	734	108	—	922

April 27, 2018	$ 6,791	$ 21,155	$ 9,717	$ 1,880	$ 39,543

The Company did not recognize any goodwill impairments during fiscal years 2018, 2017, or 2016.

Intangible Assets

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

(in millions)	April 27, 2018 Gross Carrying Amount	April 27, 2018 Accumulated Amortization	April 28, 2017 Gross Carrying Amount	April 28, 2017 Accumulated Amortization
Definite-lived:				
Customer-related	$ 16,949	$ (3,139)	$ 16,862	$ (2,166)
Purchased technology and patents	11,569	(4,441)	11,461	(3,690)
Trademarks and tradenames	822	(569)	772	(461)
Other	94	(52)	77	(42)
Total	$ 29,434	$ (8,201)	$ 29,172	$ (6,359)
Indefinite-lived:				
IPR&D	$ 490		$ 594	

The Company did not recognize any definite-lived intangible asset impairments during fiscal years 2018, 2017, or 2016. During fiscal year 2018, the Company recognized impairment losses on indefinite-lived intangibles of $68 million as a result of the discontinuation of certain IPR&D projects within the Restorative Therapies Group segment, which were recognized within *other expense, net* in the consolidated statements of income. The Company did not recognize any significant indefinite-lived asset impairments during fiscal years 2017 or 2016. 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 such clinical trials, delays or failures to obtain required market clearances or other failures to achieve a commercially viable product, or the discontinuation of certain projects, and as a result, may recognize impairment losses in the future.

Amortization

Intangible asset amortization expense for fiscal years 2018, 2017, and 2016 was $1.8 billion, $2.0 billion, and $1.9 billion, respectively. Estimated aggregate amortization expense by fiscal year based on the current carrying value and remaining estimated useful lives of definite-lived intangible assets at April 27, 2018, excluding any possible future amortization associated with acquired IPR&D which has not met technological feasibility, is as follows:

(in millions)	Amortization Expense
2019	$ 1,633
2020	1,583
2021	1,568
2022	1,548
2023	1,481

8. Financing Arrangements

Current debt obligations consisted of the following:

(in millions)	April 27, 2018	April 28, 2017
Bank borrowings	$ 355	$ 396
Capital lease obligations	5	5
Commercial paper	698	901
1.700 percent two-year 2017 senior notes	1,000	—
Three-year term loan	—	3,000
6.000 percent ten-year 2008 CIFSA senior notes	—	1,150
1.500 percent three-year 2015 senior notes	—	1,000
1.375 percent five-year 2013 senior notes	—	1,000
3.500 percent seven-year 2010 HTWR senior notes	—	42
Debt premium, net	—	26
Current debt obligations	$ 2,058	$ 7,520

Bank Borrowings Outstanding bank borrowings at April 27, 2018 were short-term advances to certain non-U.S. subsidiaries under credit agreements with various banks. Bank borrowings consist primarily of borrowings in Japanese Yen at interest rates ranging from 0.17% to 0.21%, and the borrowing is a natural hedge of currency and exchange rate risk.

Commercial Paper On January 26, 2015, Medtronic Global Holdings S.C.A. (Medtronic Luxco), an entity organized under the laws of Luxembourg, entered into various agreements pursuant to which Medtronic Luxco may issue unsecured commercial paper notes (the 2015 Commercial Paper Program) on a private placement basis up to a maximum aggregate amount outstanding at any time of $3.5 billion. The Company and Medtronic, Inc. have guaranteed the obligations of Medtronic Luxco under the 2015 Commercial Paper Program.

Commercial paper outstanding at April 27, 2018 was $698 million, as compared to $901 million at April 28, 2017. During fiscal years 2018 and 2017, the weighted average original maturity of the commercial paper outstanding was approximately 28 days and 39 days, respectively, and the weighted average interest rate was 1.46 percent and 0.89 percent, respectively. The issuance of commercial paper reduces the amount of credit available under the Company's existing Credit Facility, defined below.

Line of Credit The Company has a $3.5 billion five year revolving syndicated line of credit facility (Credit Facility), by and among Medtronic, Medtronic, Inc., Medtronic Luxco, the lenders from time to time party thereto and Bank of America, N.A., as administrative agent and issuing bank, which expires in January 2020. The Credit Facility provides the Company with the ability to increase its borrowing capacity by an additional $500 million 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, the Company could also request a one-year extension of the maturity date. The Company, Medtronic Luxco, and Medtronic, Inc. guarantee the obligations under the Amended and Restated Revolving Credit Agreement. At April 27, 2018 and April 28, 2017, no amounts were outstanding on the committed line of credit.

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 agreements also contain customary covenants, all of which the Company remained in compliance with at April 27, 2018.

Term Loan On January 26, 2015, Medtronic, Inc. borrowed $3.0 billion for a term of three years under a senior unsecured term loan credit agreement (the “Term Loan Credit Agreement”), among Medtronic, Inc., Medtronic, Medtronic Luxco, the lenders from time to time party thereto and Bank of America, N.A., as administrative agent.

The Term Loan Credit Agreement was entered into to finance, in part, the cash component of the acquisition of Covidien and certain transaction expenses. Medtronic and Medtronic Luxco provided guarantees of the obligations of Medtronic, Inc. under the Term Loan Credit Agreement. During fiscal year 2018, the Company repaid its senior unsecured term loan, including interest, for $3.0 billion.

Long-term debt consisted of the following:

(in millions, except interest rates)	Maturity by Fiscal Year	April 27, 2018 Amount	April 27, 2018 Effective Interest Rate	April 28, 2017 Amount	April 28, 2017 Effective Interest Rate
5.600 percent ten-year 2009 senior notes	2019	—	5.61	400	5.61
1.700 percent two-year 2017 senior notes	2019	—	1.74	1,000	1.74
4.450 percent ten-year 2010 senior notes	2020	—	4.47	766	4.47
Floating rate five-year 2015 senior notes	2020	500	2.92	500	1.98
2.500 percent five-year 2015 senior notes	2020	2,500	2.52	2,500	2.52
4.200 percent ten-year 2010 CIFSA senior notes	2021	600	2.22	600	2.22
4.125 percent ten-year 2011 senior notes	2021	500	4.19	500	4.19
3.150 percent seven-year 2015 senior notes	2022	2,500	3.18	2,500	3.18
3.125 percent ten-year 2012 senior notes	2022	675	3.16	675	3.16
3.200 percent ten-year 2012 CIFSA senior notes	2023	650	2.66	650	2.66
2.750 percent ten-year 2013 senior notes	2023	530	2.78	530	2.78
2.950 percent ten-year 2013 CIFSA senior notes	2024	310	2.67	310	2.67
3.625 percent ten-year 2014 senior notes	2024	850	3.65	850	3.65
3.500 percent ten-year 2015 senior notes	2025	4,000	3.61	4,000	3.61
3.350 percent ten-year 2017 senior notes	2027	850	3.35	850	3.35
4.375 percent twenty-year 2015 senior notes	2035	2,382	4.44	2,382	4.44
6.550 percent thirty-year 2007 CIFSA senior notes	2038	374	3.75	374	3.75
6.500 percent thirty-year 2009 senior notes	2039	300	6.52	300	6.52
5.550 percent thirty-year 2010 senior notes	2040	500	5.56	500	5.56
4.500 percent thirty-year 2012 senior notes	2042	400	4.51	400	4.51
4.000 percent thirty-year 2013 senior notes	2043	325	4.12	325	4.12
4.625 percent thirty-year 2014 senior notes	2044	650	4.67	650	4.67
4.625 percent thirty-year 2015 senior notes	2045	4,150	4.63	4,150	4.63
Bank borrowings	2020-2022	125	3.99	139	1.28
Debt premium, net	2020-2045	120	—	135	—
Capital lease obligations	2020-2025	21	4.46	23	4.81
Interest rate swaps	2021-2022	(6)	—	40	—
Deferred financing costs	2020-2045	(107)	—	(128)	—
Long-term debt		$ 23,699		$ 25,921	

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 April 27, 2018. The Company used the net proceeds from the sale of the Senior Notes primarily for general corporate purposes, which includes the repayment of other indebtedness of the Company.

In April 2018, the Company completed an early redemption of approximately $1.2 billion of Senior Notes for $1.2 billion of total consideration. The Company recognized a loss on the debt redemption of $38 million, which included cash premiums and accelerated amortization of deferred financing costs. The loss was recognized in *interest expense, net* in the consolidated statements of income.

In March 2017, Medtronic Luxco issued two tranches of Senior Notes with an aggregate face value of $1.850 billion (collectively, the 2017 Senior Notes). The first tranche consisted of $1.0 billion of 1.700 percent Senior Notes due in fiscal year 2019. The

second tranche consisted of $850 million of 3.350 percent Senior Notes due in fiscal year 2027. Concurrent with the offering by Medtronic Luxco, Medtronic, Inc. issued $150 million in principal amount of its 4.625 percent Senior Notes due in fiscal year 2045 (the Reopening Notes). The Reopening Notes are a further issuance of, and form a single series with, the $4.0 billion principal amount of Medtronic, Inc.'s previously outstanding 4.625 percent Senior Notes due in fiscal year 2045. Interest on the 2017 Senior Notes and the Reopening Notes is payable semi-annually. The Company used the net proceeds from the sale of the 2017 Senior Notes and the Reopening Notes for general corporate purposes.

In April 2016, the Company completed a cash tender offer and redemption of $2.7 billion of Senior Notes for $3.0 billion of total consideration. The Company recognized a loss on debt extinguishment of $163 million, which included cash premiums and accelerated amortization of deferred financing costs and debt discounts and premiums. The loss on debt extinguishment was recognized in *interest expense, net* in the consolidated statements of income. In addition to the loss on debt extinguishment, we recognized a loss of $20 million due to the acceleration of net losses on forward starting interest rate derivatives, which were terminated at the time of original debt issuances relating to the portion of debt extinguished in the tender offer, which was recognized in *interest expense, net* in the consolidated statements of income.

At April 27, 2018 and April 28, 2017, the Company had interest rate swap agreements designated as fair value hedges of certain underlying fixed-rate obligations, including the Company's $500 million 4.125 percent 2011 Senior Notes and $675 million 3.125 percent 2012 Senior Notes. Refer to Note 9 for additional information regarding the interest rate swap agreements.

Contractual maturities of debt for the next five fiscal years and thereafter, excluding deferred financing costs, debt premium, net, and the fair value of outstanding interest rate swap agreements are as follows:

(in millions)	
2019	$ 2,058
2020	3,006
2021	1,122
2022	3,275
2023	1,192
Thereafter	15,097
Total debt	25,750
Less: Current portion of debt	2,058
Long-term portion of debt	$ 23,692

Financial Instruments Not Measured at Fair Value

At April 27, 2018, the estimated fair value of the Company's Senior Notes was $25.1 billion compared to a principal value of $24.5 billion. At April 28, 2017 the estimated fair value was $30.4 billion compared to a principal value of $28.9 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.

9. Derivatives and Currency Exchange Risk Management

The Company uses operational and economic hedges, as well as 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 cash flows related to all of the Company's derivative instruments are reported as operating activities in the consolidated statements of cash flows. 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 $11.5 billion and $10.8 billion at April 27, 2018 and April 28, 2017, respectively.

The following information 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 April 27, 2018 and April 28, 2017 was $5.2 billion and $4.9 billion, respectively. 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 entered into total return swaps in fiscal year 2018, which are used to hedge the liability of a non-qualified, deferred compensation plan. The gross notional amount of the Company's total return swaps outstanding at April 27, 2018 was $210 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 amounts and classification of the gains (losses) in the consolidated statements of income related to derivative instruments, not designated as hedging instruments, for fiscal years 2018, 2017, and 2016 are as follows:

		Fiscal Year		
(in millions)	**Classification**	**2018**	**2017**	**2016**
Currency exchange rate contracts	Other expense, net	$ (253)	$ 54	$ 33
Total return swaps	Other expense, net	27	—	—
Total		$ (226)	$ 54	$ 33

Cash Flow Hedges

Currency Exchange Rate Risk

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. For derivative instruments that are designated and qualify as a cash flow hedge, the effective portion of the gain or loss on the derivative instrument is reported as a component of *accumulated other comprehensive loss*. The effective portion of the gain or loss on the derivative instrument is reclassified into earnings and is included in *other expense, net* or *cost of products sold* in the consolidated statements of income in the same period or periods during which the hedged transaction affects earnings.

No gains or losses relating to ineffectiveness of cash flow hedges were recognized in earnings during fiscal years 2018, 2017, or 2016. No components of the hedge contracts were excluded in the measurement of hedge ineffectiveness, and no hedges were derecognized or discontinued during fiscal years 2018, 2017, or 2016. The gross notional amount of these contracts, designated as cash flow hedges, outstanding at April 27, 2018 and April 28, 2017 was $6.3 billion and $5.8 billion, respectively, and will mature within the subsequent two-year period.

The amount of gross gains (losses), classification of the gains (losses) in the consolidated statements of income, and the AOCI related to the effective portion of currency exchange rate contract derivative instruments designated as cash flow hedges for fiscal years 2018, 2017, and 2016 were as follows:

	Fiscal Year 2018		
	Recognized in AOCI	Recognized in Income	
(in millions)	Amount	Classification	Amount
Currency exchange rate contracts	$ (404)	Other expense, net	$ (69)

	Fiscal Year 2017		
	Recognized in AOCI	Recognized in Income	
(in millions)	Amount	Classification	Amount
Currency exchange rate contracts	$ 342	Other expense, net	$ 173

	Fiscal Year 2016		
	Recognized in AOCI	Recognized in Income	
(in millions)	Amount	Classification	Amount
Currency exchange rate contracts	$ (165)	Other expense, net	$ 405
		Cost of products sold	(37)
Total	$ (165)		$ 368

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 effective portion of 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 effective portion of the gains or losses are then reclassified into *interest expense, net* over the term of the related debt. Any portion of the gains or losses that are determined to be ineffective is immediately recognized in *interest expense, net*.

During fiscal year 2017, in connection with the issuance of the 2017 Senior Notes, the Company terminated $300 million of fixed pay, forward starting interest rate swaps with a weighted average fixed rate of 3.10 percent. During fiscal year 2016, the Company terminated forward starting interest rate derivatives with a consolidated notional amount of $500 million, which were previously entered into in advance of a planned debt issuance that was no longer expected. During fiscal years 2017 and 2016, there were $21 million and $23 million, respectively, of unrealized gains recorded in *accumulated other comprehensive loss*.

No gains or losses related to the ineffectiveness of forward starting interest rate derivative instruments were recognized in *interest expense, net* during fiscal years 2017 and 2016. Additionally, during fiscal years 2017 and 2016, no components of the forward starting interest rate derivative instruments were excluded in the measurement of hedge ineffectiveness and no hedges were derecognized or discontinued. The reclassification of the effective portion of the net losses from *accumulated other comprehensive loss* to *interest expense, net* was not significant.

At April 27, 2018 and April 28, 2017, the Company had $(207) million and $37 million, respectively, in after-tax net unrealized (losses) gains associated with cash flow hedging instruments recorded in *accumulated other comprehensive loss*. The Company expects that $111 million of after-tax net unrealized losses at April 27, 2018 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, net*, and are offset by changes in the fair value of the underlying debt instrument. The gains (losses) from terminated interest rate swap agreements are recorded in *long-term debt*, increasing (decreasing) the outstanding balances of the debt, and amortized as a reduction of (addition to) *interest expense, net* over the remaining life of the related debt.

At both April 27, 2018 and April 28, 2017, the Company had interest rate swaps with 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.

At April 27, 2018, the market value of outstanding interest rate swap agreements was an unrealized loss of $6 million, as compared to an unrealized gain of $41 million at April 28, 2017. At April 27, 2018, the market value of the hedged items was an unrealized gain of $6 million, as compared to an unrealized loss of $41 million. The amounts were recorded in *other assets* with the offsets recorded in *long-term debt* on the consolidated balance sheets.

No significant hedge ineffectiveness was recognized as a result of these fair value hedges for fiscal years 2018, 2017, or 2016. In addition, the Company did not recognize any gains or losses during fiscal years 2018, 2017, or 2016 on firm commitments that no longer qualify as fair value hedges.

Balance Sheet Presentation

The following tables summarize the balance sheet classification and fair value of derivative instruments included in the consolidated balance sheets at April 27, 2018 and April 28, 2017. 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.

	April 27, 2018			
	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	$ 37	Other accrued expenses	$ 162
Interest rate contracts	Other assets	8	Other liabilities	14
Currency exchange rate contracts	Other assets	11	Other liabilities	51
Total derivatives designated as hedging instruments		$ 56		$ 227
Derivatives not designated as hedging instruments				
Currency exchange rate contracts	Other current assets	$ 31	Other accrued expenses	$ 25
Total return swaps	Other current assets	4	Other accrued expenses	—
Stock warrants	Other assets	21	Other liabilities	—
Cross currency interest rate contracts	Other assets	6	Other liabilities	6
Total derivatives not designated as hedging instruments		62		31
Total derivatives		$ 118		$ 258

	April 28, 2017			
	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	$ 152	Other accrued expenses	$ 43
Interest rate contracts	Other assets	41	Other liabilities	—
Currency exchange rate contracts	Other assets	48	Other liabilities	14
Total derivatives designated as hedging instruments		$ 241		$ 57
Derivatives not designated as hedging instruments				
Currency exchange rate contracts	Other current assets	$ 16	Other accrued expenses	$ 36
Cross currency interest rate contracts	Other assets	5	Other liabilities	11
Total derivatives not designated as hedging instruments		21		47

Total derivatives	$ 262	$ 104

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

	April 27, 2018		April 28, 2017	
(in millions)	Level 1	Level 2	Level 1	Level 2
Derivative assets	$ 79	$ 39	$ 216	$ 46
Derivative liabilities	238	20	93	11

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 following table provides 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.

	April 27, 2018				
		Gross Amount Not Offset on the Balance Sheet			
(in millions)	Gross Amount of Recognized Assets (Liabilities)	Financial Instruments	Cash Collateral (Received) Posted	Securities Collateral (Received) Posted	Net Amount
Derivative assets:					
Currency exchange rate contracts	$ 79	$ (61)	$ —	$ —	$ 18
Interest rate contracts	8	(6)	—	—	2
Total return swaps	4	—	—	—	4
Stock warrants	21	—	—	—	21
Cross currency interest rate contracts	6	(4)	—	—	2
	$ 118	$ (71)	$ —	$ —	$ 47
Derivative liabilities:					
Currency exchange rate contracts	$ (238)	$ 61	$ —	$ 74	$ (103)
Interest rate contracts	(14)	6	—	2	(6)
Cross currency interest rate contracts	(6)	4	—	—	(2)
	(258)	71	—	76	(111)
Total	$ (140)	$ —	$ —	$ 76	$ (64)

	April 28, 2017				
		Gross Amount Not Offset on the Balance Sheet			
(in millions)	Gross Amount of Recognized Assets (Liabilities)	Financial Instruments	Cash Collateral (Received) Posted	Securities Collateral (Received) Posted	Net Amount
Derivative assets:					
Currency exchange rate contracts	$ 216	$ (58)	$ (55)	$ —	$ 103
Interest rate contracts	41	(15)	(5)	—	21
Cross currency interest rate contracts	5	(2)	—	—	3
	$ 262	$ (75)	$ (60)	$ —	$ 127
Derivative liabilities:					
Currency exchange rate contracts	$ (93)	$ 73	$ —	$ —	$ (20)
Cross currency interest rate contracts	(11)	2	—	—	(9)
	(104)	75	—	—	(29)
Total	$ 158	$ —	$ (60)	$ —	$ 98

Concentrations of Credit Risk

Financial instruments, which potentially subject the Company to significant concentrations of credit risk, consist principally of interest-bearing investments, forward exchange derivative contracts, and trade accounts receivable. Global concentrations of credit risk with respect to trade accounts receivable are limited due to the large number of customers and their dispersion across many geographic areas. The Company monitors the creditworthiness of its customers to which it grants credit terms in the normal course of business.

The Company maintains cash and cash equivalents, investments, and certain other financial instruments (including currency exchange rate and interest rate derivative contracts) with various major financial institutions. The Company performs periodic evaluations of the relative credit standings of these financial institutions and limits the amount of credit exposure with any one institution. In addition, the Company has collateral credit agreements with its primary derivatives counterparties. Under these agreements, either party is required to post eligible collateral when the market value of transactions covered by the agreement exceeds specific thresholds, thus limiting credit exposure for both parties. At April 27, 2018, the Company posted net securities collateral of $76 million to its counterparties. At April 28, 2017, the Company received net cash collateral of $60 million from its counterparties. The cash collateral received was recorded in *cash and cash equivalents*, with the offset recorded as an increase in *other accrued expenses* on the consolidated balance sheets. The security collateral posted remained in *investments* on the consolidated balance sheets.

10. Inventories

Inventory balances, net of reserves, were as follows:

(in millions)	April 27, 2018	April 28, 2017
Finished goods	$ 2,407	$ 2,211
Work-in-process	496	458
Raw materials	676	669
Total	$ 3,579	$ 3,338

11. Property, Plant, and Equipment

Property, plant, and equipment balances and corresponding estimated useful lives were as follows:

(in millions)	April 27, 2018	April 28, 2017	Estimated Useful Lives (in years)
Land and land improvements	$ 187	$ 186	Up to 20
Buildings and leasehold improvements	2,265	2,175	Up to 40
Equipment	6,749	6,435	Generally 3-7, up to 15
Construction in progress	1,058	895	—
Property, plant, and equipment	10,259	9,691	
Less: Accumulated depreciation	(5,655)	(5,330)	
Property, plant, and equipment, net	$ 4,604	$ 4,361	

Depreciation is recognized using the straight-line method over the estimated useful lives of the assets. Depreciation expense of $821 million, $937 million, and $889 million was recognized in fiscal years 2018, 2017, and 2016, respectively. Upon retirement or disposal of property, plant, and equipment, the costs and related amounts of accumulated depreciation or amortization are eliminated from the asset and accumulated depreciation accounts. The difference, if any, between the net asset value and the proceeds, is recognized in earnings.

12. Shareholders' Equity

Share Capital

Medtronic plc is authorized to issue 2.6 billion Ordinary Shares, $0.0001 par value; 40 thousand Euro Deferred Shares, €1.00 par value; 127.5 million Preferred Shares, $0.20 par value; and 500 thousand A Preferred Shares, $1.00 par value.

Euro Deferred Shares

The authorized share capital of the Company includes 40 thousand Euro Deferred Shares, with a par value of €1.00 per share. At April 27, 2018, no Euro Deferred Shares were issued or outstanding.

Preferred Shares

The authorized share capital of the Company includes 127.5 million of Preferred Shares, with a par value of $0.20 per share. At April 27, 2018, no Preferred Shares were issued or outstanding.

A Preferred Shares

The authorized share capital of the Company includes 500 thousand A Preferred Shares, with a par value of $1.00 per share. At April 27, 2018, 1,872 A Preferred Shares were outstanding. The holders of A Preferred Shares are entitled to payment of dividends prior to any other class of shares in the Company equal to twice the dividend to be paid per Company ordinary share. On a return of assets, whether on liquidation or otherwise, the A Preferred Shares are entitled to repayment of the capital paid up thereon in priority to any repayment of capital to the holders of any other shares and the holders of the A Preferred Shares shall not be entitled to any further participation in the assets or profits of the Company. The holders of the A Preferred Shares are not entitled to receive notice of, nor to attend, speak, or vote at any general meeting of the Company.

Dividends

The timing, declaration, and payment of future dividends to holders of our ordinary and A Preferred shares falls within the discretion of the Company's Board of Directors and depends upon many factors, including the statutory requirements of Irish law, the Company's earnings and financial condition, the capital requirements of our businesses, industry practice and any other factors the Board of Directors deems relevant.

Ordinary Share Repurchase Program

Shares are repurchased from time to time to support the Company's stock-based compensation programs and to return capital to shareholders. During fiscal years 2018 and 2017, the Company repurchased approximately 25 million and 43 million shares, respectively, at an average price of $83.71 and $83.03, respectively.

In June 2015, the Company's Board of Directors authorized, subject to the ongoing existence of sufficient distributable reserves, the repurchase of 80 million of the Company's ordinary shares. As described below, this authorization was replaced in June 2017. During fiscal year 2018, prior to the June 2017 repurchase program which became effective on June 26, 2017, the Company purchased approximately 13 million shares authorized under the June 2015 repurchase program.

In June 2017, the Company's Board of Directors replaced the June 2015 authorization to repurchase up to an aggregate number of ordinary shares with an authorization to expend up to an aggregate amount of $5.0 billion beginning June 26, 2017 to repurchase the Company's ordinary shares. At April 27, 2018, the Company had used approximately $1.0 billion of the $5.0 billion authorized under the repurchase program, leaving approximately $4.0 billion available for future repurchases. The Company accounts for repurchases of ordinary shares using the par value method and shares repurchased are canceled.

13. Stock Purchase and Award Plans

The Medtronic, Inc. 2013 Stock Award and Incentive Plan was originally approved by the Company's shareholders in August 2013. In January 2015, the Company's Board of Directors approved an amendment to and assumption of the Medtronic, Inc. 2013 Stock Award and Incentive Plan, which created the Medtronic plc 2013 Stock Award and Incentive Plan (2013 Plan). In fiscal year 2018, the Company granted stock awards under the 2013 Plan. The 2013 Plan provides for the grant of non-qualified and incentive stock options, stock appreciation rights, restricted stock, restricted stock units, performance awards, and other stock and cash-based awards. At April 27, 2018, there were approximately 63 million shares available for future grants under the 2013 Plan.

Share Options Options are granted at the exercise price, which is equal to the closing price of the Company's ordinary share on the grant date. The majority of the Company's options are non-qualified options with a 10-year life and a 4-year ratable vesting term. In fiscal year 2018, the Company granted share options under the 2013 Plan. The Company also grants shares of performance-based share options that typically cliff vest after three years only if the Company has also achieved certain performance objectives. Performance awards are expensed over the performance period based on the probability of achieving the performance objectives.

Restricted Stock Restricted stock awards and restricted stock units (collectively referred to as restricted stock) are granted to officers and key employees. At April 27, 2018, the Company does not have any outstanding restricted stock awards. Beginning in fiscal year 2018, restricted stock units have a 4-year ratable vesting term. Restricted stock units issued prior to fiscal year 2018 cliff vest after four years. The expense recognized for restricted stock units is equal to the grant date fair value, which is equal to the closing stock price on the date of grant. Restricted stock units are expensed over the vesting period and are subject to forfeiture if employment terminates prior to the lapse of the restrictions. The Company also grants shares of performance-based restricted stock units that typically cliff vest after three years only if the Company has also achieved certain performance objectives. Performance awards are expensed over the performance period based on the probability of achieving the performance objectives.

Restricted stock units are not considered issued or outstanding ordinary shares of the Company. Dividend equivalent units are accumulated on restricted stock units during the vesting period. In fiscal year 2018, the Company granted restricted stock units under the 2013 Plan. At April 27, 2018, all restricted stock outstanding were restricted stock units.

Employees Stock Purchase Plan The Medtronic plc Amended and Restated 2014 Employees Stock Purchase Plan (ESPP) allows participating employees to purchase the Company's ordinary shares at a discount through payroll

deductions. The expense recognized for shares purchased under the Company's ESPP is equal to the 15 percent discount the employee receives at the end of the calendar quarter purchase period.

Employees may contribute between 2 percent and 10 percent of their wages or the statutory limit under the U.S. Internal Revenue Code toward the purchase of newly-issued ordinary shares of the Company at 85 percent of its market value at the end of the calendar quarter purchase period. Employees purchased 2 million shares at an average price of $69.41 per share in fiscal year 2018. At April 27, 2018, plan participants had approximately $11 million withheld to purchase the Company's ordinary shares at 85 percent of its market value on June 29, 2018, the last trading day before the end of the calendar quarter purchase period. At April 27, 2018, approximately 16 million ordinary shares were available for future purchase under the ESPP.

Stock Option Valuation Assumptions The Company uses the Black-Scholes option pricing model (Black-Scholes model) to determine the fair value of stock options at the grant date. The fair value of stock options under the Black-Scholes model requires management to make assumptions regarding projected employee stock option exercise behaviors, risk-free interest rates, volatility of the Company's stock price, and expected dividends.

The following table provides the weighted average fair value of options granted to employees and the related assumptions used in the Black-Scholes model:

	Fiscal Year		
	2018	2017	2016
Weighted average fair value of options granted	$ 13.71	$ 14.70	$ 13.72
Assumptions used:			
Expected life (years)[1]	6.16	6.18	5.94
Risk-free interest rate[2]	2.00 %	1.26 %	1.79 %
Volatility[3]	19.51 %	21.07 %	21.00 %
Dividend yield[4]	2.19 %	1.97 %	1.96 %

(1) The Company analyzes historical employee stock option exercise and termination data to estimate the expected life assumption. The Company calculates the expected life assumption using the midpoint scenario, which combines historical exercise data with hypothetical exercise data, as the Company believes this data currently represents the best estimate of the expected life of a new employee option.

(2) The rate is based on the grant date yield of a zero-coupon U.S. Treasury bond whose maturity period equals the expected term of the option.

(3) Expected volatility is based on a blend of historical volatility and an implied volatility of the Company's ordinary shares. Implied volatility is based on market traded options of the Company's ordinary shares.

(4) The dividend yield rate is calculated by dividing the Company's annual dividend, based on the most recent quarterly dividend rate, by the closing stock price on the grant date.

Stock-Based Compensation Expense The following table presents the components and classification of stock-based compensation expense recognized for stock options, restricted stock, and ESPP in fiscal years 2018, 2017, and 2016:

	Fiscal Year		
(in millions)	2018	2017	2016
Stock options	$ 132	$ 157	$ 206
Restricted stock	185	169	148
Employee stock purchase plan	27	22	21
Total stock-based compensation expense	$ 344	$ 348	$ 375
Cost of products sold	$ 44	$ 49	$ 50
Research and development expense	38	41	37
Selling, general, and administrative expense	242	233	212
Restructuring charges	—	2	18
Acquisition-related items	4	23	58
Divestiture-related items	16	—	—
Total stock-based compensation expense	344	348	375
Income tax benefits	(82)	(98)	(108)

Total stock-based compensation expense, net of tax	$ 262	$ 250	$ 267

Stock Options The following table summarizes all stock option activity, including activity from options assumed or issued as a result of acquisitions, during fiscal year 2018:

	Options (in thousands)	Wtd. Avg. Exercise Price	Wtd. Avg. Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Outstanding at April 28, 2017	45,194	$ 62.41		
Granted	3,773	83.92		
Exercised	(6,145)	43.72		
Expired/Forfeited	(1,783)	76.93		
Outstanding at April 27, 2018	41,039	66.56	5.94	$ 637
Vested and expected to vest at April 27, 2018	23,093	77.30	7.12	115
Exercisable at April 27, 2018	17,136	51.43	4.25	520

The following table summarizes the total cash received from the issuance of new shares upon stock option award exercises, the total intrinsic value of options exercised, and the related tax benefit during fiscal years 2018, 2017, and 2016:

	Fiscal Year		
(in millions)	2018	2017	2016
Cash proceeds from options exercised	$ 250	$ 367	$ 452
Intrinsic value of options exercised	248	403	374
Tax benefit related to options exercised	75	140	131

Unrecognized compensation expense related to outstanding stock options at April 27, 2018 was $72 million and is expected to be recognized over a weighted average period of 2.0 years.

Restricted Stock The following table summarizes restricted stock activity, including activity from restricted stock assumed or issued as a result of acquisitions, during fiscal year 2018:

	Units in thousands)	Wtd. Avg. Grant Price
Nonvested at April 28, 2017	8,788	$ 76.49
Granted	2,683	83.88
Vested	(2,589)	61.73
Forfeited	(646)	78.90
Nonvested at April 27, 2018	8,236	$ 83.35

The following table summarizes the weighted-average grant date fair value of restricted stock granted, total fair value of restricted stock vested and related tax benefit during fiscal years 2018, 2017, and 2016:

	Fiscal Year		
(in millions, except per share data)	2018	2017	2016
Weighted-average grant-date fair value per restricted stock	$ 83.88	$ 85.07	$ 77.68
Fair value of restricted stock vested	160	131	276

Tax benefit related to restricted stock vested	63	76	76

Unrecognized compensation expense related to restricted stock as of April 27, 2018 was $307 million and is expected to be recognized over a weighted average period of 2.4 years.

14. Income Taxes

The income tax provision is based on income before income taxes reported for financial statement purposes. The components of income before income taxes, based on tax jurisdiction, are as follows:

	Fiscal Year		
(in millions)	2018	2017	2016
U.S.	$ (958)	$ (234)	$ 333
International	6,633	4,836	4,003
Income before income taxes	$ 5,675	$ 4,602	$ 4,336

The income tax provision consists of the following:

	Fiscal Year		
(in millions)	2018	2017	2016
Current tax expense:			
U.S.	$ 2,899	$ 614	$ 440
International	796	840	835
Total current tax expense	3,695	1,454	1,275
Deferred tax expense (benefit):			
U.S.	45	(399)	(67)
International	(1,160)	(477)	(410)
Net deferred tax benefit	(1,115)	(876)	(477)
Income tax provision	$ 2,580	$ 578	$ 798

On December 22, 2017, the U.S. government enacted the Tax Act, which significantly revises U.S. corporate income taxation by, among other things, lowering the U.S. corporate income tax rate from 35.0 percent to 21.0 percent effective January 1, 2018, broadening the base of taxation, implementing a territorial tax system, and imposing a repatriation tax on deemed repatriated earnings of foreign subsidiaries. U.S. GAAP requires that the impact of tax legislation be recognized in the period in which the law was enacted. The decrease in the U.S. federal corporate tax rate from 35.0 percent to 21.0 percent results in a blended statutory tax rate of 30.5 percent for the Company's fiscal year 2018. As discussed in Note 1, the Company adopted guidance related to the finalization of the accounting for the income tax impacts of the Tax Act. Until the accounting for the income tax impacts of the Tax Act is complete, the reported amounts are based on reasonable estimates and are disclosed as provisional.

As of April 27, 2018, the Company had not fully completed its accounting for the tax effects of the enactment of the Tax Act. The Company’s income tax provision for fiscal year 2018 is based on a reasonable estimate of the transition tax and expected reversal of existing deferred tax balances. As a result of the Tax Act, the Company has removed its permanently reinvested assertion on historical earnings through April 27, 2018 for legal entities with accumulated earnings subject to the transition tax. The Company continues to evaluate its permanently reinvested assertion for certain legal entities. For the amounts which the Company was able to reasonably estimate, the Company recognized a provisional net tax charge of $2.4 billion within *income tax provision* in the consolidated statements of income. The components of the provisional tax amounts are as follows:

- A provisional tax charge of $2.6 billion for the transition tax liability. The Company has not yet completed the calculation of the total post-1986 foreign earnings & profits (E&P) and the income tax pools for all foreign subsidiaries. Further, the transition tax is based in part on the amount of those earnings held in cash and other specified assets. This amount may change when the Company finalizes the calculation of

post-1986 foreign E&P previously deferred from U.S. federal taxation and finalizes the amounts held in cash or other specified assets. In addition, further interpretations from U.S. federal and state governments and regulatory organizations may change the provisional tax liability or the accounting treatment of the provisional tax liability.

- A provisional net tax benefit of $114 million associated with the change in the U.S. Federal statutory tax rate for the year and the remeasurement of certain deferred tax assets, liabilities, and valuation allowances.

Because of the complexity of the new Global Intangible Low-Taxed Income (GILTI) tax rules, the Company continues to evaluate this provision of the Tax Act. The Company is allowed to make an accounting policy election of either (1) treating taxes due on future U.S. inclusions in taxable income related to GILTI as a current period expense when incurred (the "period cost method") or (2) factoring such amounts into the Company's measurement of its deferred taxes (the "deferred method"). The Company's selection of an accounting policy with respect to the new GILTI tax rules will depend, in part, on analyzing its global income to determine whether it can reasonably estimate the tax impact. The Company is currently in the process of analyzing its structure and is not yet able to determine the effect of this provision of the Tax Act. Therefore, the Company has not yet made a policy decision regarding whether to record deferred tax on GILTI and has not made any adjustments related to potential GILTI tax in its consolidated financial statements.

Tax assets (liabilities), shown before jurisdictional netting of deferred tax assets (liabilities), are comprised of the following:

(in millions)	April 27, 2018	April 28, 2017
Deferred tax assets:		
Net operating loss, capital loss, and credit carryforwards	$ 7,463	$ 6,800
Other accrued liabilities	410	658
Accrued compensation	209	427
Pension and post-retirement benefits	256	456
Stock-based compensation	190	278
Other	332	349
Inventory	207	277
Federal and state benefit on uncertain tax positions	67	191
Unrealized loss on available-for-sale securities and derivative financial instruments	93	—
Gross deferred tax assets	9,227	9,436
Valuation allowance	(7,166)	(6,311)
Total deferred tax assets	2,061	3,125
Deferred tax liabilities:		
Intangible assets	(1,697)	(4,943)
Realized loss on derivative financial instruments	(69)	(112)
Other	(143)	(74)
Accumulated depreciation	(38)	(149)
Unrealized gain on available-for-sale securities and derivative financial instruments	—	(18)
Outside basis difference of subsidiaries	(131)	(112)
Total deferred tax liabilities	(2,078)	(5,408)
Prepaid income taxes	406	475
Income tax receivables	315	218
Tax assets (liabilities), net	$ 704	$ (1,590)
Reported as (after valuation allowance and jurisdictional netting):		
Other current assets	$ 662	$ 545
Tax assets	1,465	1,550
Deferred tax liabilities	(1,423)	(2,978)
Noncurrent liabilities held for sale	—	(707)
Tax assets (liabilities), net	$ 704	$ (1,590)

No deferred taxes have been provided on the approximately $61.0 billion and $31.8 billion of undistributed earnings of the Company's subsidiaries at April 27, 2018 and April 28, 2017, respectively, since these earnings have been, and under current plans will continue to be, permanently reinvested in these subsidiaries. During fiscal year 2018, the Company removed its permanently reinvested assertion on the undistributed earnings of certain foreign subsidiaries with a U.S. parent which were subject to the transition tax. The assertion was removed for all earnings of such subsidiaries through April 27, 2018. Due to the number of legal entities and jurisdictions involved, the complexity of the legal entity structure of the Company, and the complexity of the tax laws in the relevant jurisdictions, the Company believes it is not practicable to estimate, within any reasonable range, the amount of additional taxes which may be payable upon distribution of these undistributed earnings.

At April 27, 2018, the Company had approximately $28.4 billion of net operating loss carryforwards in certain non-U.S. jurisdictions, of which $25.2 billion have no expiration, and the remaining $3.2 billion will expire during fiscal years 2019 through 2038. Included in these net operating loss carryforwards are $19.7 billion of net operating losses related to a subsidiary of the Company, substantially all of which were recorded in fiscal 2008 as a result of the receipt of a favorable tax ruling from certain non-U.S. taxing authorities. The Company has recorded a full valuation allowance against these net operating losses, as management does not believe that it is more likely than not that these net operating losses will be utilized. Certain of the remaining non-U.S. net operating loss carryforwards of $8.7 billion have a valuation allowance recorded against the carryforwards, as management does not believe that it is more likely than not that these net operating losses will be utilized.

At April 27, 2018, the Company had $963 million of U.S. federal net operating loss carryforwards, which will expire during fiscal years 2019 through 2036. For U.S. state purposes, the Company had $981 million of net operating loss carryforwards at April 27, 2018, which will expire during fiscal years 2019 through 2038.

At April 27, 2018, the Company also had $174 million of tax credits available to reduce future income taxes payable, of which $58 million have no expiration. The remaining credits expire during fiscal years 2019 through 2038.

The Company has established valuation allowances of $7.2 billion and $6.3 billion at April 27, 2018 and April 28, 2017, respectively, primarily related to the uncertainty of the utilization of certain deferred tax assets which are primarily comprised of tax loss and credit carryforwards in various jurisdictions. The increase in the valuation allowance during fiscal year 2018 is primarily related to the establishment of a valuation allowance against current year generated losses, as well as the effects of currency fluctuations. These valuation allowances would result in a reduction to the income tax provision in the consolidated statements of income if they are ultimately not required.

During fiscal year 2018, the Company received a tax ruling confirming the treatment of various intercompany transactions, which have the effect of utilizing the $12.0 billion of non-U.S. special deductions previously disclosed. The ruling allowed the Company to offset some of the gain on the sale of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses within the Minimally Invasive Therapies Group segment, as well as recognize an income tax benefit associated with the intercompany sale of intellectual property and the associated elimination of a deferred tax liability.

The Company's effective income tax rate varied from the U.S. federal statutory tax rate as follows:

	Fiscal Year		
	2018	2017	2016
U.S. federal statutory tax rate	30.5 %	35.0 %	35.0 %
Increase (decrease) in tax rate resulting from:			
U.S. state taxes, net of federal tax benefit	0.8	1.0	0.9
Research and development credit	(0.8)	(0.9)	(1.2)
Domestic production activities	(0.1)	(0.4)	(0.3)
International	(18.8)	(27.1)	(23.4)
Puerto Rico Excise Tax	(1.1)	(1.5)	(1.6)
Impact of adjustments[1]	(8.5)	5.7	11.4
U.S. Tax Reform	43.0	—	—
Valuation allowance release	(0.1)	(1.0)	(0.9)
Stock based compensation	(1.0)	—	—
Other, net	1.6	1.8	(1.5)
Effective tax rate	45.5 %	12.6 %	18.4 %

(1) Adjustments include the impact of restructuring charges, net, acquisition- and divestiture-related items, certain litigation charges, special charge, debt redemption premium, inventory step-up, loss on previously held forward starting interest rate swaps, interest expense, net, and certain tax adjustments, net.

During fiscal year 2018, certain tax adjustments of $1.9 billion, recognized in *income tax provision* in the consolidated statements of income, included the following:

- A net charge of $2.4 billion associated with U.S. tax reform, inclusive of the transition tax, remeasurement of U.S. Federal deferred tax assets and liabilities, and the decrease in the U.S. statutory tax rate. The Company's income tax provision associated with the impact of the Tax Act for fiscal year 2018 is based on a reasonable estimate and will be finalized within the measurement period.

- A charge of $73 million associated with an internal reorganization of certain foreign subsidiaries.

- A net benefit of $579 million associated with the intercompany sale of intellectual property.

During fiscal year 2017, certain tax adjustments of $202 million, recognized in *income tax provision* in the consolidated statements of income, included the following:

- A charge of $404 million associated with the IRS resolution for the Ardian, CoreValve, Inc., Ablation Frontiers, Inc., PEAK Surgical, Inc. and Salient Surgical Technologies, Inc. acquisition-related issues and the allocation of income between Medtronic, Inc. and its wholly owned subsidiary operating in Puerto Rico for certain businesses. This resolution does not include the businesses that are the subject of the Medtronic, Inc. U.S. Tax Court case for fiscal years 2005 and 2006.

- A net charge of $125 million associated with the divestiture of a portion of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses to Cardinal. The net charge primarily relates to the

tax effect from the recognition of the outside basis difference of certain subsidiaries, which are included in the expected divestiture.

- A charge of $86 million associated with the IRS's disallowance of the utilization of certain net operating losses, along with the recognition of a valuation allowance against the net operating loss deferred tax asset, which were recognized during the year.

- A charge of $18 million as a result of the redemption of an intercompany minority interest during the year.

- A benefit of $431 million as the result of the resolution of Covidien's previously disclosed Tyco International plc intercompany debt issues with the U.S. Tax Court and the Appeals Division of the IRS.

During fiscal year 2016, certain tax adjustments of $417 million, recognized in *income tax provision* in the consolidated statements of income, included the following:

- A charge of $442 million primarily related to the U.S. income tax expense resulting from the Company's completion of an internal reorganization of the ownership of certain legacy Covidien businesses that reduced the cash and investments held by its U.S.-controlled non-U.S. subsidiaries (the Internal Reorganization). As a result of the Internal Reorganization, approximately $9.7 billion of cash, cash equivalents and investments in marketable debt and equity securities previously held by U.S.-controlled non-U.S. subsidiaries became available for general corporate purposes.

- A $25 million tax benefit associated with the disposition of a wholly owned U.S. subsidiary.

Currently, the Company's operations in Puerto Rico, Switzerland, Singapore, Dominican Republic, Costa Rica, and Israel have various tax incentive grants. The tax reductions as compared to the local statutory rate favorably impacted earnings by $446 million, $475 million, and $474 million in fiscal years 2018, 2017, and 2016, respectively, and earnings per diluted share by $0.33, $0.34, and $0.33 in fiscal years 2018, 2017, and 2016, respectively. Unless these grants are extended, they will expire between fiscal years 2019 and 2029. The Company's historical practice has been to renew, extend, or obtain new tax incentive grants upon expiration of existing tax incentive grants. If the Company is not able to renew, extend, or obtain new tax incentive grants, the expiration of existing tax incentive grants could have a material impact on the Company's financial results in future periods. The tax incentive grants which expired during fiscal year 2018 did not have a material impact on the Company's consolidated financial statements.

The Company had $1.7 billion, $1.9 billion, and $2.7 billion of gross unrecognized tax benefits at April 27, 2018, April 28, 2017, and April 29, 2016, respectively. A reconciliation of the beginning and ending amount of unrecognized tax benefits for fiscal years 2018, 2017, and 2016 is as follows:

	Fiscal Year		
(in millions)	**2018**	**2017**	**2016**
Gross unrecognized tax benefits at beginning of fiscal year	$ 1,896	$ 2,703	$ 2,860
Gross increases:			
Prior year tax positions	13	147	36
Current year tax positions	63	75	202
Acquisitions	—	4	—
Gross decreases:			
Prior year tax positions	(120)	(538)	(116)
Settlements	(80)	(467)	(275)
Statute of limitation lapses	(45)	(28)	(4)
Gross unrecognized tax benefits at end of fiscal year	1,727	1,896	2,703
Cash advance paid to taxing authorities	(859)	—	(384)
Gross unrecognized tax benefits at end of fiscal year, net of cash advance	$ 868	$ 1,896	$ 2,319

If all of the Company's unrecognized tax benefits at April 27, 2018, April 28, 2017, and April 29, 2016 were recognized, $1.7 billion, $1.8 billion, and $2.1 billion would impact the Company's effective tax rate, respectively. Although the Company believes that it has adequately provided for liabilities resulting from tax assessments by taxing authorities, positions taken by these tax authorities could have a material impact on the Company's effective tax rate in future periods. The Company has recorded gross unrecognized tax benefits, net of cash advance, of $868 million as a noncurrent liability. The Company estimates that within the next 12 months, it is reasonably possible that

its uncertain tax positions, excluding interest, could decrease by as much as $25 million, net as a result of the resolution of tax matters with the IRS and other taxing authorities as well as statute of limitation lapses.

The Company recognizes interest and penalties related to income tax matters in *income tax provision* in the consolidated statements of income and records the liability in the current or noncurrent *accrued income taxes* in the consolidated balance sheets, as appropriate. The Company had $128 million, $360 million, and $609 million of accrued gross interest and penalties at April 27, 2018, April 28, 2017, and April 29, 2016, respectively. During fiscal years 2018, 2017, and 2016, the Company recognized gross

interest expense (income) of approximately $84 million, $(208) million, and $80 million, respectively, in *income tax provision* in the consolidated statements of income.

During fiscal year 2018, the Company made a $1.1 billion advance payment to the IRS in connection with certain tax matters for fiscal years 2005 through 2014. This payment is comprised of $859 million of tax and $285 million of interest.

The Company's reserves for uncertain tax positions relate to unresolved matters with the IRS and other taxing authorities. These reserves are subject to a high degree of estimation and management judgment. Resolution of these significant unresolved matters, or positions taken by the IRS or other tax authorities during future tax audits, could have a material impact on the Company's financial results in future periods. The Company continues to believe that its reserves for uncertain tax positions are appropriate and that it has meritorious defenses for its tax filings and will vigorously defend them during the audit process, appellate process, and through litigation in courts, as necessary.

The major tax jurisdictions where the Company conducts business which remain subject to examination are as follows:

Jurisdiction	Earliest Year Open
United States - federal and state	1998
Brazil	2013
Canada	2010
China	2009
Costa Rica	2014
Dominican Republic	2013
Germany	2010
India	2002
Ireland	2012
Israel	2010
Italy	2005
Japan	2015
Luxembourg	2013
Mexico	2005
Puerto Rico	2011
Singapore	2013
Switzerland	2012
United Kingdom	2016

See Note 19 for additional information regarding the status of current tax audits and proceedings.

15. 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 the 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 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 from the proceeds from issuance of the potentially dilutive

ordinary shares. Potentially dilutive ordinary shares include stock-based awards granted under the 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:

	Fiscal Year		
(in millions, except per share data)	**2018**	**2017**	**2016**
Numerator:			
Net income attributable to ordinary shareholders	$ 3,104	$ 4,028	$ 3,538
Denominator:			
Basic – weighted average shares outstanding	1,356.7	1,378.9	1,409.6
Effect of dilutive securities:			
Employee stock options	7.9	9.0	12.2
Employee restricted stock units	3.3	3.4	4.0
Other	0.3	0.1	0.1
Diluted – weighted average shares outstanding	1,368.2	1,391.4	1,425.9
Basic earnings per share	$ 2.29	$ 2.92	$ 2.51
Diluted earnings per share	$ 2.27	$ 2.89	$ 2.48

The calculation of weighted average diluted shares outstanding excludes options to purchase approximately 10 million, 7 million, and 4 million ordinary shares in fiscal years 2018, 2017, and 2016, respectively, because their effect would have been anti-dilutive on the Company's earnings per share.

16. 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 expense related to these plans was $552 million, $602 million, and $584 million in fiscal years 2018, 2017, and 2016, respectively.

In the U.S., the Company maintains a qualified pension plan designed to provide guaranteed minimum retirement benefits to all eligible U.S. employees. Pension coverage for non-U.S. employees is provided, to the extent deemed appropriate, through separate plans. In addition to the benefits provided under the qualified pension plan, retirement benefits associated with wages in excess of the IRS allowable limits are provided to certain employees under a non-qualified plan. U.S. and Puerto Rico employees are also eligible to receive a medical benefit component, in addition to normal retirement benefits, through the Company's post-retirement benefits.

At April 27, 2018 and April 28, 2017, the net underfunded status of the Company's benefit plans was $942 million and $1.3 billion, respectively. The $1.3 billion underfunded status at April 28, 2017 included $12 million of liabilities classified as held for sale. The liabilities classified as held for sale consisted of $9 million related to pension benefits and $3 million related to post-retirement benefits. Pension and post-retirement benefit liabilities held for sale at April 28, 2017 were divested during fiscal year 2018 as part of the sale of the Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses.

During fiscal year 2017, the Company offered certain eligible U.S. employees voluntary early retirement packages. The acceptance of this offer by eligible U.S. employees caused incremental expenses of $73 million to be recognized during fiscal year 2017. Of this amount, $60 million related to U.S. pension benefits, $7 million related to U.S. post-retirement benefits, $4 million related to defined contribution plans, and $2 million related to cash payments and administrative fees.

Defined Benefit Pension Plans The change in benefit obligation and funded status of the Company's U.S. and Non-U.S. pension benefits are as follows:

	U.S. Pension Benefits		Non-U.S. Pension Benefits	
	Fiscal Year		Fiscal Year	
(in millions)	2018	2017	2018	2017
Accumulated benefit obligation at end of year:	$ 2,943	$ 2,879	$ 1,580	$ 1,518
Change in projected benefit obligation:				
Projected benefit obligation at beginning of year	$ 3,232	$ 3,048	$ 1,734	$ 1,535
Service cost	116	117	67	70
Interest cost	117	109	28	26
Employee contributions	—	—	12	15
Plan curtailments and settlements	(168)	—	(8)	6
Actuarial (gain) loss	12	(22)	(74)	182
Benefits paid	(107)	(80)	(51)	(43)
Special termination benefits	—	60	—	—
Currency exchange rate changes and other	—	—	146	(57)
Divestiture	—	—	(63)	—
Projected benefit obligation at end of year	$ 3,202	$ 3,232	$ 1,791	$ 1,734
Change in plan assets:				
Fair value of plan assets at beginning of year	$ 2,479	$ 2,138	$ 1,235	$ 1,113
Actual return on plan assets	243	238	67	109
Employer contributions	215	183	90	76
Employee contributions	—	—	13	15
Plan settlements	(168)	—	(4)	(1)
Benefits paid	(108)	(80)	(51)	(43)
Currency exchange rate changes and other	—	—	108	(34)
Divestiture	—	—	(54)	—
Fair value of plan assets at end of year	$ 2,661	$ 2,479	$ 1,404	$ 1,235
Funded status at end of year:				
Fair value of plan assets	$ 2,661	$ 2,479	$ 1,404	$ 1,235
Benefit obligations	3,202	3,232	1,791	1,734
Underfunded status of the plans	(541)	(753)	(387)	(499)
Recognized liability	$ (541)	$ (753)	$ (387)	$ (499)
Amounts recognized on the consolidated balance sheets consist of:				
Non-current assets	$ —	$ —	$ 16	$ 5
Current liabilities	(17)	(13)	(8)	(7)
Non-current liabilities	(524)	(740)	(395)	(497)
Recognized liability	$ (541)	$ (753)	$ (387)	$ (499)
Amounts recognized in accumulated other comprehensive loss:				
Prior service cost (benefit)	$ 2	$ 3	$ (9)	$ (6)
Net actuarial loss	1,088	1,212	380	450

Ending balance	$ 1,090	$ 1,215	$ 371	$ 444

In certain countries outside the U.S., fully funding pension plans is not a common practice, as funding provides no income tax benefit. Consequently, certain pension plans were partially funded at April 27, 2018 and April 28, 2017. U.S. and non-U.S. plans with accumulated benefit obligations in excess of plan assets consist of the following:

	Fiscal Year	
(in millions)	2018	2017
Accumulated benefit obligation	$ 4,110	$ 4,188
Projected benefit obligation	4,282	4,677
Plan assets at fair value	3,472	3,454

Plans with projected benefit obligations in excess of plan assets consist of the following:

	Fiscal Year	
(in millions)	2018	2017
Projected benefit obligation	$ 4,736	$ 4,903
Plan assets at fair value	3,793	3,646

The net periodic benefit cost of the plans include the following components:

	U.S. Pension Benefits			Non-U.S. Pension Benefits		
	Fiscal Year			Fiscal Year		
(in millions)	2018	2017	2016	2018	2017	2016
Service cost	$ 116	$ 117	$ 120	$ 67	$ 70	$ 81
Interest cost	117	109	122	28	26	31
Expected return on plan assets	(205)	(195)	(180)	(53)	(48)	(48)
Amortization of prior service cost	1	1	—	—	(1)	—
Amortization of net actuarial loss	82	88	98	18	17	20
Settlement loss (gain)	16	—	(1)	—	—	(10)
Special termination benefits	—	60	—	—	—	—
Net periodic benefit cost	$ 127	$ 180	$ 159	$ 60	$ 64	$ 74

The other changes in plan assets and projected benefit obligations recognized in *accumulated other comprehensive loss* for fiscal year 2018 are as follows:

(in millions)	U.S. Pension Benefits	Non-U.S. Pension Benefits
Net actuarial gain	$ (27)	$ (88)
Amortization of prior service cost	(1)	—
Amortization of net actuarial loss	(82)	(18)
Prior service cost	—	(4)
Effect of exchange rates	—	37
Settlement loss	(17)	—
Total recognized in accumulated other comprehensive loss	$ (127)	$ (73)

Total recognized in net periodic benefit cost and accumulated other comprehensive loss	$ —	$ (13)

The estimated net actuarial loss that will be amortized from *accumulated other comprehensive loss* into net periodic benefit cost, before tax, in fiscal year 2019 for U.S. and non-U.S. pension benefits is expected to be $77 million and $11 million, respectively.

The actuarial assumptions are as follows:

	U.S. Pension Benefits			Non-U.S. Pension Benefits		
	Fiscal Year			Fiscal Year		
	2018	2017	2016	2018	2017	2016
Critical assumptions – projected benefit obligation:						
Discount rate	4.20% - 4.35%	3.70% - 4.30%	3.60% - 4.30%	0.70% - 11.00%	0.45% - 11.40%	0.25% - 10.20%
Rate of compensation increase	3.90 %	3.90 %	3.90 %	2.88 %	2.89 %	2.83 %
Critical assumptions – net periodic benefit cost:						
Discount rate – benefit obligation	4.00% - 4.30%	3.55% - 4.30%	4.20% - 4.80%	0.45% - 11.40%	0.25% - 10.20%	0.80% - 9.00%
Discount rate – service cost	3.70% - 4.45%	3.60% - 4.45%	4.20% - 4.80%	0.20% - 11.40%	0.05% - 10.20%	0.80% - 9.00%
Discount rate – interest cost	3.45% - 3.80%	2.90% - 3.80%	4.20% - 4.80%	0.45% - 11.40%	0.30% - 10.20%	0.80% - 9.00%
Expected return on plan assets	7.90 %	8.20 %	8.20 %	4.20 %	4.45 %	4.35 %
Rate of compensation increase	3.90 %	3.90 %	3.90 %	2.89 %	2.83 %	2.92 %

The Company changed the methodology used to estimate the service and interest cost components of net periodic pension cost and net periodic postretirement benefit cost for the Company's pension and other postretirement benefit plans, effective April 30, 2016. Previously, the Company estimated such cost components utilizing a single weighted-average discount rate derived from the market-observed yield curves of high-quality fixed income securities used to measure the pension benefit obligation and accumulated postretirement benefit obligation. The new methodology utilizes a full yield curve approach in the estimation of these cost components by applying the specific spot rates along the yield curve to their underlying projected cash flows and provides a more precise measurement of service and interest costs by improving the correlation between projected cash flows and their corresponding spot rates. The current yield curves represent high quality, long-term fixed income instruments. The change does not affect the measurement of the Company's pension obligation or accumulated postretirement benefit obligation. The Company accounted for this change prospectively as a change in accounting estimate.

The expected long-term rate of return on plan assets assumptions are determined using a building block approach, considering historical averages and real returns of each asset class. In certain countries, where historical returns are not meaningful, consideration is given to local market expectations of long-term returns.

Retirement Benefit Plan Investment Strategy The Company sponsors trusts that hold the assets for U.S. pension plans and other U.S. post-retirement benefit plans, primarily retiree medical benefits. For investment purposes, the legacy Medtronic U.S. pension and other U.S. post-retirement benefit plans are managed in an identical way, as their objectives are similar.

The Company has a Qualified Plan Committee (the Plan Committee) that sets investment guidelines for U.S. pension plans and other U.S. post-retirement benefit plans with the assistance of external consultants. These guidelines are established based on market conditions, risk tolerance, funding requirements, and expected benefit payments. The Plan Committee also oversees the investment allocation process, selects the investment managers, and monitors asset performance. As pension liabilities are long-term in nature, the Company employs a long-term total return approach to maximize the long-term rate of return on plan assets for a prudent level of risk. An annual analysis on the risk versus the return of the investment portfolio is conducted to justify the expected long-term rate of return assumption.

The investment portfolios contain a diversified allocation of investment categories, including equities, fixed income securities, hedge funds, and private equity. Securities are also diversified in terms of domestic and international, short- and long-term, growth and value styles, large cap and small cap stocks, active and passive management, and derivative-based styles.

Outside the U.S., pension plan assets are typically managed by decentralized fiduciary committees. There is significant variation in policy asset allocation from country to country. Local regulations, funding rules, and financial and tax considerations are part of the funding and investment allocation process in each country. The weighted average target asset allocations at April 27, 2018 for the plans are 38% equity securities, 29% debt securities, and 33% other.

The plans did not hold any investments in the Company's ordinary shares at April 27, 2018 or April 28, 2017.

The Company's U.S. plans target asset allocations at April 27, 2018, compared to the U.S. plans actual asset allocations at April 27, 2018 and April 28, 2017 by asset category, are as follows:

U.S. Plans

	Target Allocation	Actual Allocation	
	April 27, 2018	April 27, 2018	April 28, 2017
Asset Category:			
Equity securities	49 %	49 %	45 %
Debt securities	32	32	37
Other	19	19	18
Total	100 %	100 %	100 %

Retirement Benefit Plan Asset Fair Values The following is a description of the valuation methodologies used for retirement benefit plan assets measured at fair value:

Short-term investments: Valued at the closing price reported in the active markets in which the individual security is traded.

U.S. government securities: Certain U.S. government securities are valued at the closing price reported in the active markets in which the individual security is traded. Other U.S. government securities are valued based on inputs other than quoted prices that are observable.

Corporate debt securities: Valued based on inputs other than quoted prices that are observable.

Equity commingled trusts: Comprised of investments in equity securities held in pooled investment vehicles. The valuations of equity commingled trusts are based on the respective net asset values which are determined by the fund daily at market close. The net asset values are calculated based on the valuation of the underlying assets which are determined using observable inputs. The net asset values are not publicly reported and funds are valued at the net asset value practical expedient.

Fixed income commingled trusts: Comprised of investments in fixed income securities held in pooled investment vehicles. The valuations of fixed income commingled trusts are based on the respective net asset values which are determined by the fund daily at market close. The net asset values are calculated based on the valuation of the underlying assets which are determined using observable inputs. The net asset values are not publicly reported and funds are valued at the net asset value practical expedient.

Partnership units: Valued based on the year-end net asset values of the underlying partnerships. The net asset values of the partnerships are based on the fair values of the underlying investments of the partnerships. Quoted market prices are used to value the underlying investments of the partnerships, where the partnerships consist of the investment pools which invest primarily in common stocks. Partnership units include partnerships, private equity investments, and real asset investments. Partnerships primarily include long/short equity and absolute return strategies. These investments may be redeemed monthly with notice periods ranging from 45 to 95 days. At April 27, 2018, there are no funds in the process of liquidation. Private equity investments consist of common stock and debt instruments of private companies. For private equity funds, the sum of the unfunded commitments at April 27, 2018 is $168 million, and the estimated liquidation period of these funds is expected to be one to 15 years. Real asset investments consist of commodities, derivatives, Real Estate Investment Trusts, and illiquid real estate holdings. These investments have redemption and liquidation periods ranging from 30 days to 10 years. At April 27, 2018,

there are no real estate investments in the process of liquidation. The Company expects to receive the proceeds over the next year. Other valuation procedures are utilized to arrive at fair value if a quoted market price is not available for a partnership investment.

Registered investment companies: Valued at net asset values which are not publicly reported. The net asset values are calculated based on the valuation of the underlying assets. The underlying assets are valued at the quoted market prices of shares held by the plan at year-end in the active market on which the individual securities are traded.

Insurance contracts: Comprised of investments in collective (group) insurance contracts, consisting of individual insurance policies. The policyholder is the employer and each member is the owner/beneficiary of their individual insurance policy. These policies are a part of the insurance company's general portfolio and participate in the insurer's profit-sharing policy on an excess yield basis.

The methods described above may produce fair values that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Company believes its valuation methodologies are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

There were no transfers between Level 1, Level 2, or Level 3 during fiscal years 2018 or 2017.

The following tables provide information by level for the retirement benefit plan assets that are measured at fair value, as defined by U.S. GAAP. See Note 1 for discussion of the fair value measurement terms of Levels 1, 2, and 3. In accordance with authoritative guidance adopted in fiscal year 2017, certain investments for which the fair value is measured using the net asset value per share (or its equivalent) practical expedient are not presented within the fair value hierarchy. The fair value amounts presented for these investments are intended to permit reconciliation to the total fair value of plan assets at April 27, 2018 and April 28, 2017.

U.S. Pension Benefits

(in millions)	Fair Value at April 27, 2018	Fair Value Measurements Using Inputs Considered as Level 1	Level 2	Level 3	Investments Measured at Net Asset Value
Short-term investments	$ 181	$ 181	$ —	$ —	$ —
U.S. government securities	181	181	—	—	—
Corporate debt securities	142	—	142	—	—
Equity commingled trusts	1,322	—	—	—	1,322
Fixed income commingled trusts	298	—	—	—	298
Partnership units	537	—	—	537	—
	$ 2,661	$ 362	$ 142	$ 537	$ 1,620

(in millions)	Fair Value at April 28, 2017	Fair Value Measurements Using Inputs Considered as Level 1	Level 2	Level 3	Investments Measured at Net Asset Value
Short-term investments	$ 168	$ 168	$ —	$ —	$ —
U.S. government securities	167	138	29	—	—
Corporate debt securities	250	—	250	—	—
Equity commingled trusts	1,127	—	—	—	1,127
Fixed income commingled trusts	299	—	—	—	299
Partnership units	468	—	—	468	—
	$ 2,479	$ 306	$ 279	$ 468	$ 1,426

The following tables provide a reconciliation of the beginning and ending balances of U.S. pension benefit assets measured at fair value that used significant unobservable inputs (Level 3):

(in millions)	Partnership Units
April 28, 2017	$ 468
Total realized losses	(42)
Total unrealized gains	141
Purchases and sales, net	(30)

April 27, 2018	$ 537

(in millions)	Partnership Units
April 29, 2016	$ 462
Total realized gains	25
Total unrealized gains	28
Purchases and sales, net	(47)
April 28, 2017	$ 468

Non-U.S. Pension Benefits

(in millions)	Fair Value at April 27, 2018	Fair Value Measurements Using Inputs Considered as Level 1	Level 2	Level 3	Investments Measured at Net Asset Value
Registered investment companies	$ 1,362	$ —	$ —	$ —	$ 1,362
Insurance contracts	42	—	—	42	—
	$ 1,404	$ —	$ —	$ 42	$ 1,362

(in millions)	Fair Value at April 28, 2017	Fair Value Measurements Using Inputs Considered as Level 1	Level 2	Level 3	Investments Measured at Net Asset Value
Registered investment companies	$ 1,191	$ —	$ —	$ —	$ 1,191
Insurance contracts	44	—	—	44	—
	$ 1,235	$ —	$ —	$ 44	$ 1,191

The following tables provide a reconciliation of the beginning and ending balances of non-U.S. pension benefit assets measured at fair value that used significant unobservable inputs (Level 3):

(in millions)	Insurance Contracts
April 28, 2017	$ 44
Total unrealized gains	2
Purchases and sales, net	(7)
Currency exchange rate changes	3
April 27, 2018	$ 42

(in millions)	Insurance Contracts
April 29, 2016	$ 76
Total unrealized gains	2
Purchases and sales, net	(31)
Currency exchange rate changes	(3)
April 28, 2017	$ 44

Retirement Benefit Plan Funding It is the Company's policy to fund retirement costs within the limits of allowable tax deductions. During fiscal year 2018, the Company made discretionary contributions of approximately $215 million to the U.S. pension plan. Internationally, the Company contributed approximately $90 million for pension

benefits during fiscal year 2018. The Company anticipates that it will make contributions of $91 million and $85 million to its U.S. pension benefit plans and non-U.S. pension benefit plans, respectively, in fiscal year 2019. Based on the guidelines under the U.S. Employee Retirement Income Security Act of 1974 and the various guidelines which govern the plans outside the U.S., the majority of anticipated fiscal year 2019 contributions

will be discretionary. The Company believes that, along with pension assets, the returns on invested pension assets, and Company contributions, the Company will be able to meet its pension and other post-retirement obligations in the future.

Retiree benefit payments, which reflect expected future service, are anticipated to be paid as follows:

(in millions)	U.S. Pension Benefits	Non-U.S. Pension Benefits
Fiscal Year	Gross Payments	Gross Payments
2019	$ 106	$ 49
2020	115	45
2021	123	48
2022	133	51
2023	143	58
2024 – 2028	890	323
Total	$ 1,510	$ 574

Post-retirement Benefit Plans The net periodic benefit cost associated with the Company's post-retirement benefit plans was income of $9 million in fiscal year 2018 and expense of $11 million and $12 million in fiscal years 2017 and 2016, respectively. The Company's projected benefit obligation for all post-retirement benefit plans was $317 million and $323 million at April 27, 2018 and April 28, 2017, respectively. The Company's fair value of plan assets for all post-retirement benefit plans was $303 million and $289 million at April 27, 2018 and April 28, 2017, respectively. The activity during fiscal year 2018 related to the change in projected benefit obligation was not material. The decrease of $46 million in the Company's projected benefit obligation during fiscal year 2017 was due to the U.S. post-retirement benefit plan being frozen, effective January 1, 2018. The activity during fiscal years 2018 and 2017 related to the change in fair value of plan assets was not material.

Defined Contribution Savings Plans The Company has defined contribution savings plans that cover substantially all U.S. employees and certain non-U.S. employees. The general purpose of these plans is to provide additional financial security during retirement by providing employees with an incentive to make regular savings. Company contributions to the plans are based on employee contributions and Company performance. Expense recognized under these plans was $374 million, $347 million, and $269 million in fiscal years 2018, 2017, and 2016, respectively.

Effective May 1, 2005, the Company froze participation in the original defined benefit pension plan in the U.S. and implemented two new plans: an additional defined benefit pension plan, the Personal Pension Account (PPA), and a new defined contribution plan, the Personal Investment Account (PIA). Employees in the U.S. hired on or after May 1, 2005 but before January 1, 2016 had the option to participate in either the PPA or the PIA. Participants in the PPA receive an annual allocation of their salary and bonus on which they will receive an annual guaranteed rate of return, which is based on the ten-year Treasury bond rate. Participants in the PIA also receive an annual allocation of their salary and bonus; however, they are allowed to determine how to invest their funds among identified fund alternatives. The cost associated with the PPA is included in U.S. Pension Benefits in the tables presented earlier. The defined contribution cost associated with the PIA was approximately $56 million, $58 million, and $58 million in fiscal years 2018, 2017, and 2016, respectively.

Effective January 1, 2016, the Company froze participation in the existing defined benefit (PPA) and contribution (PIA) pension plans in the U.S. and implemented a new form of benefit under the existing defined contribution plan for legacy Covidien employees and employees in the U.S. hired on or after January 1, 2016. Participants in the Medtronic Core Contribution (MCC) also receive an annual allocation of their salary and bonus and are allowed to determine how to invest their funds among identified fund alternatives. The defined contribution cost associated with

the MCC was approximately $49 million, $45 million, and $12 million and in fiscal years 2018, 2017, and 2016, respectively.

17. Leases

The Company leases office, manufacturing, and research facilities and warehouses, as well as transportation, data processing, and other equipment under capital and operating leases. A substantial number of these leases contain options that allow the Company to renew at the fair rental value on the date of renewal.

Future minimum payments under capitalized leases and non-cancelable operating leases at April 27, 2018 are:

(in millions) Fiscal Year	Capitalized Leases	Operating Leases
2019	$ 5	$ 234
2020	5	182
2021	4	133
2022	3	87
2023	3	43
Thereafter	6	74
Total minimum lease payments	$ 26	$ 753
Less amounts representing interest	(5)	N/A
Present value of net minimum lease payments	$ 21	N/A

Rent expense for all operating leases was $319 million, $294 million, and $269 million in fiscal years 2018, 2017, and 2016, respectively.

18. Accumulated Other Comprehensive (Loss) Income

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

(in millions)	Unrealized Gain (Loss) on Available-for-Sale Securities	Cumulative Translation Adjustments	Net Change in Retirement Obligations	Unrealized Gain (Loss) on Derivative Financial Instruments	Total Accumulated Other Comprehensive (Loss) Income
April 29, 2016	$ (107)	$ (474)	$ (1,197)	$ (90)	$ (1,868)
Other comprehensive (loss) income before reclassifications	52	(978)	(17)	233	(710)
Reclassifications	(14)	—	85	(106)	(35)
Other comprehensive (loss) income	38	(978)	68	127	(745)
April 28, 2017	$ (69)	$ (1,452)	$ (1,129)	$ 37	$ (2,613)
Other comprehensive (loss) income before reclassifications	(95)	1,218	100	(272)	951
Reclassifications	(8)	(34)	67	54	79
Other comprehensive (loss) income	(103)	1,184	167	(218)	1,030
Cumulative effect of change in accounting principle[1]	(22)	—	(155)	(26)	(203)
April 27, 2018	$ (194)	$ (268)	$ (1,117)	$ (207)	$ (1,786)

(1) See Note 1 to the consolidated financial statements for discussion regarding the adoption of accounting standards during fiscal year 2018.

The income tax on gains and losses on available-for-sale securities in other comprehensive income before reclassifications during fiscal years 2018, 2017, and 2016 was an expense of $26 million, an expense of $41 million, and a benefit of $94 million, respectively. During fiscal years 2018, 2017, and 2016, realized gains and losses on available-for-sale securities reclassified from AOCI were reduced by income taxes of $4 million fiscal year 2018 and $8 million in fiscal years 2017 and 2016. When realized, gains and losses on available-for-sale securities reclassified from AOCI are recognized within *other expense, net*. Refer to Note 6 for additional information.

During fiscal year 2018, there was no tax impact on cumulative translation adjustments. However, due to recently enacted U.S. Tax Reform and change in permanently reinvested assertion with respect to certain earnings, the Company continues to evaluate the tax impact these events may have on cumulative translation adjustments. During fiscal years 2017 and 2016, taxes were not provided on cumulative translation adjustments as substantially all translation adjustments relate to earnings that were intended to be definitely reinvested outside the U.S.

The net change in retirement obligations in other comprehensive income includes net amortization of prior service costs and actuarial losses included in net periodic benefit cost. The income tax on the net change in retirement obligations in other comprehensive income before reclassifications during fiscal years 2018, 2017, and 2016 was an expense of $14 million, an expense of $41 million, and a benefit of $85 million, respectively. During fiscal years 2018, 2017, and 2016, the gains and losses on defined benefit and pension items reclassified from AOCI were reduced by income taxes of $27 million, $23 million, and $39 million, respectively. Refer to Note 16 for additional information.

The income tax on unrealized gains and losses on derivative financial instruments in other comprehensive income before reclassifications during fiscal years 2018, 2017, and 2016 was a benefit of $132 million, an expense of $130 million, and a benefit of $51 million, respectively. During fiscal years 2018, 2017, and 2016, gains and losses on derivative financial instruments reclassified from AOCI were reduced by income taxes of $22 million, $61 million, and $121 million, respectively. When realized, cash flow hedge gains and losses reclassified from AOCI are recognized within *other expense, net* or *cost of products sold,* and forward starting interest rate derivative financial instrument gains and losses reclassified from AOCI are recognized within *interest expense, net*. Refer to Note 9 for additional information.

19. 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. At April 27, 2018 and April 28, 2017, accrued litigation was approximately $0.9 billion and $1.1 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

Sprint Fidelis

In 2007, a putative class action was filed in the Ontario Superior Court of Justice in Canada seeking damages for personal injuries allegedly related to the Company's Sprint Fidelis family of defibrillation leads. On October 20, 2009, the court certified a class proceeding but denied class certification on plaintiffs' claim for punitive damages. Pretrial proceedings are underway. The Company has recognized an expense for probable and estimable damages related to this matter, and accrued expenses for this matter are included within accrued litigation as discussed above.

INFUSE Litigation

The Company estimated law firms representing approximately 6,000 claimants asserted or intended to assert personal injury claims against Medtronic in the U.S. state and federal courts involving the INFUSE bone graft product. As of June 1, 2017, the Company had reached agreements to settle substantially all of these claims, resolving this litigation. The Company's accrued expenses for this matter are included within accrued litigation as discussed above.

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 June 1, 2018, the Company had reached agreements to settle approximately 14,400 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.

Shareholder Related Matters

INFUSE

West Virginia Pipe Trades and Phil Pace, on June 27, 2013 and July 3, 2013, respectively, filed putative class action complaints against Medtronic, Inc. and certain of its officers in the U.S. District Court for the District of Minnesota, alleging that the defendants made false and misleading public statements and engaged in a scheme to defraud regarding the INFUSE Bone Graft product during the period of December 8, 2010 through August 3, 2011. The matters were consolidated in September, 2013, and in the consolidated complaint plaintiffs alleged a class period of September 28, 2010 through August 3, 2011. On September 30, 2015, the District Court granted defendants' motion for summary judgment in the consolidated matters. Plaintiffs appealed the dismissal to the U.S. Court of Appeals for

the Eighth Circuit, and in December of 2016 the Eighth Circuit Court reversed and remanded the case to the District Court for further proceedings. On January 30, 2018, the District Court issued an order certifying a class for the period of September 8, 2010 through June 28, 2011.

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 December 30, 2014, a hearing was held on plaintiffs' motion for preliminary injunction and on defendants' motion to dismiss. On January 2, 2015, the District Court denied the plaintiffs' motion for preliminary injunction and on January 5, 2015 issued its opinion. On March 20, 2015, the District Court issued its 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, reversed in part, and remanded the case to the District Court for further proceedings. In February of 2016, the Company petitioned the Minnesota Supreme Court to review the decision of the Minnesota State Court of Appeals, and on April 19, 2016 the Minnesota Supreme Court granted the Company's petition on 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. 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.

HEARTWARE

On January 22, 2016, the St. Paul Teachers' Retirement Fund Association filed a putative class action complaint (the "Complaint") in the United States District Court for the Southern District of New York against HeartWare on behalf of all persons and entities who purchased or otherwise acquired shares of HeartWare from June 10, 2014 through January 11, 2016 (the "Class Period"). The Complaint was amended on June 29, 2016 and claims HeartWare and one of its executives violated Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 by making false and misleading statements about, among other things, HeartWare's response to a June 2014 U.S. FDA warning letter, the development of the Miniaturized Ventricular Assist Device (MVAD) System and the proposed acquisition of Valtech Cardio Ltd. The Complaint seeks to recover damages on behalf of all purchasers or acquirers of HeartWare's stock during the Class Period. In August of 2016 the Company acquired HeartWare. The Company's accrued expenses for this matter are included within accrued litigation as discussed above.

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.

The Company has 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 Covidien 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.

On July 29, 2002, following a March 2002 trial, the District Court entered an opinion and order which held that conditions in the Penobscot River and Bay may pose an imminent and substantial endangerment and that Covidien was liable for the cost of performing a study of the river and bay. The District Court subsequently appointed an independent study panel to oversee the study and ordered Covidien to pay costs associated with the study. A report issued by the study panel contains recommendations for a variety of potential remedial options which could be implemented individually or in a variety of combinations, and included preliminary cost estimates for a variety of potential remedial options, which the report describes as "very rough estimates of cost," ranging from $25 million to $235 million. The report indicates that these costs are subject to uncertainties, and that before any remedial option is implemented, further engineering studies and engineering design work are necessary to determine the feasibility of the proposed remedial options. In June of 2014, a trial was held to determine if remediation was necessary and feasible, and on

September 2, 2015, the District Court issued an order concluding that further engineering study and engineering design work is appropriate to determine the nature and extent of remediation in the Penobscot River and Bay. In January of 2016, the Court appointed an engineering firm to conduct the next phase of the study. The study is targeted for completion in calendar year 2018.

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

Government Matters

Since 2011, the Company has responded to requests from the U.S. Department of Justice for information about business practices relating to several neurovascular products. The requests seek information dating back to 2010, in connection with neurovascular products developed and first marketed by Covidien or one of its predecessors, including ev3. The Company has fully cooperated and continues to cooperate with the requests, which are at various stages. The Company’s accrued expenses for the matters are included within accrued litigation as discussed above.

Since 2014, the Company has responded to requests from the U.S. Department of Health and Human Services and the U.S. Department of Justice for information about business practices relating to several peripheral vascular products. The requests seek information dating back to 2009, in connection with peripheral vascular products developed and first marketed by Covidien or one of its predecessors, including ev3. The Company has fully cooperated and continues to cooperate with the requests, which are at various stages. 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.

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 (the Court) for the 8th Circuit regarding the Tax Court Opinion. Oral argument for the Appeal occurred on March 14, 2018.

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. During the first quarter of fiscal year 2016, the Company finalized its agreement with the IRS on the proposed adjustments associated with the tax effects of the Company's acquisition of Kyphon Inc. (Kyphon). The settlement was consistent with the certain tax adjustment recorded during the fourth quarter of fiscal year 2015. During the first quarter of fiscal year 2017, an expected settlement was reached with the IRS for all outstanding issues for fiscal years 2007 and 2008 except for 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. During the first quarter of fiscal year 2017, an expected settlement was reached with the IRS for all outstanding issues for fiscal years 2009, 2010, and 2011 except for 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 U.S. federal income tax returns lapsed during the first quarter of fiscal year 2018. 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.

See Note 14 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.

As part of the Company's Minimally Invasive Therapies Group 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.

20. Quarterly Financial Data (unaudited)

(in millions, except per share data)		First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Fiscal Year
Net sales						
	2018	**$ 7,390**	**$ 7,050**	**$ 7,369**	**$ 8,144**	**$ 29,953**
	2017	7,166	7,345	7,283	7,916	29,710
Gross profit						
	2018	**$ 5,041**	**$ 4,930**	**$ 5,178**	**$ 5,749**	**$ 20,898**
	2017	4,905	5,019	5,015	5,480	20,419
Net income (loss)						
	2018	**$ 1,009**	**$ 2,013**	**$ (1,392)**	**$ 1,465**	**$ 3,095**
	2017	929	1,111	820	1,164	4,024
Net income (loss) attributable to Medtronic						
	2018	**$ 1,016**	**$ 2,017**	**$ (1,389)**	**$ 1,460**	**$ 3,104**
	2017	929	1,115	821	1,163	4,028
Basic earnings (loss) per share						
	2018	**$ 0.75**	**$ 1.49**	**$ (1.03)**	**$ 1.08**	**$ 2.29**
	2017	0.67	0.81	0.60	0.85	2.92
Diluted earnings (loss) per share						
	2018	**$ 0.74**	**$ 1.48**	**$ (1.03)**	**$ 1.07**	**$ 2.27**
	2017	0.66	0.80	0.59	0.84	2.89

The data in the schedule above has been intentionally rounded to the nearest million, and therefore, the quarterly amounts may not sum to the fiscal year-to-date amounts.

21. Segment and Geographic Information

The Company's organizational structure is based upon four principal operating and reportable segments: the Cardiac and Vascular Group, the Minimally Invasive Therapies Group, the Restorative Therapies Group, and the Diabetes Group. The Company's management has chosen to organize the entity based upon therapy solutions. The four principal segments are strategic businesses that are managed separately, as each one develops and manufactures products and provides services oriented toward targeted therapy solutions.

The primary products and services from which the Cardiac and Vascular Group segment derives its revenues include products for the diagnosis, treatment, and management of cardiac rhythm disorders and cardiovascular disease, as well as services to diagnose, treat, and manage heart- and vascular-related disorders and diseases.

The primary products and services from which the Minimally Invasive Therapies Group segment derives its revenues include those focused on diseases of the respiratory system, gastrointestinal tract, renal system, lungs, pelvic region, kidneys, obesity, and other preventable complications.

The primary products and services from which the Restorative Therapies Group segment derives its revenues include those focused on neurostimulation therapies and drug delivery systems for the treatment of chronic pain, as well as various areas of the spine and brain, along with pelvic health and conditions of the ear, nose, and throat.

The primary products from which the Diabetes Group segment derives its revenues include those focused on diabetes management, including insulin pumps, continuous glucose monitoring systems, insulin pump consumables, and diabetes therapy management software.

Segment disclosures are on a performance basis, consistent with internal management reporting. Net sales of the Company's 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 the performance of the segments and allocates resources based on net sales and segment earnings before interest, taxes, and amortization ("Segment EBITA"). Segment EBITA represents income before income taxes, excluding interest expense, net, amortization of intangible assets, centralized distribution costs, certain corporate charges, and other items not allocated to the segments.

The accounting policies of the segments are the same as those described in Note 1. 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

	Fiscal Year		
(in millions)	**2018**	**2017**	**2016**
Cardiac and Vascular Group	$ 11,354	$ 10,498	$ 10,196
Minimally Invasive Therapies Group	8,716	9,919	9,563
Restorative Therapies Group	7,743	7,366	7,210
Diabetes Group	2,140	1,927	1,864
Total	$ 29,953	$ 29,710	$ 28,833

Segment EBITA

	Fiscal Year		
(in millions)	**2018**	**2017**	**2016**
Cardiac and Vascular Group	$ 4,460	$ 4,134	$ 3,986
Minimally Invasive Therapies Group	3,346	3,434	3,373
Restorative Therapies Group	3,058	2,868	2,671
Diabetes Group	634	690	667
Segment EBITA	11,498	11,126	10,697
Interest expense, net	(749)	(728)	(955)
Amortization of intangible assets	(1,823)	(1,980)	(1,931)
Corporate	(1,437)	(1,232)	(1,464)
Centralized distribution costs	(1,936)	(1,543)	(1,177)
Restructuring and associated costs	(107)	(373)	(299)
Acquisition-related items	(132)	(230)	(283)
Certain litigation charges	(61)	(300)	(26)
Divestiture-related items	(115)	—	—
Gain on sale of businesses	697	—	—
Special charge	(80)	(100)	—
IPR&D impairment	(46)	—	—
Hurricane Maria	(34)	—	—

Impact of inventory step-up	—	(38)	(226)
Income Before Income Taxes	$ 5,675	$ 4,602	$ 4,336

Total Assets and Depreciation Expense

	Total Assets		Depreciation Expense		
(in millions)	April 27, 2018	April 28, 2017	2018	2017	2016
Cardiac and Vascular Group	$ 15,407	$ 15,192	$ 183	$ 180	$ 172
Minimally Invasive Therapies Group[1]	43,002	49,249	217	358	383
Restorative Therapies Group	15,245	15,441	146	167	135
Diabetes Group	2,900	2,641	29	29	31
Segments	76,554	82,523	575	734	721
Corporate	14,839	17,334	246	203	168
Total	$ 91,393	$ 99,857	$ 821	$ 937	$ 889

(1) Assets of $6.3 billion classified as held for sale were included within Minimally Invasive Therapies Group at April 28, 2017.

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. Geographic property, plant, and equipment are attributed to the country based on the physical location of the assets.

The following table presents net sales for fiscal years 2018, 2017, and 2016, and property, plant, and equipment, net at April 27, 2018 and April 28, 2017 for the Company's country of domicile, countries with significant concentrations, and all other countries:

	Net sales			Property, plant, and equipment, net	
(in millions)	2018	2017	2016	April 27, 2018	April 28, 2017
Ireland	$ 85	$ 69	$ 79	$ 149	$ 143
United States	15,875	16,663	16,422	2,927	2,434
Rest of world	13,993	12,978	12,332	1,528	1,784
Total other countries, excluding Ireland	29,868	29,641	28,754	4,455	4,218
Total	$ 29,953	$ 29,710	$ 28,833	$ 4,604	$ 4,361

No single customer represented over 10 percent of the Company’s consolidated net sales in fiscal years 2018, 2017, or 2016.

22. 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. Effective March 28, 2017, 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 and condensed consolidating statements of cash flows as of and for the fiscal years ended April 27, 2018, April 28, 2017, and April 29, 2016, and condensed consolidating balance sheets at April 27, 2018 and April 28, 2017. 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. The Company has presented the provisional tax impacts related to the Tax Act within the condensed consolidating financial statements for the fiscal year ended April 27, 2018, at the subsidiary which the Company reasonably expects to be affected by the Tax Act. Certain reclassifications have been made to prior year financial statements to conform to classifications used in the current year.

The Company made revisions to its condensed consolidating balance sheets of the guarantees of the Medtronic Senior Notes, Medtronic Luxco Senior Notes and the CIFSA Senior Notes, as previously presented in Note 23 in the Company's Annual Report on Form 10-K for the year ended April 28, 2017. An approximate $16.0 billion revision was made to decrease the investment in subsidiaries and shareholders' equity balances in the Medtronic, Inc. column for the Medtronic Senior Notes and Medtronic Luxco Senior Notes, as well as an approximate $16.0 billion revision to increase the investment in subsidiaries and shareholders' equity balances in the CIFSA column for the CIFSA Senior Notes. Both revisions were primarily related to an incorrect presentation of an intercompany asset sale. There is no impact to the consolidated financial statements of Medtronic plc.

During fiscal year 2018, the Company undertook certain steps to reorganize ownership of various subsidiaries. The transactions were entirely among subsidiaries under the common control of Medtronic. The reorganization has been reflected as of the beginning of the earliest period presented.

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Consolidating *Statement of Comprehensive Income*
Fiscal Year Ended April 27, 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	$ —	$ 1,198	$ —	$ 29,952	$ (1,197)	$ 29,953
Costs and expenses:						
Cost of products sold	—	959	—	8,884	(788)	9,055
Research and development expense	—	653	—	1,600	—	2,253
Selling, general, and administrative expense	12	1,329	—	8,633	—	9,974
Amortization of intangible assets	—	8	—	1,815	—	1,823
Restructuring charges, net	—	(7)	—	37	—	30
Acquisition-related items	—	60	—	44	—	104
Certain litigation charges	—	24	—	37	—	61
Divestiture-related items	—	15	—	99	—	114
Gain on sale of businesses	—	—	—	(697)	—	(697)
Special charge	—	80	—	—	—	80
Other expense (income), net	52	(2,329)	—	3,190	(408)	505
Operating (loss) profit	(64)	406	—	6,310	(1)	6,651
Investment loss	—	172	—	55	—	227
Interest income	—	(353)	(482)	(1,582)	2,020	(397)
Interest expense	247	1,897	234	788	(2,020)	1,146
Interest expense (income), net	247	1,544	(248)	(794)	—	749
Equity in net (income) loss of subsidiaries	(3,408)	(830)	(3,160)	—	7,398	—
Income (loss) before income taxes	3,097	(480)	3,408	7,049	(7,399)	5,675
Income tax (benefit) provision	(7)	41	—	2,546	—	2,580
Net income	3,104	(521)	3,408	4,503	(7,399)	3,095
Net loss attributable to noncontrolling interests	—	—	—	9	—	9
Net income attributable to Medtronic	3,104	(521)	3,408	4,512	(7,399)	3,104
Other comprehensive gain (loss), net of tax	1,030	788	1,030	954	(2,772)	1,030
Other comprehensive loss attributable to non-controlling interests	—	—	—	9	—	9
Comprehensive income (loss) attributable to Medtronic	$ 4,134	$ 267	$ 4,438	$ 5,466	$ (10,171)	$ 4,134

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Consolidating *Statement of Comprehensive Income*
Fiscal Year Ended April 28, 2017
Medtronic Senior Notes and Medtronic Luxco Senior Notes

(in millions)	Medtronic plc	Medtronic, Inc.	Medtronic Luxco	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ 1,199	$ —	$ 29,708	$ (1,197)	$ 29,710
Costs and expenses:						
Cost of products sold	—	932	—	9,152	(793)	9,291
Research and development expense	—	636	—	1,557	—	2,193
Selling, general, and administrative expense	12	1,163	—	8,536	—	9,711
Amortization of intangible assets	—	11	—	1,969	—	1,980
Restructuring charges, net	—	114	—	249	—	363
Acquisition-related items	—	133	—	87	—	220
Certain litigation charges	—	—	—	300	—	300
Special charge	—	100	—	—	—	100
Other expense (income), net	18	(2,472)	—	3,099	(423)	222
Operating (loss) profit	(30)	582	—	4,759	19	5,330
Interest income	—	(250)	(649)	(1,065)	1,598	(366)
Interest expense	113	1,652	62	865	(1,598)	1,094
Interest expense (income), net	113	1,402	(587)	(200)	—	728
Equity in net (income) loss of subsidiaries	(4,163)	(1,712)	(3,576)	—	9,451	—
Income (loss) before income taxes	4,020	892	4,163	4,959	(9,432)	4,602
Income tax (benefit) provision	(8)	(124)	—	710	—	578
Net income	4,028	1,016	4,163	4,249	(9,432)	4,024
Net loss attributable to noncontrolling interests	—	—	—	4	—	4
Net income attributable to Medtronic	4,028	1,016	4,163	4,253	(9,432)	4,028
Other comprehensive gain (loss), net of tax	(745)	(340)	(745)	(928)	2,014	(744)
Other comprehensive loss attributable to non-controlling interests	—	—	—	3	—	3
Comprehensive income (loss) attributable to Medtronic	$ 3,283	$ 676	$ 3,418	$ 3,324	$ (7,418)	$ 3,283

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Consolidating *Statement of Comprehensive Income*
Fiscal Year Ended April 29, 2016
Medtronic Senior Notes

(in millions)	Medtronic plc	Medtronic, Inc.	Medtronic Luxco	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ 1,282	$ —	$ 28,832	$ (1,281)	$ 28,833
Costs and expenses:						
Cost of products sold	—	991	—	9,045	(894)	9,142
Research and development expense	—	627	—	1,597	—	2,224
Selling, general, and administrative expense	10	991	—	8,468	—	9,469
Amortization of intangible assets	—	12	—	1,919	—	1,931
Restructuring charges, net	—	17	—	273	—	290
Acquisition-related items	—	135	—	148	—	283
Certain litigation charges	—	—	—	26	—	26
Other expense (income), net	109	(1,784)	—	2,169	(387)	107
Operating (loss) profit	(119)	293	—	5,187	—	5,361
Investment loss	—	70	—	—	—	70
Interest income	—	(237)	(706)	(448)	960	(431)
Interest expense	25	1,906	10	405	(960)	1,386
Interest expense (income), net	25	1,669	(696)	(43)	—	955
Equity in net (income) loss of subsidiaries	(3,673)	(1,405)	(2,977)	—	8,055	—
Income (loss) before income taxes	3,529	(41)	3,673	5,230	(8,055)	4,336
Income tax (benefit) provision	(9)	(279)	—	1,086	—	798
Net income	3,538	238	3,673	4,144	(8,055)	3,538
Other comprehensive gain (loss), net of tax	(684)	(854)	(684)	(673)	2,211	(684)
Comprehensive income (loss)	$ 2,854	$ (616)	$ 2,989	$ 3,471	$ (5,844)	$ 2,854

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Balance Sheet*
April 27, 2018
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	$ 1	$ 3,648	$ —	$ 3,669
Investments	—	76	—	7,482	—	7,558
Accounts receivable, net	—	—	—	5,987	—	5,987
Inventories, net	—	165	—	3,539	(125)	3,579
Intercompany receivable	37	23,480	—	33,929	(57,446)	—
Other current assets	6	178	—	2,003	—	2,187
Total current assets	43	23,919	1	56,588	(57,571)	22,980
Property, plant and equipment, net	—	1,426	—	3,178	—	4,604
Goodwill	—	1,883	—	37,660	—	39,543
Other intangible assets, net	—	12	—	21,711	—	21,723
Tax assets	—	385	—	1,080	—	1,465
Investment in subsidiaries	60,381	73,594	61,457	—	(195,432)	—
Intercompany loans receivable	3,000	6,519	19,337	34,196	(63,052)	—
Other assets	—	223	—	855	—	1,078
Total assets	$ 63,424	$ 107,961	$ 80,795	$ 155,268	$ (316,055)	$ 91,393
LIABILITIES AND EQUITY						
Current liabilities:						
Current debt obligations	$ —	$ —	$ 1,696	$ 362	$ —	$ 2,058
Accounts payable	—	381	—	1,247	—	1,628
Intercompany payable	—	28,401	5,542	23,503	(57,446)	—
Accrued compensation	3	787	—	1,198	—	1,988
Accrued income taxes	—	—	—	979	—	979
Other accrued expenses	16	359	4	3,052	—	3,431
Total current liabilities	19	29,928	7,242	30,341	(57,446)	10,084
Long-term debt	—	20,598	844	2,257	—	23,699
Accrued compensation and retirement benefits	—	902	—	523	—	1,425
Accrued income taxes	10	531	—	2,510	—	3,051
Intercompany loans payable	12,675	14,339	19,335	16,703	(63,052)	—
Deferred tax liabilities	—	—	—	1,423	—	1,423
Other liabilities	—	68	—	821	—	889
Total liabilities	12,704	66,366	27,421	54,578	(120,498)	40,571
Shareholders' equity	50,720	41,595	53,374	100,588	(195,557)	50,720
Noncontrolling interests	—	—	—	102	—	102
Total equity	50,720	41,595	53,374	100,690	(195,557)	50,822
Total liabilities and equity	$ 63,424	$ 107,961	$ 80,795	$ 155,268	$ (316,055)	$ 91,393

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Balance Sheet*
April 28, 2017
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	$ —	$ 45	$ 5	$ 4,917	$ —	$ 4,967
Investments	—	—	—	8,741	—	8,741
Accounts receivable, net	—	—	—	5,591	—	5,591
Inventories, net	—	155	—	3,316	(133)	3,338
Intercompany receivable	51	16,301	—	30,475	(46,827)	—
Other current assets	10	227	—	1,628	—	1,865
Current assets held for sale	—	—	—	371	—	371
Total current assets	61	16,728	5	55,039	(46,960)	24,873
Property, plant and equipment, net	—	1,311	—	3,050	—	4,361
Goodwill	—	1,883	—	36,632	—	38,515
Other intangible assets, net	—	20	—	23,387	—	23,407
Tax assets	—	727	—	823	—	1,550
Investment in subsidiaries	55,747	52,300	52,532	—	(160,579)	—
Intercompany loans receivable	3,000	6,530	16,114	25,621	(51,265)	—
Other assets	—	434	—	798	—	1,232
Noncurrent assets held for sale	—	—	—	5,919	—	5,919
Total assets	$ 58,808	$ 79,933	$ 68,651	$ 151,269	$ (258,804)	$ 99,857
LIABILITIES AND EQUITY						
Current liabilities:						
Current debt obligations	$ —	$ 5,000	$ 901	$ 1,619	$ —	$ 7,520
Accounts payable	—	295	—	1,260	—	1,555
Intercompany payable	—	23,380	7,111	16,336	(46,827)	—
Accrued compensation	9	734	—	1,161	—	1,904
Accrued income taxes	13	—	—	620	—	633
Other accrued expenses	—	361	4	2,253	—	2,618
Current liabilities held for sale	—	—	—	34	—	34
Total current liabilities	22	29,770	8,016	23,283	(46,827)	14,264
Long-term debt	—	21,782	1,842	2,297	—	25,921
Accrued compensation and retirement benefits	—	1,120	—	604	—	1,724
Accrued income taxes	10	1,658	—	737	—	2,405
Intercompany loans payable	8,568	13,109	10,049	19,539	(51,265)	—
Deferred tax liabilities	—	—	—	2,978	—	2,978
Other liabilities	—	153	—	1,362	—	1,515
Noncurrent liabilities held for sale	—	—	—	720	—	720
Total liabilities	8,600	67,592	19,907	51,520	(98,092)	49,527
Shareholders' equity	50,208	12,341	48,744	99,627	(160,712)	50,208
Noncontrolling interests	—	—	—	122	—	122
Total equity	50,208	12,341	48,744	99,749	(160,712)	50,330

Total liabilities and equity	$ 58,808	$ 79,933	$ 68,651	$ 151,269	$ (258,804)	$ 99,857

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Statement of Cash Flows*
Fiscal Year Ended April 27, 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 operating activities	$ 155	$ (1,567)	$ 249	$ 16,419	$ (10,572)	$ 4,684
Investing Activities:						
Acquisitions, net of cash acquired	—	—	—	(137)	—	(137)
Proceeds from sale of businesses	—	—	—	6,058	—	6,058
Additions to property, plant, and equipment	—	(340)	—	(728)	—	(1,068)
Purchases of investments	—	(98)	(25)	(3,124)	47	(3,200)
Sales and maturities of investments	—	25	—	4,249	(47)	4,227
Capital contributions paid	—	(59)	(4,200)	—	4,259	—
Other investing activities, net	—	—	—	(22)	—	(22)
Net cash (used in) provided by investing activities	—	(472)	(4,225)	6,296	4,259	5,858
Financing Activities:						
Acquisition-related contingent consideration	—	—	—	(48)	—	(48)
Change in current debt obligations, net	—	—	(205)	(44)	—	(249)
Repayment of short-term borrowings (maturities greater than 90 days)	—	—	—	(45)	—	(45)
Proceeds from short-term borrowings (maturities greater than 90 days)	—	—	—	1	—	1
Issuance of long-term debt	—	—	—	21	—	21
Payments on long-term debt	—	(6,166)	—	(1,204)	—	(7,370)
Dividends to shareholders	(2,494)	—	—	—	—	(2,494)
Issuance of ordinary shares	403	—	—	—	—	403
Repurchase of ordinary shares	(2,171)	—	—	—	—	(2,171)
Net intercompany loan borrowings (repayments)	4,107	8,180	4,177	(16,464)	—	—
Intercompany dividends paid	—	—	—	(10,572)	10,572	—
Capital contributions received	—	—	—	4,259	(4,259)	—
Other financing activities	—	—	—	(2)	—	(2)
Net cash (used in) provided by financing activities	(155)	2,014	3,972	(24,098)	6,313	(11,954)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	114	—	114
Net change in cash and cash equivalents	—	(25)	(4)	(1,269)	—	(1,298)
Cash and cash equivalents at beginning of period	—	45	5	4,917	—	4,967
Cash and cash equivalents at end of period	$ —	$ 20	$ 1	$ 3,648	$ —	$ 3,669

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Statement of Cash Flows*
Fiscal Year Ended April 28, 2017
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 operating activities	$ 842	$ 1,902	$ 302	$ 4,721	$ (887)	$ 6,880
Investing Activities:						
Acquisitions, net of cash acquired	—	(940)	—	(384)	—	(1,324)
Additions to property, plant, and equipment	—	(369)	—	(885)	—	(1,254)
Purchases of investments	—	—	—	(4,533)	162	(4,371)
Sales and maturities of investments	—	210	—	5,308	(162)	5,356
Capital contributions paid	—	(248)	—	—	248	—
Other investing activities, net	—	—	—	22	—	22
Net cash (used in) provided by investing activities	—	(1,347)	—	(472)	248	(1,571)
Financing Activities:						
Acquisition-related contingent consideration	—	—	—	(69)	—	(69)
Change in current debt obligations, net	—	—	901	5	—	906
Repayment of short-term borrowings (maturities greater than 90 days)	—	—	—	(2)	—	(2)
Proceeds from short-term borrowings (maturities greater than 90 days)	—	—	—	12	—	12
Issuance of long-term debt	—	150	1,850	140	—	2,140
Payments on long-term debt	—	(500)	—	(363)	—	(863)
Dividends to shareholders	(2,376)	—	—	—	—	(2,376)
Issuance of ordinary shares	428	—	—	—	—	428
Repurchase of ordinary shares	(3,544)	—	—	—	—	(3,544)
Net intercompany loan borrowings (repayments)	4,650	(255)	(3,048)	(1,347)	—	—
Intercompany dividends paid	—	—	—	(887)	887	—
Capital contributions received	—	—	—	248	(248)	—
Other financing activities	—	40	—	45	—	85
Net cash (used in) provided by financing activities	(842)	(565)	(297)	(2,218)	639	(3,283)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	65	—	65
Net change in cash and cash equivalents	—	(10)	5	2,096	—	2,091
Cash and cash equivalents at beginning of period	—	55	—	2,821	—	2,876
Cash and cash equivalents at end of period	$ —	$ 45	$ 5	$ 4,917	$ —	$ 4,967

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Statement of Cash Flows*
Fiscal Year Ended April 29, 2016
Medtronic Senior Notes

(in millions)	Medtronic plc	Medtronic, Inc.	Medtronic Luxco	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Operating Activities:						
Net cash provided by operating activities	$ 297	$ 402	$ 696	$ 4,635	$ (812)	$ 5,218
Investing Activities:						
Acquisitions, net of cash acquired	—	(526)	—	(687)	—	(1,213)
Additions to property, plant, and equipment	—	(334)	—	(712)	—	(1,046)
Purchases of investments	—	—	—	(5,406)	—	(5,406)
Sales and maturities of investments	—	—	—	9,924	—	9,924
Capital contributions paid	—	(11)	(4,959)	(4,900)	9,870	—
Other investing activities, net	—	—	—	(14)	—	(14)
Net cash (used in) provided by investing activities	—	(871)	(4,959)	(1,795)	9,870	2,245
Financing Activities:						
Acquisition-related contingent consideration	—	—	—	(22)	—	(22)
Change in current debt obligations, net	—	—	—	7	—	7
Repayment of short-term borrowings (maturities greater than 90 days)	—	—	(139)	—	—	(139)
Proceeds from short-term borrowings (maturities greater than 90 days)	—	—	139	—	—	139
Payments on long-term debt	—	(2,988)	—	(2,144)	—	(5,132)
Dividends to shareholders	(2,139)	—	—	—	—	(2,139)
Issuance of ordinary shares	491	—	—	—	—	491
Repurchase of ordinary shares	(2,830)	—	—	—	—	(2,830)
Net intercompany loan borrowings (repayments)	3,918	(2,459)	4,093	(5,552)	—	—
Intercompany dividends paid	—	—	—	(812)	812	—
Capital contributions received	—	4,900	—	4,970	(9,870)	—
Other financing activities	—	—	—	82	—	82
Net cash (used in) provided by financing activities	(560)	(547)	4,093	(3,471)	(9,058)	(9,543)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	113	—	113
Net change in cash and cash equivalents	(263)	(1,016)	(170)	(518)	—	(1,967)
Cash and cash equivalents at beginning of period	263	1,071	170	3,339	—	4,843
Cash and cash equivalents at end of period	$ —	$ 55	$ —	$ 2,821	$ —	$ 2,876

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Consolidating *Statement of Comprehensive Income*
Fiscal Year Ended April 27, 2018
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ —	$ —	$ 29,953	$ —	$ 29,953
Costs and expenses:						
Cost of products sold	—	—	—	9,055	—	9,055
Research and development expense	—	—	—	2,253	—	2,253
Selling, general, and administrative expense	12	1	2	9,959	—	9,974
Amortization of intangible assets	—	—	—	1,823	—	1,823
Restructuring charges, net	—	—	—	30	—	30
Acquisition-related items	—	—	—	104	—	104
Certain litigation charges	—	—	—	61	—	61
Divestiture-related items	—	—	—	114	—	114
Gain on sale of businesses	—	—	—	(697)	—	(697)
Special charge	—	—	—	80	—	80
Other expense (income), net	52	1	—	452	—	505
Operating (loss) profit	(64)	(2)	(2)	6,719	—	6,651
Investment loss	—	—	—	227	—	227
Interest income	—	(60)	(498)	(562)	723	(397)
Interest expense	247	83	234	1,305	(723)	1,146
Interest expense (income), net	247	23	(264)	743	—	749
Equity in net (income) loss of subsidiaries	(3,408)	(4,233)	(3,146)	—	10,787	—
Income (loss) before income taxes	3,097	4,208	3,408	5,749	(10,787)	5,675
Income tax (benefit) provision	(7)	—	—	2,587	—	2,580
Net income	3,104	4,208	3,408	3,162	(10,787)	3,095
Net loss attributable to noncontrolling interests	—	—	—	9	—	9
Net income attributable to Medtronic	3,104	4,208	3,408	3,171	(10,787)	3,104
Other comprehensive gain (loss), net of tax	1,030	228	1,030	1,030	(2,288)	1,030
Other comprehensive loss attributable to non-controlling interests	—	—	—	9	—	9
Comprehensive income (loss) attributable to Medtronic	$ 4,134	$ 4,436	$ 4,438	$ 4,201	$ (13,075)	$ 4,134

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Consolidating *Statement of Comprehensive Income*
Fiscal Year Ended April 28, 2017
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ —	$ —	$ 29,710	$ —	$ 29,710
Costs and expenses:						
Cost of products sold	—	—	—	9,291	—	9,291
Research and development expense	—	—	—	2,193	—	2,193
Selling, general, and administrative expense	12	1	2	9,696	—	9,711
Amortization of intangible assets	—	—	—	1,980	—	1,980
Restructuring charges, net	—	—	—	363	—	363
Acquisition-related items	—	—	—	220	—	220
Certain litigation charges	—	—	—	300	—	300
Special charge	—	—	—	100	—	100
Other expense (income), net	18	1	4	199	—	222
Operating (loss) profit	(30)	(2)	(6)	5,368	—	5,330
Interest income	—	(82)	(656)	(433)	805	(366)
Interest expense	113	104	62	1,620	(805)	1,094
Interest expense (income), net	113	22	(594)	1,187	—	728
Equity in net (income) loss of subsidiaries	(4,163)	(3,581)	(3,575)	—	11,319	—
Income (loss) before income taxes	4,020	3,557	4,163	4,181	(11,319)	4,602
Income tax (benefit) provision	(8)	—	—	586	—	578
Net income	4,028	3,557	4,163	3,595	(11,319)	4,024
Net loss attributable to noncontrolling interests	—	—	—	4	—	4
Net income attributable to Medtronic	4,028	3,557	4,163	3,599	(11,319)	4,028
Other comprehensive gain (loss), net of tax	(745)	(324)	(745)	(744)	1,814	(744)
Other comprehensive loss attributable to non-controlling interests	—	—	—	3	—	3
Comprehensive income (loss) attributable to Medtronic	$ 3,283	$ 3,233	$ 3,418	$ 2,854	$ (9,505)	$ 3,283

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Consolidating *Statement of Comprehensive Income*
Fiscal Year Ended April 29, 2016
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Net sales	$ —	$ —	$ —	$ 28,833	$ —	$ 28,833
Costs and expenses:						
Cost of products sold	—	—	—	9,142	—	9,142
Research and development expense	—	—	—	2,224	—	2,224
Selling, general, and administrative expense	10	1	3	9,455	—	9,469
Amortization of intangible assets	—	—	—	1,931	—	1,931
Restructuring charges, net	—	—	—	290	—	290
Acquisition-related items	—	—	—	283	—	283
Certain litigation charges	—	—	—	26	—	26
Other expense (income), net	109	1	14	(17)	—	107
Operating (loss) profit	(119)	(2)	(17)	5,499	—	5,361
Investment loss	—	—	—	70	—	70
Interest income	—	(434)	(710)	(464)	1,177	(431)
Interest expense	25	138	10	2,390	(1,177)	1,386
Interest expense (income), net	25	(296)	(700)	1,926	—	955
Equity in net (income) loss of subsidiaries	(3,673)	(2,716)	(2,990)	—	9,379	—
Income (loss) before income taxes	3,529	3,010	3,673	3,503	(9,379)	4,336
Income tax (benefit) provision	(9)	—	—	807	—	798
Net income	3,538	3,010	3,673	2,696	(9,379)	3,538
Other comprehensive gain (loss), net of tax	(684)	59	(684)	(684)	1,309	(684)
Comprehensive income (loss)	$ 2,854	$ 3,069	$ 2,989	$ 2,012	$ (8,070)	$ 2,854

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Balance Sheet*
April 27, 2018
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	$ 3,668	$ —	$ 3,669
Investments	—	—	—	7,558	—	7,558
Accounts receivable, net	—	—	—	5,987	—	5,987
Inventories, net	—	—	—	3,579	—	3,579
Intercompany receivable	37	—	1,343	5,560	(6,940)	—
Other current assets	6	—	—	2,181	—	2,187
Total current assets	43	—	1,344	28,533	(6,940)	22,980
Property, plant and equipment, net	—	—	—	4,604	—	4,604
Goodwill	—	—	—	39,543	—	39,543
Other intangible assets, net	—	—	—	21,723	—	21,723
Tax assets	—	—	—	1,465	—	1,465
Investment in subsidiaries	60,381	31,144	60,118	—	(151,643)	—
Intercompany loans receivable	3,000	1,291	19,337	19,436	(43,064)	—
Other assets	—	—	—	1,078	—	1,078
Total assets	$ 63,424	$ 32,435	$ 80,799	$ 116,382	$ (201,647)	$ 91,393
LIABILITIES AND EQUITY						
Current liabilities:						
Current debt obligations	$ —	$ —	$ 1,696	$ 362	$ —	$ 2,058
Accounts payable	—	—	—	1,628	—	1,628
Intercompany payable	—	1,283	5,542	115	(6,940)	—
Accrued compensation	3	—	—	1,985	—	1,988
Accrued income taxes	—	—	—	979	—	979
Other accrued expenses	16	21	8	3,386	—	3,431
Total current liabilities	19	1,304	7,246	8,455	(6,940)	10,084
Long-term debt	—	2,111	844	20,744	—	23,699
Accrued compensation and retirement benefits	—	—	—	1,425	—	1,425
Accrued income taxes	10	—	—	3,041	—	3,051
Intercompany loans payable	12,675	100	19,335	10,954	(43,064)	—
Deferred tax liabilities	—	—	—	1,423	—	1,423
Other liabilities	—	—	—	889	—	889
Total liabilities	12,704	3,515	27,425	46,931	(50,004)	40,571
Shareholders' equity	50,720	28,920	53,374	69,349	(151,643)	50,720
Noncontrolling interests	—	—	—	102	—	102
Total equity	50,720	28,920	53,374	69,451	(151,643)	50,822
Total liabilities and equity	$ 63,424	$ 32,435	$ 80,799	$ 116,382	$ (201,647)	$ 91,393

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Balance Sheet*
April 28, 2017
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
ASSETS						
Current assets:						
Cash and cash equivalents	$ —	$ 33	$ 5	$ 4,929	$ —	$ 4,967
Investments	—	—	—	8,741	—	8,741
Accounts receivable, net	—	—	—	5,591	—	5,591
Inventories, net	—	—	—	3,338	—	3,338
Intercompany receivable	51	—	1,329	7,111	(8,491)	—
Other current assets	10	—	—	1,855	—	1,865
Current assets held for sale	—	—	—	371	—	371
Total current assets	61	33	1,334	31,936	(8,491)	24,873
Property, plant and equipment, net	—	—	—	4,361	—	4,361
Goodwill	—	—	—	38,515	—	38,515
Other intangible assets, net	—	—	—	23,407	—	23,407
Tax assets	—	—	—	1,550	—	1,550
Investment in subsidiaries	55,747	50,580	51,208	—	(157,535)	—
Intercompany loans receivable	3,000	2,978	16,114	10,149	(32,241)	—
Other assets	—	—	—	1,232	—	1,232
Noncurrent assets held for sale	—	—	—	5,919	—	5,919
Total assets	$ 58,808	$ 53,591	$ 68,656	$ 117,069	$ (198,267)	$ 99,857
LIABILITIES AND EQUITY						
Current liabilities:						
Current debt obligations	$ —	$ 1,176	$ 901	$ 5,443	$ —	$ 7,520
Accounts payable	—	—	—	1,555	—	1,555
Intercompany payable	—	1,269	7,111	111	(8,491)	—
Accrued compensation	9	—	—	1,895	—	1,904
Accrued income taxes	13	—	—	620	—	633
Other accrued expenses	—	23	8	2,587	—	2,618
Current liabilities held for sale	—	—	—	34	—	34
Total current liabilities	22	2,468	8,020	12,245	(8,491)	14,264
Long-term debt	—	2,133	1,842	21,946	—	25,921
Accrued compensation and retirement benefits	—	—	—	1,724	—	1,724
Accrued income taxes	10	—	—	2,395	—	2,405
Intercompany loans payable	8,568	100	10,050	13,523	(32,241)	—
Deferred tax liabilities	—	—	—	2,978	—	2,978
Other liabilities	—	—	—	1,515	—	1,515
Noncurrent liabilities held for sale	—	—	—	720	—	720
Total liabilities	8,600	4,701	19,912	57,046	(40,732)	49,527
Shareholders' equity	50,208	48,890	48,744	59,901	(157,535)	50,208
Noncontrolling interests	—	—	—	122	—	122
Total equity	50,208	48,890	48,744	60,023	(157,535)	50,330

Total liabilities and equity	$ 58,808	$ 53,591	$ 68,656	$ 117,069	$ (198,267)	$ 99,857

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Statement of Cash Flows*
Fiscal Year Ended April 27, 2018
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Operating Activities:						
Net cash provided by operating activities	$ 155	$ 974	$ 264	$ 4,339	$ (1,048)	$ 4,684
Investing Activities:						
Acquisitions, net of cash acquired	—	—	—	(137)	—	(137)
Proceeds from sale of businesses	—	—	—	6,058	—	6,058
Additions to property, plant, and equipment	—	—	—	(1,068)	—	(1,068)
Purchases of investments	—	—	(25)	(3,200)	25	(3,200)
Sales and maturities of investments	—	—	—	4,252	(25)	4,227
Capital contributions paid	—	(1,557)	(4,200)	—	5,757	—
Other investing activities, net	—	—	—	(22)	—	(22)
Net cash (used in) provided by investing activities	—	(1,557)	(4,225)	5,883	5,757	5,858
Financing Activities:						
Acquisition-related contingent consideration	—	—	—	(48)	—	(48)
Change in current debt obligations, net	—	—	(205)	(44)	—	(249)
Repayment of short-term borrowings (maturities greater than 90 days)	—	—	—	(45)	—	(45)
Proceeds from short-term borrowings (maturities greater than 90 days)	—	—	—	1	—	1
Issuance of long-term debt	—	—	—	21	—	21
Payments on long-term debt	—	(1,150)	—	(6,220)	—	(7,370)
Dividends to shareholders	(2,494)	—	—	—	—	(2,494)
Issuance of ordinary shares	403	—	—	—	—	403
Repurchase of ordinary shares	(2,171)	—	—	—	—	(2,171)
Net intercompany loan borrowings (repayments)	4,107	1,700	4,162	(9,969)	—	—
Intercompany dividend paid	—	—	—	(1,048)	1,048	—
Capital contributions received	—	—	—	5,757	(5,757)	—
Other financing activities	—	—	—	(2)	—	(2)
Net cash (used in) provided by financing activities	(155)	550	3,957	(11,597)	(4,709)	(11,954)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	114	—	114
Net change in cash and cash equivalents	—	(33)	(4)	(1,261)	—	(1,298)
Cash and cash equivalents at beginning of period	—	33	5	4,929	—	4,967
Cash and cash equivalents at end of period	$ —	$ —	$ 1	$ 3,668	$ —	$ 3,669

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Statement of Cash Flows*
Fiscal Year Ended April 28, 2017
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Operating Activities:						
Net cash provided by operating activities	$ 842	$ 1,904	$ 302	$ 5,829	$ (1,997)	$ 6,880
Investing Activities:						
Acquisitions, net of cash acquired	—	—	—	(1,324)	—	(1,324)
Additions to property, plant, and equipment	—	—	—	(1,254)	—	(1,254)
Purchases of investments	—	—	—	(4,371)	—	(4,371)
Sales and maturities of investments	—	—	—	5,356	—	5,356
Capital contributions paid	—	(537)	—	—	537	—
Other investing activities, net	—	—	—	22	—	22
Net cash (used in) provided by investing activities	—	(537)	—	(1,571)	537	(1,571)
Financing Activities:						
Acquisition-related contingent consideration	—	—	—	(69)	—	(69)
Change in current debt obligations, net	—	—	901	5	—	906
Repayment of short-term borrowings (maturities greater than 90 days)	—	—	—	(2)	—	(2)
Proceeds from short-term borrowings (maturities greater than 90 days)	—	—	—	12	—	12
Issuance of long-term debt	—	—	1,850	290	—	2,140
Payments on long-term debt	—	—	—	(863)	—	(863)
Dividends to shareholders	(2,376)	—	—	—	—	(2,376)
Issuance of ordinary shares	428	—	—	—	—	428
Repurchase of ordinary shares	(3,544)	—	—	—	—	(3,544)
Net intercompany loan borrowings (repayments)	4,650	(1,542)	(3,048)	(60)	—	—
Intercompany dividend paid	—	—	—	(1,997)	1,997	—
Capital contributions received	—	—	—	537	(537)	—
Other financing activities	—	—	—	85	—	85
Net cash (used in) provided by financing activities	(842)	(1,542)	(297)	(2,062)	1,460	(3,283)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	65	—	65
Net change in cash and cash equivalents	—	(175)	5	2,261	—	2,091
Cash and cash equivalents at beginning of period	—	208	—	2,668	—	2,876
Cash and cash equivalents at end of period	$ —	$ 33	$ 5	$ 4,929	$ —	$ 4,967

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Condensed Consolidating *Statement of Cash Flows*
Fiscal Year Ended April 29, 2016
CIFSA Senior Notes

(in millions)	Medtronic plc	CIFSA	CIFSA Subsidiary Guarantors	Subsidiary Non-guarantors	Consolidating Adjustments	Total
Operating Activities:						
Net cash provided by operating activities	$ 297	$ 4,208	$ 604	$ 4,114	$ (4,005)	$ 5,218
Investing Activities:						
Acquisitions, net of cash acquired	—	—	—	(1,266)	53	(1,213)
Additions to property, plant, and equipment	—	—	—	(1,046)	—	(1,046)
Purchases of investments	—	—	—	(5,406)	—	(5,406)
Sales and maturities of investments	—	—	—	9,924	—	9,924
Sales of subsidiaries	—	—	53	—	(53)	—
Capital contributions paid	—	(720)	(4,959)	—	5,679	—
Other investing activities, net	—	—	—	(14)	—	(14)
Net cash (used in) provided by investing activities	—	(720)	(4,906)	2,192	5,679	2,245
Financing Activities:						
Acquisition-related contingent consideration	—	—	—	(22)	—	(22)
Change in current debt obligations, net	—	—	—	7	—	7
Repayment of short-term borrowings (maturities greater than 90 days)	—	—	(139)	—	—	(139)
Proceeds from short-term borrowings (maturities greater than 90 days)	—	—	139	—	—	139
Payments on long-term debt	—	(2,121)	—	(3,011)	—	(5,132)
Dividends to shareholders	(2,139)	—	—	—	—	(2,139)
Issuance of ordinary shares	491	—	—	—	—	491
Repurchase of ordinary shares	(2,830)	—	—	—	—	(2,830)
Net intercompany loan borrowings (repayments)	3,918	(1,887)	4,132	(6,163)	—	—
Intercompany dividend paid	—	—	—	(4,005)	4,005	—
Capital contributions received	—	—	—	5,679	(5,679)	—
Other financing activities	—	—	—	82	—	82
Net cash (used in) provided by financing activities	(560)	(4,008)	4,132	(7,433)	(1,674)	(9,543)
Effect of exchange rate changes on cash and cash equivalents	—	—	—	113	—	113
Net change in cash and cash equivalents	(263)	(520)	(170)	(1,014)	—	(1,967)
Cash and cash equivalents at beginning of period	263	728	170	3,682	—	4,843
Cash and cash equivalents at end of period	$ —	$ 208	$ —	$ 2,668	$ —	$ 2,876

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

Not applicable.

Item 9A. Controls and Procedures

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 annual report, our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act) are effective.

Management's Annual Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company (as defined in Exchange Act Rule 13a-15(f)). Management conducted an evaluation of the effectiveness of internal control over financial reporting based on the framework in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, management concluded that the Company's internal control over financial reporting was effective at April 27, 2018. Our internal control over financial reporting at April 27, 2018, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm who has also audited our consolidated financial statements, as stated in their report in the section entitled "Report of Independent Registered Public Accounting Firm," which expresses an unqualified opinion on the effectiveness of the Company's internal control over financial reporting at April 27, 2018, which is included in "Item 8. Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

The Company began deployment of an enterprise resource planning (ERP) software program, SAP, to the Minimally Invasive Therapies Group during fiscal year 2017. Although no specific implementation activity or related changes in internal controls occurred during the period covered by this Annual Report on Form 10-K, the system deployments will continue in the coming year with a 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 Annual Report on Form 10-K that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Part III of this Annual Report on Form 10-K incorporates information by reference from the Company's 2018 definitive proxy statement, which will be filed no later than 120 days after April 27, 2018.

Item 10. Directors, Executive Officers, and Corporate Governance

The sections entitled “Proposal 1 — Election of Directors — Directors and Nominees,” “Corporate Governance — Committees of the Board and Meetings,” and “Share Ownership Information — Section 16(a) Beneficial Ownership Reporting Compliance” in the Company's Proxy Statement for our 2018 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 27, 2018, are incorporated herein by reference.

Set forth below are the names and ages of our Section 16(b) executive officers of Medtronic, as well as information regarding their positions with Medtronic, their periods of service in these capacities, and their business experiences. There are no family relationships among any of the officers named, nor is there any arrangement or understanding pursuant to which any person was selected as an officer.

Omar Ishrak, age 62, has been Chairman and Chief Executive Officer of Medtronic since 2011. Prior to joining Medtronic, Mr. Ishrak served as President and Chief Executive Officer of GE Healthcare Systems, a comprehensive provider of medical imaging and diagnostic technology, from 2009 to 2011. Before that, Mr. Ishrak was President and Chief Executive Officer of GE Healthcare Clinical Systems from 2005 to 2008 and President and Chief Executive Officer of GE Healthcare Ultrasound and BMD from 1995 to 2004. Mr. Ishrak is also a current member of the Board of Directors of Intel Corporation.

Michael J. Coyle, age 56, has been Executive Vice President and Group President, Cardiac and Vascular Group of the Company since January 2015 and of Medtronic, Inc. since December 2009. Prior to that, he served as President of the Cardiac Rhythm Management division at St. Jude from 2001 to 2007, and prior positions included serving St. Jude as President of the company’s Daig Catheter division and numerous leadership positions at Eli Lilly & Company.

Hooman C. Hakami, age 48, has been Executive Vice President and Group President, Diabetes Group of the Company since January 2015 and of Medtronic, Inc. since June 2014. Prior to that, he was President and Chief Executive Officer of Detection and Guidance Solutions at GE Healthcare from April 2012 to May 2014. Prior to that, he served as President and Chief Executive Officer of Interventional Systems from July 2009 to April 2012; Global Business Transformation leader for GE Healthcare from December 2008 to July 2009; and Vice President and General Manager, Global Ultrasound Services from June 2004 to December 2008. Mr. Hakami started his career with GE and has held the following financial roles: Chief Financial Officer for the Global Ultrasound division from 2001 to 2004; Chief Financial Officer for Clinical and Multi-vendor Services from 1999 to 2001; as well as various finance roles at GE Capital from 1994 to 1999; GE's Aerospace Division from 1992 to 1994 and GE Power Systems from 1991 to 1992.

Richard Kuntz, M.D., age 61, has been Senior Vice President and Chief Scientific, Clinical and Regulatory Officer of the Company since January 2015 and of Medtronic, Inc. since August 2009. Prior to that, he was Senior Vice President and President, Neuromodulation from October 2005 to August 2009; and prior to that, he was an interventional cardiologist and Chief of the Division of Clinical Biometrics at Brigham and Women’s Hospital and Associate Professor of Medicine and Chief Scientific Officer of the Harvard Clinical Research Institute.

Bradley E. Lerman, age 61, has been Senior Vice President, General Counsel and Corporate Secretary of the Company since January 2015 and of Medtronic, Inc. since May 2014. Prior to that, he was Executive Vice President, General Counsel and Corporate Secretary at Federal National Mortgage Association (Fannie Mae) from October 2012 to May 2014; Senior Vice President and Chief Litigation Counsel at Pfizer, Inc. from January 2009 to September 2012; Partner at Winston & Strawn from August 1998 to January 2009; partner at Kirkland & Ellis from March 1996 to July 1998; Associate Independent Counsel from October 1994 to March 1996; and Assistant U.S. Attorney in the Northern District of Illinois from February 1986 to September 1994. Mr. Lerman is also a current member of the Board of Directors of McKesson Corporation.

Geoffrey S. Martha, age 48, has been Executive Vice President and President, Restorative Therapies Group since June 2015. Mr. Martha previously served as Senior Vice President of Strategy and Business Development of the

Company beginning in January 2015 and of Medtronic, Inc. beginning in August 2011. Prior to that, he served as Managing Director of Business Development at GE Healthcare from April 2007 to July 2011; General Manager for GE Capital Technology Finance Services from November 2003 to March 2007; Senior Vice President, Business Development for GE Capital Vendor Financial Services from February 2002 to October 2003; General Manager for GE Capital Colonial Pacific Leasing from February 2001 to January 2002; and Vice President, Business Development for Potomac Federal, the GE Capital federal financing investment bank from May 1998 to January 2001.

Karen L. Parkhill, age 52, has been Executive Vice President and Chief Financial Officer since June 2016. From 2011 to 2016, Ms. Parkhill served as Vice Chairman and Chief Financial Officer of Comerica Incorporated. Ms. Parkhill was a member of Comerica's Management Executive Committee and the Comerica Bank Board of Directors. Prior to joining Comerica, Ms. Parkhill worked for J.P. Morgan Chase & Co. in various capacities from 1992 to 2011, including serving as Chief Financial Officer of the Commercial Banking business from 2007 to 2011. Ms. Parkhill is also a current member of the Board of Directors for the Methodist Health System in Dallas.

Carol A. Surface, age 52, has been Senior Vice President and Chief Human Resources Officer of the Company since January 2015 and of Medtronic, Inc. since September 2013. Prior to that, she was the Executive Vice President and Chief Human Resources Officer at Best Buy Co., Inc. from March 2010 to September 2013, and held a series of HR leadership roles at PepsiCo Inc., from May 2000 to March 2010.

Robert ten Hoedt, age 57, has been Executive Vice President and President, EMEA of the Company since January 2015 and of Medtronic, Inc. since May 2014. Prior to that, he was Senior Vice President and President, EMEA and Canada from 2009 to 2014; Vice President CardioVascular Europe and Central Asia from 2006 to 2009; Vice President and General Manager, Vitatron from 1999 to 2006; Gastro-Uro leader from 1994 to 1999; and Marketing Manager, Neurological from 1991 to 1994.

Robert J. White, age 55, has been Executive Vice President and President, Minimally Invasive Therapies Group since December 2017. Prior to that, he was Senior Vice President and President, Asia Pacific from January 2015 to December 2017. Mr. White held various leadership positions at Covidien from 2010 to 2015 including President, Emerging Markets; President, Respiratory and Monitoring Solutions; and Vice President and General Manager, Patient Monitoring. Mr. White also held various leadership positions at GE Healthcare and IBM.

Item 11. Executive Compensation

The sections entitled "Corporate Governance — Director Compensation," "Corporate Governance — Committees of the Board and Meetings," "Compensation Discussion and Analysis," and "Executive Compensation" in Medtronic's Proxy Statement for the Company's 2018 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 27, 2018, are incorporated herein by reference. The section entitled "Compensation Committee Report" in Medtronic's Proxy Statement for the Company's 2018 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 27, 2018, is furnished herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters

The sections entitled "Share Ownership Information – Significant Shareholders," "Share Ownership Information – Beneficial Ownership of Management," and "Executive Compensation — Equity Compensation Plan Information" in Medtronic's Proxy Statement for the Company's 2018 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 27, 2018, are incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The sections entitled "Corporate Governance — Director Independence" and "Corporate Governance — Related Party Transactions and Other Matters" in Medtronic's Proxy Statement for the Company's 2018 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 27, 2018, are incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The sections entitled "Corporate Governance — Committees of the Board and Meetings" and "Audit and Non-Audit Fees" in Medtronic's Proxy Statement for the Company's 2018 Annual General Meeting of Shareholders, which will be filed no later than 120 days after April 27, 2018, are incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) 1. Financial Statement Schedules

Schedule II. Valuation and Qualifying Accounts — years ended April 27, 2018, April 28, 2017, and April 29, 2016.

All other schedules are omitted because they are not applicable or the required information is shown in the financial statements or notes thereto.

2. Exhibits

Exhibit No.	Description
3.1	Certificate of Incorporation of Medtronic plc (incorporated by reference to Exhibit 3.1 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
3.2	Amended and Restated Memorandum and Articles of Association of Medtronic plc (incorporated by reference to Exhibit 3.2 to Medtronic plc's Registration Statement on Form S-3, filed on February 6, 2017, File No. 333-215895).
4.1	Form of Indenture between Medtronic, Inc. and Wells Fargo Bank, National Association regarding 2009 offering (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Registration Statement on Form S-3, filed on March 9, 2009, File No. 333-157777).
4.2	First Supplemental Indenture, dated March 12, 2009, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 12, 2009, File No. 001-07707).
4.3	Second Supplemental Indenture, dated March 16, 2010, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 16, 2010, File No. 001-07707).
4.4	Third Supplemental Indenture, dated March 15, 2011, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current report on Form 8-K, filed on March 16, 2011, File No. 001-07707).
4.5	Fourth Supplemental Indenture, dated March 19, 2012, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.2 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 20, 2012, File No. 001-07707).
4.6	Fifth Supplemental Indenture, dated March 26, 2013, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Forms of Notes thereof) (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on March 26, 2013, File No. 001-07707).
4.7	Sixth Supplemental Indenture, dated February 27, 2014, between Medtronic, Inc. and Wells Fargo Bank, National Association (including the Form of Global Note thereof) (incorporated by reference to Exhibit 4.2 to Medtronic, Inc.'s Current Report on Form 8-K, filed on February 27, 2014, File No. 001-07707).
4.8	Seventh Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic plc, Medtronic, Inc., Medtronic Global Holdings S.C.A. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.2 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).

4.9	Indenture, dated December 10, 2014, between Medtronic, Inc. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.1 to Medtronic, Inc.'s Current Report on Form 8-K filed with the Commission on December 10, 2014, File No. 001-07707).

4.10	First Supplemental Indenture, dated December 10, 2014, between Medtronic, Inc. and Wells Fargo Bank, National Association (including Form of Floating Rate Senior Notes due 2020, Form of 1.500% Senior Notes due 2018, Form of 2.500% Senior Notes due 2020, Form of 3.150% Senior Notes due 2022, Form of 3.500% Senior Notes due 2025, Form of 4.375% Senior Notes due 2035 and Form of 4.625% Senior Notes due 2045) (incorporated by reference to Exhibit 4.2 of Medtronic, Inc.'s Current Report on Form 8-K filed with the Commission on December 10, 2014, File No. 001-07707).
4.11	Second Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic plc and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.3 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.12	Third Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic Global Holdings S.C.A. and Wells Fargo Bank, National Association (incorporated by reference to Exhibit 4.4 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
4.13	Indenture, dated as of October 22, 2007, by and among Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1(a) to Covidien plc's Current Report on Form 8-K filed on October 22, 2007, File No. 001-33259).
4.14	Third Supplemental Indenture, dated as of October 22, 2007, by and among Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1(d) to Covidien plc's Current Report on Form 8-K filed on October 22, 2007, File No. 001-33259).
4.15	Fourth Supplemental Indenture, dated as of October 22, 2007, by and among Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1(e) to Covidien plc's Current Report on Form 8-K filed on October 22, 2007, File No. 001-33259).
4.16	Fifth Supplemental Indenture, dated as of June 4, 2009, by and among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K12G3 filed on June 5, 2009, File No. 001-33259).
4.17	Sixth Supplemental Indenture, dated as of June 28, 2010, among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K filed on June 28, 2010, File No. 001-33259).
4.18	Seventh Supplemental Indenture, dated as of May 30, 2012, among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K filed on May 30, 2012, File No. 001-33259).
4.19	Eighth Supplemental Indenture, dated as of May 16, 2013, among Covidien International Finance S.A., Covidien Ltd., Covidien plc and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.1 to Covidien plc's Current Report on Form 8-K filed on May 16, 2013, File No. 001-33259).
4.20	Ninth Supplemental Indenture, dated as of January 26, 2015, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Covidien public limited company, Covidien International Finance S.A., Covidien Ltd. and Deutsche Bank Trust Company Americas (incorporated by reference to Exhibit 4.5 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).

4.21	Senior Indenture, dated as of March 28, 2017, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Medtronic, Inc., and Wells Fargo Bank, N.A. (incorporated by reference to Exhibit 4.1 to Medtronic plc's Current Report on Form 8-K, filed on March 28, 2017, File No. 001-36820).
4.23	First Supplemental Indenture, dated as of March 28, 2017, by and among Medtronic plc, Medtronic Global Holdings S.C.A., Medtronic, Inc., and Wells Fargo Bank, N.A. (incorporated by reference to Exhibit 4.2 to Medtronic plc's Current Report on Form 8-K, filed on March 28, 2017, File No. 001-36820).

10.1	Amendment and Restatement Agreement, dated as of November 7, 2014, by and among Medtronic, Inc., Medtronic plc (formerly known as Medtronic Holdings Limited), Medtronic Global Holdings S.C.A., the lenders from time to time party thereto, and Bank of America, N.A., as administrative agent and issuing bank (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Current Report on Form 8-K, filed on November 10, 2014, File No. 001-07707).
10.2	Amendment dated September 30, 2015, to Amended and Restated Revolving Credit Agreement, dated as of November 7, 2014, by and among Medtronic, Inc., Medtronic Holdings Limited, Medtronic Global Holdings, SCA, the lenders from time to time party thereto, and Bank of America, N.A., as administrative agent and issuing bank (incorporated by reference to Exhibit 10.2 to Medtronic plc's Form 10-Q for the quarter ended October 30, 2015,filed on December 9, 2015, File No. 001-36820).
10.3	Tax Sharing Agreement, dated as of June 29, 2007, by and among Tyco International Ltd., Covidien Ltd. and Tyco Electronics Ltd. (incorporated by reference to Exhibit 10.1 to Covidien plc's Current Report on Form 8-K, filed on July 5, 2007, File No. 001-33259).
10.4	Form of Deed of Indemnification (incorporated by reference to Exhibit 10.1 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
10.5	Form of Indemnification Agreement (incorporated by reference to Exhibit 10.2 to Medtronic plc's Current Report on Form 8-K12B, filed on January 27, 2015, File No. 001-36820).
*10.6	Letter Agreement by and between Medtronic, Inc. and Omar Ishrak dated May 11, 2011 (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Current Report on Form 8-K, filed on May 11, 2011, File No. 001-07707).
*10.7	Change of Control Severance Plan - Section 16B Officers (as amended and restated as of January 26, 2015) (incorporated by reference to Exhibit 10.14 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.8	Amendment to Letter Agreement dated May 11, 2011 by and between Medtronic, Inc. and Omar Ishrak (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 29, 2011, filed September 7, 2011, File No. 001-07707).
*10.9	Amendment dated February 12, 2015 to the Letter Agreement by and between Medtronic, Inc. and Omar Ishrak dated May 11, 2011 (incorporated by reference to Exhibit 10.24 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.10	Letter Agreement by and between Medtronic, Inc. and Michael J. Coyle dated November 19, 2009 (incorporated by reference to Exhibit 10.55 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 27, 2012, filed on June 26, 2012, File No. 001-07707).
*10.11	Letter Agreement by and between Medtronic, Inc. and Carol Surface dated August 22, 2013 (incorporated by reference to Exhibit 10.44 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2014, filed on June 20, 2014, File No. 001-07707).
*10.12	Letter Agreement by and between Medtronic, Inc. and Hooman Hakami dated April 29, 2014 (incorporated by reference to Exhibit 10.5 of Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2014, filed on August 29, 2014, File No. 001-07707)
*10.13	Letter Agreement by and between Medtronic, Inc. and Bradley E. Lerman dated May 2, 2014 (incorporated by reference to Exhibit 10.4 of Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2014, filed on August 29, 2014, File No. 001-07707)
*10.14	Letter Agreement by and between Medtronic, Inc. and Karen Parkhill dated May 2, 2016 (incorporated by reference to Exhibit 10.1 to Medtronic, plc's Current Report on Form 8-K, filed on May 4, 2016, File No. 001-36820).
*10.15	

	Form of Offer Letter Amendment (incorporated by reference to Exhibit 10.25 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.16	1998 Outside Director Stock Compensation Plan (as amended and restated effective as of January 1, 2008) (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 25, 2008, filed on, filed on March 4, 2008, File No. 001-07707).

*10.17	Amendment to the 1998 Outside Director Stock Compensation Plan (incorporated by reference to Exhibit 10.2 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.18	2003 Long-Term Incentive Plan (as amended and restated effective January 1, 2008) (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2008, filed on March 4, 2008, File No. 001-07707).
*10.19	Amendment to the 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.20	Form of Restricted Stock Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2005, filed on March 7, 2005, File No. 001-07707).
*10.21	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan (four year vesting) (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2005, filed on March 7, 2005, File No. 001-07707).
*10.22	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan (immediate vesting) (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 28, 2005, filed on March 7, 2005, File No. 001-07707).
*10.23	Form of Restricted Stock Units Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.20 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 29, 2005, filed on June 29, 2005, File No. 001-07707).
*10.24	Form of Performance Share Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.21 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 29, 2005, filed on June 29, 2005, File No. 001-07707).
*10.25	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.23 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.26	Form of Restricted Stock Award Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.24 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.27	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.25 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.28	Form of Performance Award Agreement under 2003 Long-Term Incentive Plan effective June 22, 2006 (incorporated by reference to Exhibit 10.26 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 28, 2006, filed on June 28, 2006, File No. 001-07707).
*10.29	Form of Restricted Stock Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 26, 2007, filed on December 4, 2007, File No. 001-07707).
*10.30	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 26, 2007, filed on December 4, 2007, File No. 001-07707).
*10.31	Form of Non-Qualified Stock Option Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.39 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2008, filed on June 24, 2008, File No. 001-07707).

*10.32	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.40 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2008, filed on June 24, 2008, File No. 001-07707).
*10.33	Form of Restricted Stock Unit Award Agreement under 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.41 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 25, 2008, filed on June 24, 2008, File No. 001-07707).
*10.34	Israeli Amendment to the 2003 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended January 25, 2008, filed on March 4, 2008, File No. 001-07707).

*10.35	2008 Stock Award and Incentive Plan (as amended and restated effective August 27, 2009) (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 30, 2009, filed on December 9, 2009, File No. 001-07707).
*10.36	Amendment to the 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.37	Form of Restricted Stock Unit Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.38	Form of Restricted Stock Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.39	Form of Restricted Stock Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.40	Form of Restricted Stock Unit Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.41	Form of Non-Qualified Stock Option Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.6 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended July 25, 2008, filed on September 3, 2008, File No. 001-07707).
*10.42	Terms of Non-Employee Director Compensation under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.42 to Medtronic, Inc.'s Annual Report on Form 10-K for the year ended April 27, 2012, filed on June 26, 2012, File No. 001-07707).
*10.43	Form of Non-Employee Director Initial Option Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.1 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.44	Form of Non-Employee Director Annual Option Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.45	Form of Non-Employee Director Deferred Unit Award Agreement under 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.46	Form of Non-Employee Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.65 to Medtronic plc's Annual Report on Form 10-K for the year ended April 24, 2015, filed on June 23, 2015, File No. 001-36820).
*10.47	Israeli Amendment to the Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.10 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.48	Form of Restricted Stock Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-K for the quarter ended July 28, 2017, filed on September 1, 2017, File No. 001-36820).
*10.49	Medtronic plc Amended and Restated 2013 Stock Award and Incentive Plan (as amended and restated generally effective December 8, 2017) (incorporated by reference to Exhibit 10.1 to

	Medtronic plc's Current Report on Form 8-K, filed on December 12, 2017, File No. 001-36820).
*10.50	Form of Non-qualified Stock Option Agreement Amended and Restated 2013 Stock Award and Incentive Plan.#
*10.51	Form of Restricted Stock Unit Award Agreement Amended and Restated 2013 Stock Award and Incentive Plan.#
*10.52	Form of Restricted Stock Award Agreement Amended and Restated 2013 Stock Award and Incentive Plan.#
*10.53	Form of Long Term Performance Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan#

*10.54	Form of Non-Qualified Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.31 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.55	Form of Non-Employee Director Deferred Unit Award Agreement under the 2008 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Quarterly Report on Form 10-Q for the quarter ended October 24, 2008, filed on December 3, 2008, File No. 001-07707).
*10.56	Form of Non-Qualified Stock Option Agreement under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.2 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.57	Form of Restricted Stock Unit Award Agreement (U.S. Employees) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.3 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.58	Form of Restricted Stock Unit Award Agreement (Non-U.S. Employees) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.4 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.59	Form of Restricted Stock Unit Award Agreement (Time-Based) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.5 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.60	Form of Restricted Stock Unit Award Agreement (Israeli-Employees) under 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.8 to Medtronic, Inc.'s Current Report on Form 8-K, filed on August 27, 2013, File No. 001-07707).
*10.61	Form of Non-Qualified Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.48 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.62	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.49 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.63	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.50 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.64	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.51 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.65	Form of Stock Option Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.53 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.66	Form of Restricted Stock Unit Award Agreement under Amended and Restated 2013 Stock Award and Incentive Plan (incorporated by reference to Exhibit 10.54 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended January 23, 2015, filed on February 27, 2015, File No. 001-36820).
*10.67	Medtronic plc 2014 Amended and Restated Employees Stock Purchase Plan (incorporated by reference to Exhibit 10.8 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).

*10.68	Medtronic plc Incentive Plan (as amended and restated effective January 26, 2015) (incorporated by reference to Exhibit 10.11 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.69	Medtronic plc Supplemental Executive Retirement Plan (as restated generally effective January 26, 2015) (incorporated by reference to Exhibit 10.15 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).

*10.70	Medtronic plc Savings and Investment Plan (as amended and restated generally effective January 26, 2015) (incorporated by reference to Exhibit 4.22 to Medtronic plc's Registration Statement on Form S-8 filed on January 28, 2015, File No. 333-201737).
*10.71	Medtronic plc Puerto Rico Employees' Savings and Investment Plan (as amended and restated generally effective January 26, 2015) (incorporated by reference to Exhibit 4.23 to Medtronic plc's Registration Statement on Form S-8 filed on January 28, 2015, File No. 333-201737).
*10.72	Medtronic plc Capital Accumulation Plan Deferral Program (as amended and restated generally effective January 26, 2015) (incorporated by reference to Exhibit 10.13 to Medtronic plc's Current Report on Form 8-K, filed on January 27, 2015, File No. 001-36820).
*10.73	Capital Accumulation Plan Deferral Program (as amended and restated generally effective January 1, 2017) (incorporated by reference to Exhibit 10.1 to Medtronic plc's Quarterly Report on Form 10-Q for the quarter ended October 28, 2016, filed on December 5, 2016, File No. 001-36820).
12.1	Computation of Ratio of Earnings to Fixed Charges.
21	List of Subsidiaries of Medtronic plc.
23	Consent of Independent Registered Public Accounting Firm.
24	Power of Attorney.
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	The following materials from Medtronic plc's Annual Report on Form 10-K for the year ended April 27, 2018, formatted in Extensible Business Reporting Language (XBRL): (i) consolidated statements of income, (ii) consolidated statements of comprehensive income, (iii) consolidated balance sheets, (iv) consolidated statements of cash flows, (v) consolidated statements of equity, and (vi) the notes to the consolidated financial statements.

*Exhibits that are management contracts or compensatory plans or arrangements.

#Filed herewith.

MEDTRONIC PLC AND SUBSIDIARIES
SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS
(in millions)

		Additions		Deductions	
	Balance at Beginning of Fiscal Year	Charges to Income	Charges to Other Accounts	Other Changes (Debit) Credit	Balance at End of Fiscal Year
Allowance for doubtful accounts:					
Year ended 4/27/18	$ 155	$ 52	$ —	$ (14) (a)	$ 193
Year ended 4/28/17	$ 161	$ 39	$ —	$ (45) (a)	$ 155
Year ended 4/29/16	$ 144	$ 49	$ —	$ (32) (a)	$ 161
Inventory reserve:					
Year ended 4/27/18	$ 443	$ 170	$ —	$ (161) (b)	$ 452
Year ended 4/28/17	$ 426	$ 155	$ 28	$ (166) (b)	$ 443
Year ended 4/29/16	$ 413	$ 164	$ 10	$ (161) (b)	$ 426
Deferred tax valuation allowance:					
Year ended 4/27/18	$ 6,311	$ 434	$ 21 (c)	$ (171) (d)	$ 7,166
				$ 571 (e)	
Year ended 4/28/17	$ 7,032	$ 101	$ 6 (c)	$ (524) (d)	$ 6,311
				$ (304) (e)	
Year ended 4/29/16	$ 5,607	$ 1,194	$ 4 (c)	$ (88) (d)	$ 7,032
				$ 315 (e)	

(a) Primarily consists of uncollectible accounts written off, less recoveries.
(b) Primarily reflects utilization of the inventory reserve.
(c) Reflects the impact from acquisitions.
(d) Reflects carryover attribute utilization and expiration.
(e) Primarily reflects the effects of currency fluctuations.

Item 16. Form 10-K Summary

Registrants may voluntarily include a summary of information required by Form 10-K under this Item 16. The Company has not elected to include such summary information.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

MEDTRONIC PUBLIC LIMITED COMPANY

Dated: June 22, 2018

By: /s/ **Omar Ishrak**
Omar Ishrak
Chairman and
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, the report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

MEDTRONIC PUBLIC LIMITED COMPANY

Dated: June 22, 2018

By: /s/ **Omar Ishrak**
Omar Ishrak
Chairman and
Chief Executive Officer
(Principal Executive Officer)

Dated: June 22, 2018

By: /s/ **Karen L. Parkhill**
Karen L. Parkhill
Executive Vice President and
Chief Financial Officer
(Principal Financial and Accounting Officer)

Directors

Richard H. Anderson*
Craig Arnold*
Scott C. Donnelly*
Randall J. Hogan, III*
Omar Ishrak*
Shirley Ann Jackson, Ph.D*
Michael O. Leavitt*
James T. Lenehan*
Elizabeth G. Nabel*
Denise M. O'Leary*
Kendall J. Powell*
Robert C. Pozen*

*Bradley E. Lerman, by signing his name hereto, does hereby sign this document on behalf of each of the above named directors of the registrant pursuant to powers of attorney duly executed by such persons.

Dated: June 22, 2018

By: **/s/ Bradley E. Lerman**