Table of Contents

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

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 of each exchange on which registered
Ordinary shares, par value $0.0001 per share	MDT	New York Stock Exchange
Floating Rate Notes due 2021	MDT/21	New York Stock Exchange
0.000% Senior Notes due 2021	MDT/21A	New York Stock Exchange
0.000% Senior Notes due 2022	MDT/22B	New York Stock Exchange
0.375% Senior Notes due 2023	MDT/23B	New York Stock Exchange
0.25% Senior Notes due 2025	MDT/25	New York Stock Exchange
1.125% Senior Notes due 2027	MDT/27	New York Stock Exchange
1.625% Senior Notes due 2031	MDT/31	New York Stock Exchange
1.00% Senior Notes due 2031	MDT/31A	New York Stock Exchange
2.250% Senior Notes due 2039	MDT/39A	New York Stock Exchange
1.50% Senior Notes due 2039	MDT/39B	New York Stock Exchange
1.75% Senior Notes due 2049	MDT/49	New York Stock Exchange

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.

TABLE OF CONTENTS

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

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.

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.

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.

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.

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:

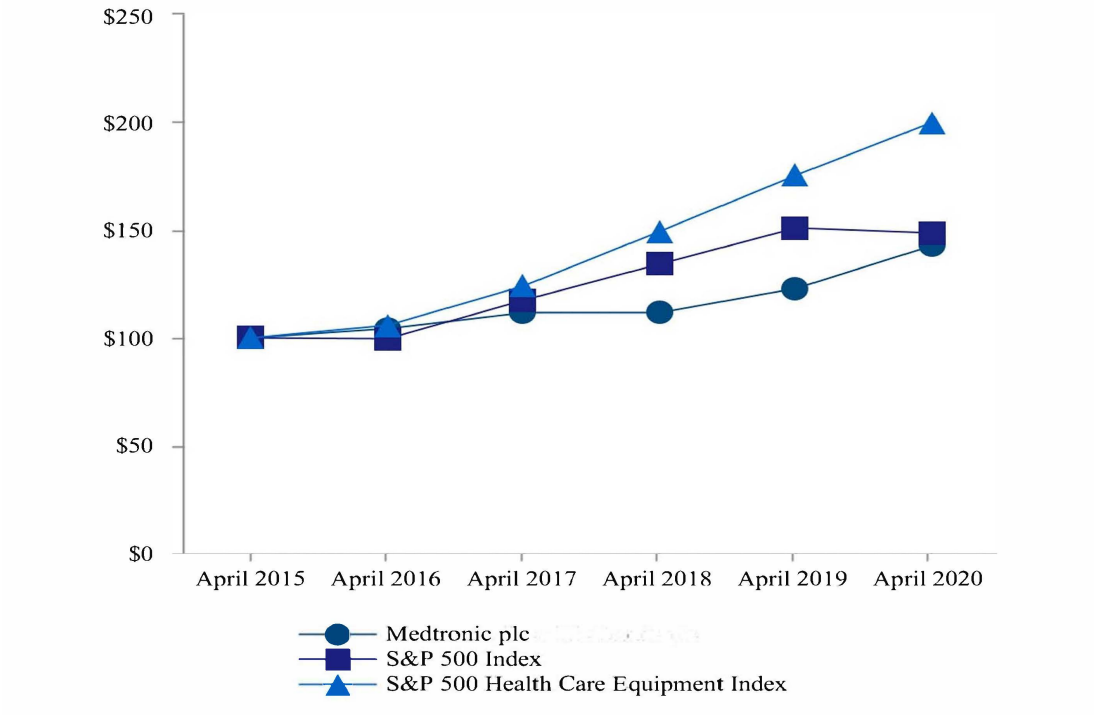
Fiscal Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as a Part of Publicly Announced Program	Maximum Approximate Dollar Value of Shares that may yet be Purchased Under the Program
1/25/2020-2/21/2020	950,308	$ 118.23	950,308	$ 5,950,169,124
2/22/2020-3/27/2020	—	—	—	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.



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.

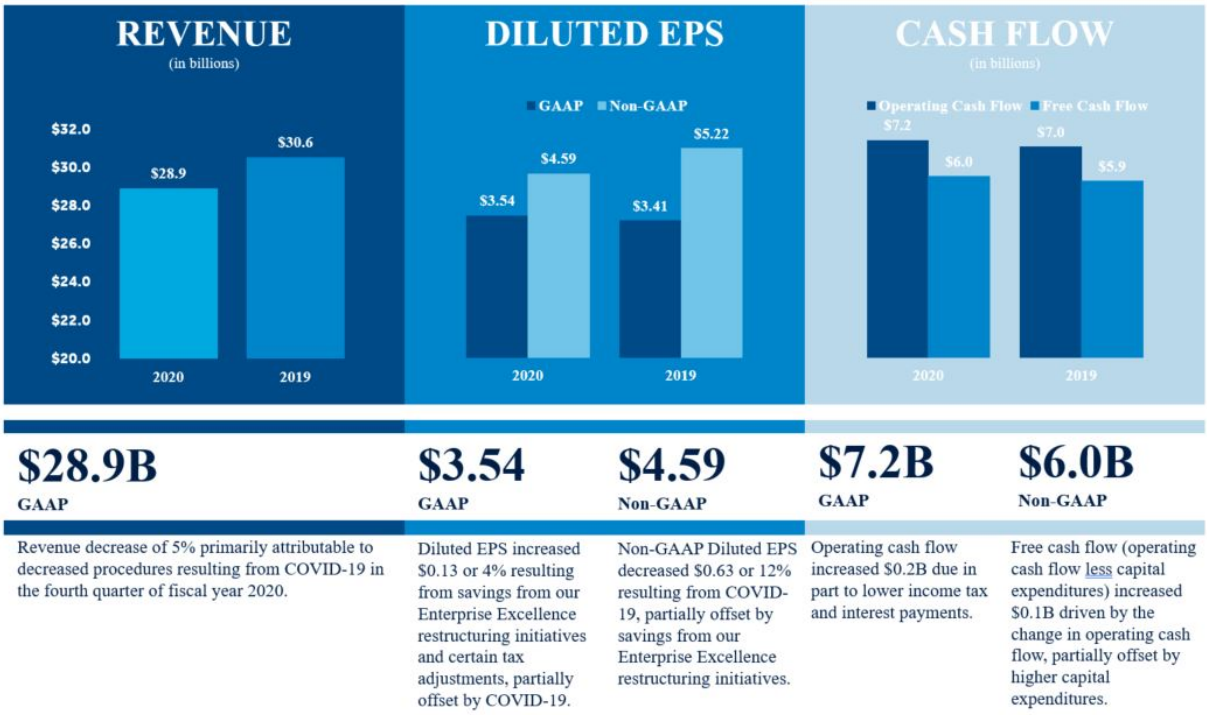
COVID-19 is having, and will likely continue to have, an adverse impact on significant aspects of our Company and business, including the demand for our products, our operations, supply chains and distribution systems, and our ability to research and develop and bring to market new products and services. 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:



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 %

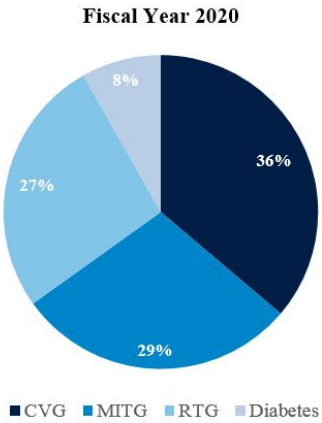
(in millions, except per share data)	Fiscal year ended April 26, 2019				
	Income Before Income Taxes	Income Tax (Benefit) Provision	Net Income Attributable to Medtronic	Diluted EPS [1]	Effective Tax Rate
GAAP	$ 5,197	$ 547	$ 4,631	$ 3.41	10.5 %
Non-GAAP Adjustments:					
Restructuring and associated 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 %

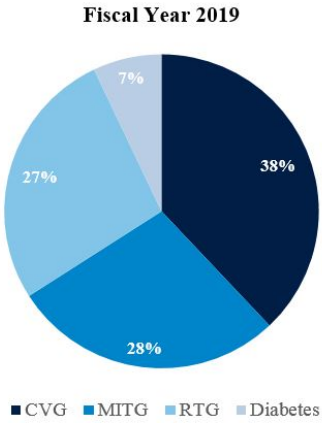
(1) Amounts in this column have been intentionally rounded to the nearest $0.01 and, therefore, may not sum.
(2) Associated costs include costs incurred as a direct result of the restructuring program, such as salaries for employees supporting the program and consulting expenses.
(3) The charges primarily 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:





(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.

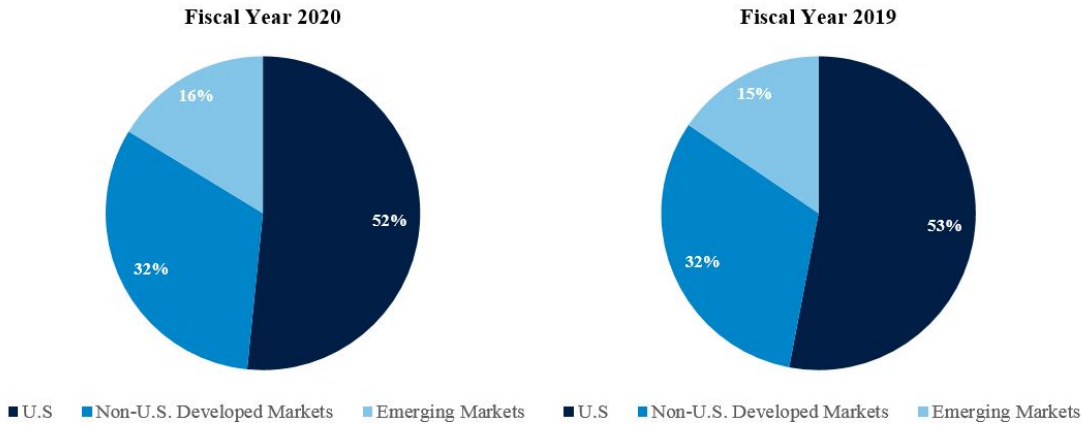
We remain focused against our three growth strategies: therapy innovation, globalization, and economic value. We continue to allocate our capital to higher growth markets and new opportunities that create competitive advantages and capitalize on the long-term trends in healthcare: namely, the desire 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:



(in millions)	U.S.[1], [2] Fiscal Year 2020	U.S.[1], [2] Fiscal Year 2019	U.S.[1], [2] % Change	Non-U.S. Developed Markets[1], [3] Fiscal Year 2020	Non-U.S. Developed Markets[1], [3] Fiscal Year 2019	Non-U.S. Developed Markets[1], [3] % Change	Emerging Markets[1], [4] Fiscal Year 2020	Emerging Markets[1], [4] Fiscal Year 2019	Emerging Markets[1], [4] % 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:

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:

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:

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):

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	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

	Fiscal Year	
(in millions)	**2020**	**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.

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 change in accounting principle[3]	—	—	—	(33)	—	(33)	—	(33)
April 24, 2020	1,341	$ —	$ 26,165	$ 28,132	$ (3,560)	$ 50,737	$ 135	$ 50,872

(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.

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.

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

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.

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

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:

	Fiscal Year	
(in millions)	2020	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.

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

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:

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

(in millions)	Classification	Fiscal Year 2020	2019	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	2019	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

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

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

	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	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.

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

Intangible Assets

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

(in millions)	April 24, 2020		April 26, 2019	
	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:

	Fiscal Year		
(in millions)	**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

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

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

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

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:

(in millions, except per share data)	Fiscal Year 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.

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

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)	Partnership Units
April 26, 2019	$ 629
Total unrealized gains	(45)
Purchases and sales, net	41
April 24, 2020	$ 625

(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

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.

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

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.

Medtronic plc
Notes to Consolidated Financial Statements (Continued)

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)

	Balance at Beginning of Fiscal Year	Additions: Charges to Income	Additions: Charges to Other Accounts	Deductions: 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).

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).

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).

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).

*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).

*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).

*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

Exhibit 4.24

The following is a brief description of (i) the ordinary shares, par value $0.0001 per share (the “Ordinary Shares”), of Medtronic plc, a company incorporated under the laws of Ireland (“Medtronic” or “Medtronic plc”), and (ii) the Floating Rate Senior Notes due 2021, 0.000% Senior Notes due 2021, 0.00% Senior Notes due 2022, 0.375% Senior Notes due 2023, 0.25% Senior Notes due 2025, 1.125% Senior Notes due 2027, 1.625% Senior Notes due 2031, 1.00% Senior Notes due 2031, 2.250% Senior Notes due 2039, 1.50% Senior Notes due 2039, and 1.75% Senior Notes due 2049, issued by Medtronic Global Holdings S.C.A., an entity incorporated and existing under the laws of Luxembourg (“Medtronic Luxco”), which are all of the securities of Medtronic and its subsidiaries registered pursuant to Section 12 of the Securities Exchange Act of 1934 (the “Exchange Act”).

DESCRIPTION OF MEDTRONIC ORDINARY SHARES

The following description of Medtronic’s share capital is a summary. This summary does not purport to be complete and is qualified in its entirety by reference to the Irish Companies Act 2014 (as amended) (the "Irish Companies Act") and the complete text of Medtronic’s memorandum and articles of association, as they may be amended from time to time (the “Articles of Association”). Copies of the Articles of Association have been filed with the Securities and Exchange Commission (the “SEC”) as exhibit 3.1 to Medtronic’s Annual Report on Form 10-K.

Capital Structure

Authorized 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.

Medtronic may issue shares subject to the maximum authorized share capital contained in the Articles of Association. The authorized share capital may be increased or reduced by a resolution approved by a simple majority of the votes of Medtronic’s shareholders cast at a general meeting (referred to under Irish law as an “ordinary resolution”). The shares comprising the authorized share capital of Medtronic may be divided into shares of such nominal value as the resolution shall prescribe. As a matter of Irish company law, the directors of a company may issue new ordinary or preferred shares without shareholder approval once authorized to do so by the Articles of Association or by an ordinary resolution adopted by the shareholders at a general meeting. The authorization may be granted for a maximum period of five years, at which point it must be renewed by the shareholders by an ordinary resolution. Medtronic's shareholders adopted an ordinary resolution at the 2019 annual general meeting of Medtronic on December 6, 2019 authorizing the board of directors to issue up to an aggregate nominal amount of $44,257.39 (442,573,969 ordinary shares) (being equivalent to approximately 33% of the aggregate nominal value of the issued share capital of Medtronic as of August 1, 2019) for a period of 18 months from December 6, 2019.

The rights and restrictions to which the ordinary shares, euro deferred shares and A preferred shares are subject are prescribed in the Articles of Association. The Articles of Association entitle the Medtronic board of directors, without shareholder approval, to determine the terms of the preferred shares issued by Medtronic. Preferred shares may be preferred as to dividends, rights upon liquidation or voting in such manner as the directors of Medtronic may resolve. The preferred shares may also be redeemable at the option of the holder of the preferred shares or at the option of Medtronic, and may be convertible into or exchangeable for shares of any other class or classes of Medtronic, depending on the terms of such preferred shares.

The holders of the A preferred shares are entitled in priority to any payments of dividends on any other class of shares in Medtronic to be paid a dividend in the amount per A preferred share equal to twice the dividend to be paid per ordinary share and in addition on a return of assets, whether on liquidation or otherwise, the A preferred shares entitle the holders to repayment of the capital paid up on those shares (including any share premium) in priority to any repayment of capital to the holders of any other shares. The holders of the A preferred shares are not entitled to any further participation in the assets or profits of Medtronic, nor are the holders of the A preferred shares, which are non-voting shares, entitled to receive notice of, attend, speak or vote at any general meeting of Medtronic.

The holders of euro deferred shares are not entitled to receive any dividend or distribution and are not entitled to receive notice of, attend, speak or vote at any general meeting of Medtronic. On a return of assets, the euro deferred shares will entitle the holder only to the repayment of amounts paid up on such shares after repayment of the capital paid up on the ordinary shares plus the payment of $5,000,000 on each ordinary share. There are no euro deferred shares in issue.
Irish law does not recognize fractional shares held of record. Accordingly, the Articles of Association do not provide for the issuance of fractional shares of Medtronic, and the official Irish register of Medtronic does not reflect any fractional shares.

Whenever an alteration or reorganization of the share capital of Medtronic would result in any Medtronic shareholder becoming entitled to fractions of a share, the Medtronic board of directors may, on behalf of those shareholders that would become entitled to fractions of a share, arrange for the sale of the shares representing fractions and the distribution of the net proceeds of sale in due proportion among the shareholders who would have been entitled to the fractions.

Preemption Rights, Share Warrants and Share Options

Under Irish law certain statutory preemption rights apply automatically in favor of shareholders where shares are to be issued for cash. Medtronic initially opted out of these preemption rights in the Articles of Association as permitted under Irish company law. Because Irish law requires this opt-out to be renewed every five years by a resolution approved by not less than 75% of the votes of the shareholders of Medtronic cast at a general meeting (referred to under Irish law as a “special resolution”), the Articles of Association provide that this opt-out must be so renewed. If the opt-out is not renewed, shares issued for cash must be offered to existing shareholders of Medtronic on a pro rata basis to their existing shareholding before the shares can be issued to any new shareholders. The statutory preemption rights do not apply where shares are issued for non-cash consideration (such as in a stock-for-stock acquisition) and do not apply to the issue of non-equity shares (that is, shares that have the right to participate only up to a specified amount in any income or capital distribution) or where shares are issued pursuant to an employee stock option or similar equity plan. Medtronic's shareholders passed a special resolution at the 2019 annual general meeting of Medtronic on December 6, 2019 authorizing the Medtronic board of directors to opt out of preemption rights with respect to the issuance of equity securities up to an aggregate nominal value of $13,411.33 (134,113,324 shares) (being equivalent to approximately 10% of the aggregate nominal value of the issued ordinary share capital of Medtronic as of August 1, 2019) for a period of 18 months from December 6, 2019 (provided that with respect to 67,056,662 of such shares (being equivalent to approximately 5% of the issued ordinary share capital of Medtronic as of August 1, 2019), such allotment is to be used for the purposes of an acquisition or a specified capital investment).

The Articles of Association of Medtronic provide that, subject to any shareholder approval requirement under any laws, regulations or the rules of any stock exchange to which Medtronic is subject, the board is authorized, from time to time, in its discretion, to grant such persons, for such periods and upon such terms as the board deems advisable, options to purchase such number of shares of any class or classes or of any series of any class as the board may deem advisable, and to cause warrants or other appropriate instruments evidencing such options to be issued. The Irish Companies Act provides that directors may issue share warrants or options without shareholder approval once authorized to do so by the Articles of Association or an ordinary resolution of shareholders. Medtronic is subject to the rules of the NYSE and the U.S. Internal Revenue Code of 1986, as amended, which require shareholder approval of certain equity plan and share issuances. Medtronic’s board of directors may issue shares upon exercise of warrants or options without shareholder approval or authorization (up to the relevant authorized share capital limit).

Dividends

Under Irish law, dividends and distributions may be made only from distributable reserves. Distributable reserves generally means accumulated realized profits less accumulated realized losses and includes reserves created by way of capital reduction. In addition, no distribution or dividend may be made unless the net assets of Medtronic are equal to, or in excess of, the aggregate of Medtronic’s called up share capital plus undistributable reserves and the

distribution does not reduce Medtronic's net assets below such aggregate. Undistributable reserves include the share premium account, the par value of Medtronic shares acquired by Medtronic and the amount by which Medtronic's accumulated unrealized profits, so far as not previously utilized by any capitalization, exceed Medtronic's accumulated unrealized losses, so far as not previously written off in a reduction or reorganization of capital.

The determination as to whether or not Medtronic has sufficient distributable reserves to fund a dividend must be made by reference to "relevant financial statements" of Medtronic. The "relevant financial statements" will be either the last set of unconsolidated annual audited financial statements or other financial statements properly prepared in accordance with the Irish Companies Act, which give a "true and fair view" of Medtronic's unconsolidated financial position and accord with accepted accounting practice. The "relevant financial statements" must be filed in the Companies Registration Office (the official public registry for companies in Ireland).

The Articles of Association authorize the directors to declare dividends out of funds lawfully available for the purpose without shareholder approval. The board of directors may also recommend a dividend to be approved and declared by the Medtronic shareholders at a general meeting. The board of directors may direct that the payment be made by distribution of assets, shares or cash and no dividend issued may exceed the amount recommended by the directors. Dividends may be declared and paid in the form of cash or non-cash assets and may be paid in U.S. dollars or any other currency.

The directors of Medtronic may deduct from any dividend payable to any shareholder any amounts payable by such shareholder to Medtronic in relation to the shares of Medtronic.

The directors may also authorize Medtronic to issue shares with preferred rights to participate in dividends declared by Medtronic. The holders of preferred shares may, depending on their terms, rank senior to the Medtronic ordinary shares in terms of dividend rights and/or be entitled to claim arrears of a declared dividend out of subsequently declared dividends in priority to ordinary shareholders.

Please see "*Description of Medtronic Ordinary Shares—Capital Structure—Authorized Share Capital*" for additional information on dividend rights.

Share Repurchases, Redemptions and Conversions

Overview

The Articles of Association provide that any ordinary share which Medtronic has agreed to acquire will be deemed to be a redeemable share, unless the board resolves otherwise. Accordingly, for Irish company law purposes, the repurchase of ordinary shares by Medtronic may technically be effected as a redemption of those shares as described below under "*Description of Medtronic Ordinary Shares—Share Repurchases, Redemptions and Conversions—Repurchases and Redemptions by Medtronic*." If the Articles of Association did not contain such provision, all repurchases by Medtronic would be subject to many of the same rules that apply to purchases of Medtronic ordinary shares by subsidiaries described below under "*—Purchases by Subsidiaries of Medtronic*," including the shareholder approval requirements described below and the requirement that any on-market purchases be effected on a "recognized stock exchange." Except where otherwise noted, references to repurchasing or buying back ordinary shares of Medtronic refer to the redemption of ordinary shares by Medtronic or the purchase of ordinary shares of Medtronic by a subsidiary of Medtronic, in each case in accordance with the Articles of Association and Irish company law as described below.

Repurchases and Redemptions by Medtronic

Under Irish law, a company may issue redeemable shares and redeem them out of distributable reserves or the proceeds of a new issue of shares for that purpose. Medtronic may only issue redeemable shares if the nominal value of the issued share capital that is not redeemable is not less than 10% of the nominal value of the total issued share capital of Medtronic. All redeemable shares must also be fully-paid. Based on the provision of the Articles of Association described above, shareholder approval will not be required to redeem Medtronic shares.

Medtronic may also be given an additional general authority by its shareholders to purchase its own shares on-market, which would take effect on the same terms and be subject to the same conditions as applicable to purchases by Medtronic's subsidiaries as described below.

The board of directors of Medtronic may also issue preferred shares which may be redeemed at the option of either Medtronic or the shareholder, depending on the terms of such preferred shares. Please see "*Description of Medtronic Ordinary Shares—Capital Structure—Authorized Share Capital*" for additional information on preferred shares.

Repurchased and redeemed shares may be cancelled or held as treasury shares. The nominal value of treasury shares held by Medtronic at any time must not exceed 10% of the aggregate of the par value and share premium received in respect of the allotment of Medtronic shares together with the par value of any shares acquired by Medtronic. Medtronic may not exercise any voting rights in respect of any shares held as treasury shares. Treasury shares may be cancelled by Medtronic or re-issued subject to certain conditions.

The Articles of Association provide that Medtronic may not, directly or indirectly, purchase or agree to purchase any shares entitled to vote from a person who beneficially owns more than five percent of the voting power of Medtronic for more than the market value thereof if the shares have been beneficially owned by the person for less than two years, unless the purchase or agreement to purchase is approved at a meeting of shareholders by the affirmative vote of the holders of not less than a majority of the issued and outstanding shares of Medtronic entitled to vote or Medtronic makes an offer, of at least equal value per share, to all holders of shares of the class or series and to all holders of any class or series into which the securities may be converted.

Purchases by Subsidiaries of Medtronic

Under Irish law, an Irish or non-Irish subsidiary may purchase shares of Medtronic either on-market or off-market. For a subsidiary of Medtronic to make on-market purchases of Medtronic ordinary shares, the shareholders of Medtronic must provide general authorization for such purchase by way of ordinary resolution. However, as long as this general authority has been granted, no specific shareholder authority for a particular on-market purchase by a subsidiary of Medtronic ordinary shares is required. For an off-market purchase by a subsidiary of Medtronic, the proposed purchase contract must be authorized by special resolution of the shareholders before the contract is entered into. The person whose shares are to be bought back cannot vote in favor of the special resolution and, from the date of the notice of the meeting at which the resolution approving the contract is to be proposed, the purchase contract must be on display or must be available for inspection by shareholders at the registered office of Medtronic.

In order for a subsidiary of Medtronic to make an on-market purchase of Medtronic's shares, such shares must be purchased on a "recognized stock exchange." The NYSE, on which the shares of Medtronic are listed, is specified as a recognized stock exchange for this purpose by Irish company law.

The number of shares held by the subsidiaries of Medtronic at any time will count as treasury shares and will be included in any calculation of the permitted treasury share threshold of 10% of the aggregate of the par value and share premium in respect of the allotment of Medtronic shares together with the par value of any shares acquired by Medtronic. While a subsidiary holds shares of Medtronic, it cannot exercise any voting rights in respect of those shares. The acquisition of the shares of Medtronic by a subsidiary must be funded out of distributable reserves of the subsidiary.

Lien on Shares, Calls on Shares and Forfeiture of Shares

The Articles of Association provide that Medtronic has a first and paramount lien on every share for all debts and liabilities of any shareholder to the company, whether presently due or not, payable in respect of such share. Subject to the terms of their allotment, directors may call for any unpaid amounts in respect of any shares to be paid, and if payment is not made, the shares may be forfeited. These provisions are standard inclusions in the articles of association of an Irish company limited by shares such as Medtronic and will only be applicable to shares of Medtronic that have not been fully paid up. See also "*—Transfer and Registration of Shares*" below.

Consolidation and Division; Subdivision

Under the Articles of Association, Medtronic may, by ordinary resolution, consolidate and divide all or any of its share capital into shares of larger nominal value than its existing shares or subdivide its shares into smaller amounts than is fixed by its memorandum of association.

Reduction of Share Capital

Medtronic may, by ordinary resolution, reduce its authorized but unissued share capital in any way. Medtronic also may, by special resolution and subject to confirmation by the Irish High Court, reduce or cancel its issued share capital in any manner permitted by the Irish Companies Act.

Annual Meetings of Shareholders

Medtronic is required to hold an annual general meeting at intervals of no more than 15 months, provided that an annual general meeting is held in each calendar year no more than nine months after Medtronic's fiscal year-end. Any annual general meeting may be held outside of Ireland, provided that technological means are provided to enable shareholders to participate in the meeting without leaving Ireland.

Notice of an annual general meeting must be given to all Medtronic shareholders and to the auditors of Medtronic. The Articles of Association provide for a minimum notice period of 21 days, which is the minimum permitted under Irish law.

The only matters which must, as a matter of Irish company law, be transacted at an annual general meeting are (i) the consideration of the statutory financial statements and reports of the directors and auditors, (ii) the review by the members of the company's affairs and (iii) the appointment or re-appointment of the auditors and the fixing of the auditor’s remuneration (or delegation of same). If no resolution is made in respect of the reappointment of an existing auditor at an annual general meeting, the existing auditor will be deemed to have continued in office.

Extraordinary General Meetings of Shareholders

Extraordinary general meetings of Medtronic may be convened by (i) the board of directors, (ii) any two directors, (iii) the chief executive officer, (iv) the chief financial officer, (v) on requisition of the shareholders holding not less than 10% of the paid up share capital of Medtronic carrying voting rights or (vi) on requisition of Medtronic’s auditors. Extraordinary general meetings are generally held for the purposes of approving shareholder resolutions as may be required from time to time. At any extraordinary general meeting, only such business will be conducted as is set forth in the notice thereof or is proposed pursuant to and in accordance with the procedures and requirements set out in the Articles of Association.

Notice of an extraordinary general meeting must be given to all Medtronic shareholders and to the auditors of Medtronic. Under Irish law and the Articles of Association, the minimum notice periods are 21 days’ notice in writing for an extraordinary general meeting to approve a special resolution and 14 days’ notice in writing for any other extraordinary general meeting.

In the case of an extraordinary general meeting convened by shareholders of Medtronic, the proposed purpose of the meeting must be set out in the requisition notice. Upon receipt of any such valid requisition notice, the Medtronic board of directors has 21 days to convene a meeting of Medtronic shareholders to vote on the matters set out in the requisition notice. This meeting must be held within two months of the receipt of the requisition notice. If the board of directors does not convene the meeting within such 21-day period, the requisitioning shareholders, or any of them representing more than one half of the total voting rights of all of them, may themselves convene a meeting, which meeting must be held within three months of Medtronic’s receipt of the requisition notice.

If the board of directors becomes aware that the net assets of Medtronic are not greater than half of the amount of Medtronic’s called-up share capital, the directors of Medtronic must convene an extraordinary general meeting of Medtronic shareholders not later than 28 days from the date that they learn of this fact to consider how to address the situation.

Quorum for General Meetings

The Articles of Association provide that no business may be transacted at any general meeting unless a quorum is present. One or more shareholders present in person or by proxy at any meeting of shareholders holding not less than a majority of the issued and outstanding shares entitled to vote at the meeting in question will constitute a quorum for such meeting.

Voting

The Articles of Association provide that all votes will be decided on a poll and that the board or the chairman may determine the manner in which the poll is to be taken and the manner in which the votes are to be counted.

Every shareholder is entitled to one vote for each ordinary share that he or she holds as of the record date for the meeting. Voting rights may be exercised by shareholders registered in Medtronic's share register as of the record date for the meeting or by a duly appointed proxy, which proxy need not be a shareholder. Where interests in shares are held by a nominee trust company, this company may exercise the rights of the beneficial holders on their behalf as their proxy. All proxies must be appointed in the manner prescribed by the Articles of Association, which provide that the Medtronic board may permit shareholders to notify Medtronic of their proxy appointments electronically.

Irish company law requires special resolutions of the shareholders at a general meeting to approve certain matters. Examples of matters requiring special resolutions include:

(a) amending the objects or memorandum of association of Medtronic;

(b) amending the Articles of Association;

(c) approving a change of name of Medtronic;

Variation of Rights Attaching to a Class or Series of Shares

Under the Articles of Association and the Irish Companies Act, any variation of class rights attaching to the issued shares of Medtronic must be approved by an ordinary resolution of the shareholders of the affected class or with the consent in writing of the holders of the majority of the issued shares of that class of shares.

The provisions of the Articles of Association relating to general meetings apply to general meetings of the holders of any class of shares except that the necessary quorum is determined in reference to the shares of the holders of the class. Accordingly, for general meetings of holders of a particular class of shares, a quorum consists of one or more shareholders present in person or by proxy holding not less than a majority of the issued and outstanding shares of the class entitled to vote at the meeting in question.

Acquisitions

An Irish public limited company may be acquired in a number of ways, including:

(a) a court-approved scheme of arrangement under the Irish Companies Act. A scheme of arrangement with shareholders requires a court order from the Irish High Court and the approval of a majority in number representing 75% in value of each class of shareholder present and voting in person or by proxy at a meeting called to approve the scheme;

(b) through a tender or takeover offer by a third party for all of the shares of Medtronic. Where the holders of 80% or more of Medtronic's shares have accepted an offer for their shares in Medtronic, the remaining shareholders may also be statutorily required to transfer their shares. If the bidder does not exercise its "squeeze out" right, then the non-accepting shareholders also have a statutory right to require the bidder to acquire their shares on the same terms. If shares of Medtronic were to be listed on the Irish Stock Exchange or another regulated stock exchange in the European Union, the "squeeze out" threshold would be increased to 90%; and

(c) by way of a merger with a company incorporated in the European Economic Area ("EEA") under the EU Cross-Border Mergers Directive (EU) 2017/1132 or with another Irish company under the Irish Companies Act. Such a merger must be approved by a special resolution. Shareholders also may be entitled to have their shares acquired for cash. See the section entitled "Description of Share Capital—Appraisal Rights"

Appraisal Rights

Generally, under Irish law, shareholders of an Irish company do not have statutory appraisal rights. If Medtronic is being merged as the transferor company with another EEA company under the EU Cross-
Border Mergers Directive (EU) 2017/1132 as implemented in Ireland by the European Communities (Cross- Border Mergers) Regulations 2008 (as amended) or if Medtronic is being merged with another Irish company under the Irish Companies Act, (i) any of Medtronic's shareholders who voted against the special resolution approving the merger or (ii) if 90% of Medtronic's shares are held by the successor company, any other of Medtronic's shareholders, may be entitled to require that the successor company acquire its shares for cash.

Disclosure of Interests in Shares

Under the Irish Companies Act, Medtronic shareholders must notify Medtronic if, as a result of a transaction, the shareholder will become interested in 3% or more of the shares of Medtronic or if, as a result of a transaction a shareholder who was interested in more than 3% of the shares of Medtronic ceases to be so interested. Where a shareholder is interested in more than 3% of the shares of Medtronic, the shareholder must notify Medtronic of any alteration of his or her interest that brings his or her total holding through the nearest whole percentage number, whether an increase or a reduction. The relevant percentage figure is calculated by reference to the aggregate nominal value of the shares in which the shareholder is interested as a proportion of the entire nominal value of the issued share capital of Medtronic (or any such class of share capital in issue). Where the percentage level of the shareholder's interest does not amount to a whole percentage, this figure may be rounded down to the next whole number. Medtronic must be notified within five business days of the transaction or alteration of the shareholder's interests that gave rise to the notification requirement. If a shareholder fails to comply with these notification requirements, the shareholder's rights in respect of any Medtronic shares it holds will not be enforceable, either directly or indirectly. However, such person may apply to the court to have the rights attaching to such shares reinstated.

In addition to these disclosure requirements, Medtronic, under the Irish Companies Act, may, by notice in writing, require a person whom Medtronic knows or has reasonable cause to believe to be, or at any time during the three years immediately preceding the date on which such notice is issued to have been, interested in shares comprised in Medtronic's relevant share capital to: (i) indicate whether or not it is the case and (ii) where such person holds or has during that time held an interest in the shares of Medtronic, to provide additional information, including the person's

own past or present interests in shares of Medtronic. If the recipient of the notice fails to respond within the reasonable time period specified in the notice, Medtronic may apply to court for an order directing that the affected shares be subject to certain restrictions, as prescribed by the Irish Companies Act.

In the event Medtronic is in an offer period pursuant to the Irish Takeover Rules, accelerated disclosure provisions apply for persons holding an interest in Medtronic securities of 1% or more.

In addition, the beneficial ownership disclosures of the U.S. federal securities laws will apply with respect to beneficial ownership of Medtronic shares.

Anti-Takeover Provisions

Business Combinations with Interested Shareholders

Medtronic's Articles of Association provide that, subject to certain exceptions, Medtronic may not engage in certain business combinations with any person that acquires beneficial ownership of 10% or more of Medtronic's outstanding voting shares for a period of four years following the date on which the person became a 10% shareholder unless prior to the person becoming a 10% shareholder, a committee of Medtronic's disinterested directors approve the business combination or the acquisition of shares.

Control Share Acquisition

Subject to certain exceptions, Medtronic's Articles of Association restrict the ability of persons who acquire between twenty percent and thirty percent of the voting rights of Medtronic to exercise the voting rights of the acquired shares in excess of twenty percent absent approval by an ordinary resolution of the disinterested shareholders.

Irish Takeover Rules and Substantial Acquisition Rules

A transaction in which a third party seeks to acquire 30% or more of the voting rights of Medtronic will be governed by the Irish Takeover Panel Act 1997 and the Irish Takeover Rules made thereunder and will be regulated by the Irish Takeover Panel. The “General Principles” of the Irish Takeover Rules and certain important aspects of the Irish Takeover Rules are described below.

General Principles

The Irish Takeover Rules are built on the following General Principles, which will apply to any transaction regulated by the Irish Takeover Panel:

(a) in the event of an offer, all holders of securities of the target company should be afforded equivalent treatment and, if a person acquires control of a company, the other holders of securities must be protected;

(b) the holders of the securities of the target company must have sufficient time and information to enable them to reach a properly informed decision on the offer; where it advises the holders of securities, the board of the target company must give its views on the effects of implementation of the offer on employment, conditions of employment and the locations of the target company’s places of business;

(c) the board of the target company must act in the interests of the company as a whole and must not deny the holders of securities the opportunity to decide on the merits of the offer;

(d) false markets must not be created in the securities of the target company, the bidder or of any other company concerned by the offer in such a way that the rise or fall of the prices of the securities becomes artificial and the normal functioning of the markets is distorted;

(e) a bidder must announce an offer only after ensuring that he or she can fulfill in full, any cash consideration, if such is offered, and after taking all reasonable measures to secure the implementation of any other type of consideration;

(f) a target company must not be hindered in the conduct of its affairs for longer than is reasonable by an offer for its securities; and

(g) a substantial acquisition of securities (whether such acquisition is to be effected by one transaction or a series of transactions) shall take place only at an acceptable speed and shall be subject to adequate and timely disclosure.

Mandatory Bid

Under certain circumstances, a person who acquires shares or other voting rights in Medtronic may be required under the Irish Takeover Rules to make a mandatory cash offer for the remaining outstanding shares in Medtronic at a price not less than the highest price paid for the shares by the acquirer (or any parties acting in concert with the acquirer) during the previous 12 months. This mandatory bid requirement is triggered if an acquisition of shares would increase the aggregate holding of an acquirer (including the holdings of any parties acting in concert with the acquirer) to shares representing 30% or more of the voting rights in Medtronic, unless the Irish Takeover Panel otherwise consents. An acquisition of shares by a person holding (together with its concert parties) shares representing between 30% and 50% of the voting rights in Medtronic would also trigger the mandatory bid requirement if, after giving effect to the acquisition, the percentage of the voting rights held by that person (together with its concert parties) would increase by 0.05% within a 12-month period. Any person (excluding any parties acting in concert with the holder) holding shares representing more than 50% of the voting rights of a company is not subject to these mandatory offer requirements in purchasing additional securities.

Voluntary Bid; Requirements to Make a Cash Offer and Minimum Price Requirements

If a person makes a voluntary offer to acquire outstanding ordinary shares of Medtronic, the offer price must be no less than the highest price paid for Medtronic ordinary shares by the bidder or its concert parties during the three-month period prior to the commencement of the offer period. The Irish Takeover Panel has the power to extend the “look back” period to 12 months if the Irish Takeover Panel, taking into account the General Principles, believes it is appropriate to do so.

If the bidder or any person acting in concert with it has acquired ordinary shares of Medtronic (i) during the period of 12 months prior to the commencement of the offer period which represent more than 10% of the total ordinary shares of Medtronic or (ii) at any time after the commencement of the offer period, the offer must be in cash (or accompanied by a full cash alternative) and the price per Medtronic ordinary share must not be less than the highest price paid by the bidder or any person acting in concert with it during, in the case of (i), the 12-month period prior to the commencement of the offer period or, in the case of (ii), the offer period. The Irish Takeover Panel may apply this rule to a bidder who, together with any person acting in concert with it, has acquired less than 10% of the total ordinary shares of Medtronic in the 12-month period prior to the commencement of the offer period if the Irish Takeover Panel, taking into account the General Principles, considers it just and proper to do so.

An offer period will generally commence from the date of the first announcement of the offer or proposed offer.

In addition, the Articles of Association provide that an offeror who has completed a tender offer for Medtronic may not, within two years after the last purchase in the tender offer, acquire additional shares, whether by purchase, merger, exchange or otherwise, unless the shareholders in those additional acquisitions are given terms that are substantially equivalent to those provided in the earlier tender offer or unless the proposed additional acquisitions are approved by an independent committee of Medtronic’s board of directors prior to the tender offer.

Substantial Acquisition Rules

The Irish Takeover Rules also contain rules governing substantial acquisitions of shares and other voting securities which restrict the speed at which a person may increase his or her holding of shares and rights over shares to an

aggregate of between 15% and 30% of the voting rights of Medtronic. Except in certain circumstances, an acquisition or series of acquisitions of shares or rights over shares representing 10% or more of the voting rights of Medtronic is prohibited, if such acquisition(s), when aggregated with shares or rights already held, would result in the acquirer holding 15% or more but less than 30% of the voting rights of Medtronic and such acquisitions are made within a period of seven days. These rules also require accelerated disclosure of acquisitions of shares or rights over shares relating to such holdings.

Shareholder Rights Plan

The Articles of Association expressly authorize Medtronic's board of directors to adopt a shareholder rights plan, subject to applicable law.

Irish law does not expressly authorize or prohibit companies from issuing share purchase rights or adopting a shareholder rights plan as an anti-takeover measure and there is no directly relevant case law on this issue.

Frustrating Action

Under the Irish Takeover Rules, the Medtronic board of directors is not permitted to take any action which might frustrate an offer for the shares of Medtronic once the Medtronic board of directors has received an approach which may lead to an offer or has reason to believe an offer is or may be imminent, subject to certain exceptions. Potentially frustrating actions such as (i) the issue of shares, options or convertible securities, (ii) material acquisitions or disposals, (iii) entering into contracts other than in the ordinary course of business or (iv) any action, other than seeking alternative offers, which may result in frustration of an offer, are prohibited during the course of an offer or at any time during which the board has reason to believe an offer is or may be imminent. Exceptions to this prohibition are available where:

(a) the action is approved by Medtronic's shareholders at a general meeting; or

(b) the Irish Takeover Panel has given its consent, where:

  (i) it is satisfied the action would not constitute frustrating action;

  (ii) Medtronic shareholders that hold 50% of the voting rights state in writing that they approve the proposed action and would vote in favor of it at a general meeting;

  (iii) the action is taken in accordance with a contract entered into prior to the announcement of the offer; or

  (iv) the decision to take such action was made before the announcement of the offer and either has been at least partially implemented or is in the ordinary course of business.

Corporate Governance

The Articles of Association of Medtronic allocate authority over the day-to-day management of Medtronic to the Medtronic board of directors. The Medtronic board of directors may then, by resolution approved by the affirmative vote of a majority of the board, delegate any of its powers, authorities and discretions (with power to sub-delegate) to any committee, consisting of one or more directors, or delegate to any director, officer or member of management of Medtronic or any of its subsidiaries such of its powers as it considers desirable to be exercised by him or her, but regardless, the directors will remain responsible, as a matter of Irish law, for the proper management of the affairs of Medtronic. Committees may meet and adjourn as they determine proper. Unless otherwise determined by the board of directors, the quorum necessary for the transaction of business at any committee meeting shall be a majority of the members of the committee.

Medtronic has a standing Audit Committee, Compensation Committee, Nominating and Corporate Governance Committee, Quality Committee, Finance and Financial Risk Committee and Technology and Value Creation Committee.

Appointment of Directors

The Irish Companies Act provides for a minimum of two directors. Medtronic's Articles of Association provide for a minimum of three directors and a maximum of fifteen. The board of directors has sole authority to determine its size within these parameters. Directors of Medtronic will be elected by way of an ordinary resolution at a general meeting. This majority voting standard could result in the number of directors falling below the prescribed minimum number of directors due to the failure of nominees to be elected. If the number of the directors is reduced below the fixed minimum number, the remaining director or directors must appoint, as soon as practicable, an additional director or additional directors to make up such minimum or must convene a general meeting of Medtronic for the purpose of making such appointment. In the event of a “contested election” of directors, directors shall be elected by the vote of a plurality of the votes cast at any meeting for the election of directors at which a quorum is present. Each director of Medtronic must retire from office at each annual shareholder meeting and shall be re-eligible for re-election.

No person may be appointed director unless nominated in accordance with the Articles of Association. The Articles of Association provide that, with respect to an annual or extraordinary general meeting of shareholders, nominations of persons for election to the Medtronic board of directors may be made by (i) the affirmative vote of the Medtronic board of directors or a committee thereof, (ii) any shareholder who is entitled to vote at the meeting and who has complied with the advance notice procedures provided for in the Articles of Association, (iii) with respect to election at an extraordinary general meeting requisitioned in accordance with section 178(3) of the Irish Companies Act, by a shareholder who holds ordinary shares or other shares carrying the general right to vote at general meetings of the company and who makes such nomination in the written requisition of the extraordinary general meeting in accordance with the Articles of Association and the Irish Companies Act relating to nominations of directors and the proper bringing of business before an extraordinary general meeting, or (iv) any shareholder who is entitled to vote at the meeting and who has complied with the "proxy access" provisions contained in the Articles of Association. Medtronic’s Articles of Association contain “proxy access” provisions which give an eligible shareholder (or group of up to 20 such shareholders) that has owned 3% or more of the voting power continuously for at least three years, the right to nominate up to 20% of the directors and to have those nominees included in Medtronic’s proxy materials, subject to the other terms and conditions of Medtronic's articles of association.

Removal of Directors

Under the Irish Companies Act, the shareholders may, by an ordinary resolution, remove a director from office before the expiration of his or her term at a meeting held on no less than 28 days’ notice and at which the director is entitled to be heard. The power of removal is without prejudice to any claim for damages for breach of contract (e.g., employment contract) that the director may have against Medtronic in respect of his or her removal.

The board of directors may fill any vacancy occurring on the board of directors. If the Medtronic board of directors fills a vacancy, the director shall hold office until the next election of directors and until his or her successor shall be elected. A vacancy on the board of directors created by the removal of a director may be filled by the Medtronic board of directors.

Duration; Dissolution; Rights upon Liquidation

Medtronic’s duration is unlimited. Medtronic may be dissolved and wound up at any time by way of a shareholders’ voluntary winding up or a creditors’ winding up. In the case of a shareholders’ voluntary winding-up, a special resolution of shareholders is required. Medtronic may also be dissolved by way of court order on the application of a creditor, or by the Companies Registration Office as an enforcement measure where Medtronic has failed to file certain returns.

The rights of the shareholders to a return of Medtronic’s assets on dissolution or winding up, following the settlement of all claims of creditors, may be prescribed in the Articles of Association or the terms of any preferred

shares issued by the directors of Medtronic from time to time. The holders of preferred shares in particular may have the right to priority in a dissolution or winding up of Medtronic. If the Articles of Association contain no specific provisions in respect of a dissolution or winding up then, subject to the priorities of any creditors, the assets will be distributed to shareholders in proportion to the paid-up nominal value of the shares held. The Articles of Association provide that the ordinary shareholders of Medtronic are entitled to participate pro rata in a winding up, but their right to do so may be subject to the rights of any preferred shareholders to participate under the terms of any series or class of preferred shares. Please see "*Description of Medtronic Ordinary Shares—Capital Structure—Authorized Share Capital*" for additional information on rights upon a liquidation.

Uncertificated Shares

Pursuant to the Irish Companies Act, a shareholder is entitled to be issued a share certificate on request and subject to payment of a nominal fee.

Stock Exchange Listing

The Medtronic ordinary shares are listed on the New York Stock Exchange under the ticker symbol "MDT."

No Sinking Fund

The Medtronic ordinary shares have no sinking fund provisions.

Transfer and Registration of Shares

The transfer agent for Medtronic maintains the share register, registration in which is determinative of membership in Medtronic. A shareholder of Medtronic who holds shares beneficially is not holder of record of such shares. Instead, the depository or other nominee is the holder of record of those shares. Accordingly, a transfer of shares from a person who holds such shares beneficially to a person who also holds such shares beneficially through a depository or other nominee will not be registered in Medtronic's official share register, as the depository or other nominee will remain the record holder of any such shares.

A written instrument of transfer is required under Irish law in order to register on Medtronic's official share register any transfer of shares (i) from a person who holds such shares directly to any other person, (ii) from a person who holds such shares beneficially to a person who holds such shares directly or (iii) from a person who holds such shares beneficially to another person who holds such shares beneficially where the transfer involves a change in the depository or other nominee that is the record owner of the transferred shares. An instrument of transfer is also required for a shareholder who directly holds shares to transfer those shares into his or her own broker account (or vice versa). Such instruments of transfer may give rise to Irish stamp duty, which must be paid prior to registration of the transfer on Medtronic's official Irish share register. However, a shareholder who directly holds shares may transfer those shares into his or her own broker account (or vice versa) without giving rise to Irish stamp duty provided there is no change in the ultimate beneficial ownership of the shares as a result of the transfer and the transfer is not made in contemplation of a sale of the shares.

Any transfer of Medtronic ordinary shares that is subject to Irish stamp duty will not be registered in the name of the buyer unless an instrument of transfer is duly stamped and provided to the transfer agent. The Articles of Association allow Medtronic, in its absolute discretion, to create an instrument of transfer and pay (or procure the payment of) any stamp duty, which is the legal obligation of a buyer. In the event of any such payment, Medtronic is (on behalf of itself or its affiliates) entitled to (i) seek reimbursement from the buyer or seller (at its discretion), (ii) set-off the amount of the stamp duty against future dividends payable to the buyer or seller (at its discretion) and (iii) claim a lien against the Medtronic ordinary shares on which it has paid stamp duty. Parties to a share transfer may assume that any stamp duty arising in respect of a transaction in Medtronic ordinary shares has been paid unless one or both of such parties is otherwise notified by Medtronic.

The Articles of Association delegate to Medtronic's secretary (or such other person as may be nominated by the secretary for this purpose) the authority to execute an instrument of transfer on behalf of a transferring party.

In order to help ensure that the official share register is regularly updated to reflect trading of Medtronic ordinary shares occurring through normal electronic systems, Medtronic intends to regularly produce any required instruments of transfer in connection with any transactions for which it pays stamp duty (subject to the reimbursement and set-off rights described above). In the event that Medtronic notifies one or both of the parties to a share transfer that it believes stamp duty is required to be paid in connection with the transfer and that it will not pay the stamp duty, the parties may either themselves arrange for the execution of the required instrument of transfer (and may request a form of instrument of transfer from Medtronic for this purpose) or request that Medtronic execute an instrument of transfer on behalf of the transferring party in a form determined by Medtronic. In either event, if the parties to the share transfer have the instrument of transfer duly stamped (to the extent required) and then provide it to Medtronic's transfer agent, the buyer will be registered as the legal owner of the relevant shares on Medtronic's official Irish share register (subject to the matters described below).

The directors may suspend registration of transfers from time to time, not exceeding 30 days in aggregate each year.

DESCRIPTION OF DEBT SECURITIES

The following description of Medtronic's registered debt securities is a summary. This summary does not purport to be complete and is qualified in its entirety by reference to the Base Indenture and Supplemental Indentures (each as hereinafter defined). Copies of the Base Indenture and Supplemental Indentures have been filed with the Securities and Exchange Commission (the "SEC") as exhibits 4.21, 4.23, and 4.24, respectively, to our Annual Report on Form 10-K for the fiscal year ended April 24, 2020.

General

Each series of notes was issued as a separate series of senior debt securities, under a Senior Indenture, dated March 28, 2017 (the "Base Indenture") among Medtronic Luxco, as issuer, Medtronic and Medtronic, Inc., a Minnesota corporation ("Medtronic, Inc.") as guarantors, and Wells Fargo Bank, National Association as trustee, as supplemented by the Second Supplemental Indenture, dated as of March 7, 2019 (the "Second Supplemental Indenture"), and the Third Supplemental Indenture, dated as of July 2, 2019 (the "Third Supplemental Indenture," and, together with the Second Supplemental Indenture, the "Supplemental Indentures.") The Base Indenture, together with the Supplemental Indentures, shall be referred to throughout this description of debt securities as the "Indenture." Each series of notes is a general unsecured senior obligation of Medtronic Luxco and is fully and unconditionally guaranteed by Medtronic and Medtronic, Inc., on a joint and several basis.

The notes of each series are issued only in registered form, without coupons, in minimum denominations of €100,000 and integral multiples of €1,000 in excess thereof. The notes of each series are issued in the form of one or more global securities that are deposited initially with, or on behalf of, a common depositary, and registered in the name of the nominee of the common depositary, for, and in respect of interests held through, Euroclear Bank SA/NV ("Euroclear") and Clearstream Banking S.A. ("Clearstream"). U.S. Bank National Association acts as registrar for the notes. The notes may be presented for registration of transfer and exchange at the offices of the registrar. Medtronic Luxco entered into agency agreements with Elavon Financial Services DAC, UK Branch ("Elavon") as paying agent and/or calculation agent with respect to each series of notes. Medtronic Luxco may change any paying agent, calculation agent and registrar without notice to holders of the notes and may act as a paying agent, calculation agent or registrar.

Maturity

Each series of notes will mature and bear interest as provided in the following table:

Series	*Maturity*	*Interest Rate*	*Interest Payment Dates*	*Record Dates*
Floating rate notes	March 7, 2021	Three-month USD EURIBOR plus 0.2% per annum	March 7, June 7, September 7, and December 7	Close of business on the business day immediately preceding the interest payment date.
2021 notes	March 7, 2021	0.00%	March 7	Close of business on the business day immediately preceding the interest payment date.
2022 notes	December 2, 2022	0.00%	December 2	Close of business on the business day immediately preceding the interest payment date.
2023 notes	March 7, 2023	0.375%	March 7	Close of business on the business day immediately preceding the interest payment date.
2025 notes	July 2, 2025	0.250%	July 2	Close of business on the business day immediately preceding the interest payment date.
2027 notes	March 7, 2027	1.125%	March 7	Close of business on the business day immediately preceding the interest payment date.
1.625% 2031 notes	March 7, 2031	1.625%	March 7	Close of business on the business day immediately preceding the interest payment date.
1.000% 2031 notes	July 2, 2031	1.000%	July 2	Close of business on the business day immediately preceding the interest payment date.
2.250% 2039 notes	March 7, 2039	2.250%	March 7	Close of business on the business day immediately preceding the interest payment date.
1.500% 2039 notes	July 2, 2039	1.500%	July 2	Close of business on the business day immediately preceding the interest payment date.
2049 Notes	July 2, 2049	1.750%	July 2	Close of business on the business day immediately preceding the interest payment date.

The notes are not subject to any sinking fund.

Interest

Floating Rate Notes

Interest on the floating rate notes accrues from the date of original issuance or, if interest has already been paid, from and including the most recent interest payment date to which interest has been paid or provided for. Medtronic Luxco will make interest payments on the floating rate notes on each interest payment date set forth in the table above. Medtronic Luxco will make interest payments to the person in whose name the floating rate notes are

registered at the close of business on the record date set forth in the table above whether or not a business day that precedes the applicable interest payment date.

The floating rate notes bear interest for each interest period at a rate per annum calculated by the calculation agent, subject to the maximum interest rate permitted by New York law or other applicable state law, as such law may be modified by United States law of general application. The per annum rate at which interest on the floating rate notes will be payable during each interest period will be equivalent to three-month EURIBOR, determined on the interest determination date for that interest period, plus 0.200%; provided, that the minimum interest rate shall be zero. The rate of interest on the floating rate notes will be reset on the interest reset date for each relevant interest period.

If any interest payment date (other than a maturity date or redemption date) or interest reset date for the floating rate notes would otherwise be a day that is not a business day, such interest payment date or interest reset date shall be the next succeeding business day, unless the next succeeding business day is in the next succeeding calendar month, in which case such interest payment date or interest reset date shall be the business day immediately preceding such interest payment date or interest reset date, as applicable. If the maturity date or redemption date for the floating rate notes would fall on a day that is not a business day, the payment of interest and principal will be made on the next succeeding business day, and no interest will accrue after such maturity date.

All percentages resulting from any calculation of any interest rate for the floating rate notes will be rounded, if necessary, to the nearest one hundred thousandth of a percentage point, with five one-millionths of a percentage point rounded upward (e.g., 9.876545% (or .09876545) would be rounded to 9.87655% (or .0987655)), and all dollar amounts would be rounded to the nearest cent, with one-half cent being rounded upward.

“Interest determination date” means the second London business day immediately preceding the first day of the relevant interest period.

“Interest period” means, with respect to the floating rate notes, the period beginning on any interest payment date for the floating rate notes to, but excluding, the next succeeding interest payment date for the floating rate notes, and in the case of the last such period, from and including the interest payment date immediately preceding the maturity date to, but not including, the maturity date for the floating rate notes.

“Interest reset date” means the first day of the relevant interest period.

“Three-month EURIBOR” will be determined by the calculation agent in accordance with the following provisions:

- With respect to any interest determination date, three-month EURIBOR will be the offered rate for deposits in euro having a maturity of three months, as that rate appears on Reuters Page EURIBOR01 as of 11:00 A.M., Brussels time, on the relevant interest determination date.

- If the rate described above does not appear on Reuters Page EURIBOR01, three-month EURIBOR will be determined on the basis of the rates, at approximately 11:00 A.M., Brussels time, on the relevant EURIBOR interest determination date, at which deposits of the following kind are offered to prime banks in the Euro-Zone interbank market by the principal Euro-Zone office of each of four major banks in that market selected by Medtronic Luxco: euro deposits having a maturity of three months and in a principal amount of not less than €1,000,000 that is representative for a single transaction in such market at such time. Medtronic Luxco will request the principal Euro-Zone office of each of these banks to provide to the paying agent and the calculation agent a quotation in writing of its rate. If at least two quotations are provided in writing, EURIBOR for such interest determination date will be the arithmetic mean (rounded upwards) calculated by the calculation agent of such quotations.

- If fewer than two quotations are provided as described above, three-month EURIBOR for the relevant interest determination date will be the arithmetic mean of the rates for loans of the following kind to leading Euro-Zone banks quoted in writing, at approximately 11:00 A.M., Brussels time, on such interest determination date, by three major banks in the Euro-Zone selected by Medtronic Luxco: loans of euro having a maturity of three months and in a principal amount of not less than €1,000,000 that is representative for a single transaction in such market at such time.

- If fewer than three banks selected by Medtronic Luxco are quoting as described above, three-month EURIBOR shall be the EURIBOR in effect on such interest determination date (or, in the case of the first interest reset date, three-month EURIBOR will be the initial three-month EURIBOR).

- The amount of interest for each day that the floating rate notes are outstanding (the "Daily Interest Amount") will be calculated by dividing the interest rate in effect for the floating rate notes for such day by 360 and multiplying the result by the principal amount of the floating rate notes then outstanding. The amount of interest to be paid on the floating rate notes for any interest period will be calculated by adding the Daily Interest Amount for the floating rate notes for each day in such interest period.

Notwithstanding the foregoing, if Medtronic Luxco, in its sole discretion, determines that EURIBOR has been permanently discontinued, or the reference to EURIBOR becomes illegal, or most other debt obligations similar to the floating rate notes have converted away from EURIBOR to a new reference rate, the calculation agent will use, as directed by Medtronic Luxco, as a substitute for EURIBOR for each future interest determination date, the alternative reference rate (the "Alternative Rate") selected by a central bank, reserve bank, monetary authority or any similar institution (including any committee or working group thereof) that is consistent with accepted market practice regarding a substitute for EURIBOR. As part of such substitution, the calculation agent will, as directed by Medtronic Luxco, make such adjustments ("Adjustments") to the Alternative Rate and/or the spread thereon, as well as the business day convention, interest determination dates and related provisions and definitions, in each case that are consistent with accepted market practice for the use of such Alternative Rate for debt obligations such as the floating rate notes. If Medtronic Luxco determines there is no clear market consensus as to whether any rate has replaced EURIBOR in customary market usage, Medtronic Luxco may appoint in its sole discretion an independent financial advisor (the "IFA") to determine an appropriate Alternative Rate, and any Adjustments, and the decision of the IFA will be binding on Medtronic Luxco, the calculation agent, the trustee and the holders. If, however, Medtronic Luxco determines that EURIBOR has been discontinued, but for any reason an Alternative Rate has not been determined, the rate of EURIBOR for the next interest period will be equal to such rate on the interest determination date when EURIBOR was last available on Reuters Page EURIBOR01, as determined by the calculation agent.

The interest rates and amount of interest to be paid on the floating rate notes for each interest period will be calculated by the calculation agent, which initially will be Elavon. All calculations made by the calculation agent shall, in the absence of manifest error, be conclusive for all purposes and binding on us and the holders of the floating rate notes. So long as three-month EURIBOR is required to be determined with respect to the floating rate notes, there will at all times be a calculation agent. In the event that any then acting calculation agent shall be unable or unwilling to act, or that such calculation agent shall fail duly to establish EURIBOR for any interest period, or that Medtronic Luxco proposes to remove such calculation agent, Medtronic Luxco shall appoint itself or another person which is a bank, trust company, investment banking firm or other financial institution to act as the calculation agent.

Fixed Rate Notes

The 2021 notes, the 2023 notes, the 2027 notes, the 1.625% 2031 notes and the 2.250% 2039 notes bear interest from the date of issuance, payable annually in arrears on March 7 of each year. The 2022 notes bear interest from the date of issuance, payable annually in arrears on December 2 of each year. The 2025 notes, the 1.000% 2031 notes, the 1.500% 2039 notes and the 2049 notes bear interest from the date of issuance, payable annually in arrears on July 2 of each year. Interest is payable to the persons in whose names such notes are registered at the close of business on the business day (for this purpose, a day on which Clearstream and Euroclear are open for business) immediately preceding the relevant interest payment. Interest on the fixed rate notes will be computed on the basis of the actual number of days in the period for which interest is being calculated and the actual number of days from

and including the last date on which interest was paid on the notes, to, but excluding, the next scheduled interest payment date. This payment convention is referred to as Actual/Actual (ICMA) as defined in the rulebook of the International Capital Market Association.

If any interest payment date would otherwise be a day that is not a business day, such interest payment date will be postponed to the next date that is a business day and no interest will accrue on the amounts payable from and after such interest payment date to the next business day. If the maturity date of any series of fixed rate notes falls on a day that is not a business day, the related payment of principal, premium, if any, and interest will be made on the next business day as if it were made on the date such payment was due, and no interest will accrue on the amounts so payable for the period from and after such date to the next business day.

Guarantees

Each of Medtronic and Medtronic, Inc. (each, a "Guarantor" and together, the "Guarantors") fully and unconditionally guarantee, on a joint and several basis, the due and punctual payment of all obligations of Medtronic Luxco under the notes, whether for the payment of principal of, premium, if any, or interest or certain additional amounts on the notes, when and as the same shall become due and payable, whether at maturity, declaration of acceleration, upon redemption, repurchase or otherwise.

Notwithstanding the foregoing, each Guarantor will be automatically and unconditionally released from all obligations under its guarantee, and such guarantees shall terminate and be discharged and be of no further force and effect upon the occurrence of certain circumstances.

The guarantees of the notes may be subject to review under United States federal or state fraudulent transfer law or similar laws in other applicable jurisdictions, which could limit their enforceability. The guarantees will provide that the obligations of each Guarantor will be limited as necessary to prevent that guarantee from constituting a fraudulent conveyance or fraudulent transfer under applicable law.

Ranking

The notes are unsecured senior obligations of Medtronic Luxco and rank equally in right of payment with each other and with all of Medtronic Luxco's other existing and future unsecured senior obligations, including its outstanding guarantees of senior notes of other indebtedness of Medtronic, Inc. and other subsidiaries of Medtronic, including Covidien International Finance S.A., a wholly-owned indirect subsidiary of Medtronic Luxco. Additionally, the notes are effectively subordinated to any existing and future secured indebtedness of Medtronic Luxco, to the extent of the assets securing such indebtedness. The notes rank senior in right of payment to any existing and future subordinated indebtedness of Medtronic Luxco. The notes are also structurally subordinated to all existing and any future obligations of Medtronic Luxco's subsidiaries (other than Medtronic, Inc. because of its guarantee of the notes).

The guarantees are unsecured senior obligations of each of Medtronic and Medtronic, Inc., and rank equally with all other unsecured senior obligations of Medtronic plc and Medtronic, Inc. as applicable. The guarantees of the notes rank equally in right of payment with all other existing and future unsecured senior obligations of Medtronic plc and Medtronic, Inc.; be effectively subordinated to any existing and future secured indebtedness of Medtronic plc and Medtronic, Inc. to the extent of the assets securing such indebtedness; and be structurally subordinated to all existing and future debt and other obligations of Medtronic plc's and Medtronic, Inc.'s subsidiaries, respectively, including, with respect to Medtronic plc, Covidien International Finance S.A., a wholly-owned indirect subsidiary of Medtronic Luxco.

Optional Redemption

Except as described below under "—Redemption Upon Changes in Withholding Taxes," the floating rate notes are not redeemable at Medtronic Luxco's option.

Medtronic Luxco may redeem any series of the fixed rate notes, in whole or in part, in the case of the 2021 notes, at any time prior to their maturity, and in the case of the 2022 notes, the 2023 notes, the 2025 notes, the 2027 notes, the

1.625% 2031 notes, the 1.000% 2031 notes, the 2.250% 2039 notes, the 1.500% 2039 notes, and the 2049 notes, at any time prior to the applicable Par Call Date at a redemption price equal to the greater of:

- 100% of the principal amount of the fixed rate notes of the applicable series being redeemed; and

- the sum, as determined by a Quotation Agent (defined below), of the present values of the Remaining Scheduled Payments (as defined below) of principal and interest on the notes of such series to be redeemed (excluding any portion of such payments of interest accrued as of the date of redemption and assuming, in the case of the 2022 notes, the 2023 notes, the 2025 notes, the 2027 notes, the 1.625% 2031 notes, the 1.000% 2031 notes, the 2.250% 2039 notes, the 1.500% 2039 notes, and the 2049 notes, that such notes matured on the applicable Par Call Date), discounted to the redemption date on an annual basis (ACTUAL/ACTUAL(ICMA)) at the Comparable Bond Rate (defined below), plus 10 basis points, in the case of the 2021 notes, 15 basis points, in the case of the 2022 notes, the 2023 notes and the 2025 notes, 20 basis points, in the case of the 2027 notes and the 1.000% 2031 notes, 25 basis points, in the case of the 1.625% 2031 notes, the 1.500% 2039 notes and the 2049 notes, and 30 basis points, in the case of the 2.250% 2039 notes;

plus, in each case, accrued and unpaid interest to, but not including, the date of redemption. These notes may be redeemed in part in the minimum authorized denomination or in any integral multiple of such amount. Unless Medtronic Luxco defaults in payment of the redemption price, on and after the redemption date, interest will cease to accrue on the fixed rate notes or portions thereof called for redemption.
In addition, at any time on and after the applicable Par Call Date, the 2022 notes, the 2023 notes, the 2025 notes, the 2027 notes, the 1.625% 2031 notes, the 1.000% 2031 notes, the 2.250% 2039 notes, the 1.500% 2039 notes and the 2049 notes will be redeemable at Medtronic Luxco's option, in whole or in part, at a redemption price equal to 100% of the principal amount of the notes to be redeemed, plus accrued and unpaid interest, if any, to, but not including, the date of redemption.

Medtronic Luxco will provide notice of any optional redemption to each holder of notes of the series to be redeemed at least 15 days, but not more than 60 days, before the redemption date. A notice of redemption may, at the discretion of Medtronic Luxco, be subject to one or more conditions precedent, including, but not limited to, completion of an equity offering, a financing, or other corporate transaction. In addition, if such redemption or notice is subject to satisfaction of one or more conditions precedent, such notice shall state that, in Medtronic Luxco's discretion, the redemption date may be postponed until up to 60 days following the notice of redemption, and such notice may be rescinded in the event that any or all such conditions shall not have been satisfied by the redemption date (including as it may be postponed). Medtronic Luxco will give notice of such redemption to the trustee at least 10 days prior to the date Medtronic Luxco mails the notice of redemption to each holder (or such shorter time as may be acceptable to the trustee). Unless Medtronic Luxco defaults in payment of the redemption price on the redemption date, on and after the redemption date, interest will cease to accrue on the fixed rate notes or portions thereof called for redemption.

If Medtronic Luxco does not redeem all of the fixed rate notes of a particular series, the trustee shall select the fixed rate notes of that series to be redeemed in any manner that it deems fair and appropriate consistent with the applicable procedures of the despositary.

Any notice to holders of fixed rate notes of a redemption hereunder shall include the appropriate calculation of the redemption price, but does not need to include the redemption price itself. The actual redemption price, calculated as described above, will be set forth in an officers' certificate delivered to the trustee no later than two business days prior to the redemption date.

"Comparable Bond Rate" means, for any redemption date, the rate per annum equal to the annual equivalent yield to maturity or interpolated yield to maturity (on a day count basis), computed as the third business day immediately preceding that redemption date, of the Comparable Government Issue (as defined below), assuming a price for the Comparable Government Issue (expressed as a percentage of its principal amount) equal to the Comparable Price (as defined below) for that redemption date.

“Comparable Government Issue” means the euro-denominated security issued by the German federal government selected by a Quotation Agent as having an actual or interpolated maturity comparable to the remaining term of the fixed rate notes to be redeemed (assuming that the notes to be redeemed matured on the applicable Par Call Date) that would be utilized, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of comparable maturity to the remaining term of the notes to be redeemed.

“Comparable Price” means, with respect to any redemption date, (1) the average of the Reference Dealer Quotations (as defined below) for such redemption date, after excluding the highest and lowest of the Reference Dealer Quotations, (2) if Medtronic Luxco obtains fewer than four Reference Dealer Quotations, the arithmetic average of those quotations or (3) if Medtronic Luxco obtains only one Reference Dealer Quotation, such Reference Dealer Quotation.

“Par Call Date” means: in the case of the 2022 notes, November 2, 2022; in the case of the 2023 notes, February 7, 2023; in the case of the 2025 notes, April 2, 2025; in the case of the 2027 notes, December 7, 2026; in the case of the 1.625% 2031 notes, December 7, 2030; in the case of the 1.000% 2031 notes, April 2, 2031; in the case of the 2.250% 2039 notes, December 7, 2038; in the case of the 1.500% 2039 notes, April 2, 2039; and in the case of the 2049 notes, January 2, 2049.

“Quotation Agent” means the Reference Dealer appointed by Medtronic Luxco.

“Reference Dealer” means (1) each of Barclays Bank PLC and Merrill Lynch International and their respective successors, in the case of the 2021 notes, the 2023 notes, the 2027 notes, the 1.625% 2031 notes, and the 2.250% 2039 notes, and each of Barclays Bank PLC, Goldman Sachs & Co LLC and Merrill Lynch International, in the case of the 2022 notes, the 2025 notes, the 1.000% 2031 notes, the 1.150% 2039 notes, and the 2049 notes; provided, however, that if any of the foregoing shall cease to be a broker or dealer of, and/or a market maker in, German government bonds (a “Primary Bond Dealer”), Medtronic Luxco shall substitute another Primary Bond Dealer and (2) any other Primary Bond Dealers selected by Medtronic Luxco.

“Reference Dealer Quotations” means, with respect to each Reference Dealer and any redemption date, the average, as determined by the Quotation Agent, of the bid and asked prices for the Comparable Government Issue (expressed in each case as a percentage of its principal amount) quoted in writing to the Quotation Agent by that Reference Dealer at 11:00 a.m., London time, on the third business day preceding that redemption date.

“Remaining Scheduled Payments” means, with respect to each fixed rate note to be redeemed, the remaining scheduled payments of the principal thereof and interest thereon that would be due after the related redemption date but for such redemption (assuming that the fixed rate notes to be redeemed matured on the applicable Par Call Date); provided, however, that, if such redemption date is not an interest payment date with respect to such note, the amount of the next succeeding scheduled interest payment thereon will be reduced by the amount of interest accrued thereon to such redemption date.

Redemption Upon Changes in Withholding Taxes

Medtronic Luxco may redeem all, but not less than all, of the notes of any series in the event of certain changes in the tax laws, regulations, rulings or treaties of Luxembourg, Ireland, the United States or any other jurisdiction in which Medtronic Luxco or any Guarantor is then organized (or any taxing authority thereof or therein) (a “Taxing Jurisdiction”) if, in the written opinion of independent counsel chosen by Medtronic Luxco, Medtronic plc or Medtronic, Inc., there is a material probability that Medtronic Luxco, Medtronic plc or Medtronic, Inc. will become obligated to pay certain additional amounts with respect to the notes. This redemption would be at a redemption price equal to 100% of the principal amount of the notes of such series being redeemed, together with accrued and unpaid interest, if any, to, but not including, the redemption date.

Payment of Additional Amounts

Subject to certain exceptions and limitations, all payments made by Medtronic Luxco or any Guarantor under or with respect to the notes and guarantees will be made free and clear of and without withholding or deduction for or on account of any present or future taxes, duties, levies, imposts, assessments or governmental charges of whatever

nature imposed or levied by or on behalf of any Taxing Jurisdiction, unless Medtronic Luxco or any Guarantor, as the case may be, is required to withhold or deduct taxes by law or by the interpretation or administration thereof. In the event that Medtronic Luxco or any Guarantor is required to so withhold or deduct any amount for or on account of any taxes from any payment made under or with respect to the notes or the guarantees, as the case may be, subject to certain exceptions and limitations Medtronic Luxco or the applicable Guarantor, as the case may be, will pay such additional amounts ("Additional Amounts") as may be necessary so that the net amount received by each holder of notes (including Additional Amounts) after such withholding or deduction will equal the amount that such holder would have received if such taxes had not been required to be withheld or deducted.

Events of Default

Any of the following events will constitute an event of default for each series of notes under the Indenture:

- failure to pay any interest on the notes of that series when due and payable and such failure continues for 30 days;
- failure to pay principal of or any premium on the notes of that series at its maturity, acceleration, redemption or otherwise;
- failure to perform or the breach of any other covenant or warranty in the Indenture applicable to such series and such failure continues for 60 days after written notice as provided in such Indenture;
- failure to pay principal when due at maturity or a default that results in the acceleration of maturity of Medtronic plc's or any Restricted Subsidiary's (defined below) indebtedness for borrowed money in an aggregate amount of $150 million or more;
- Medtronic plc's or Medtronic, Inc.'s guarantee ceases to be in full force and effect or is declared to be null and void and unenforceable or such guarantee is found to be invalid or Medtronic plc or Medtronic, Inc. denies its liability under its guarantee (other than by reason of release of a Guarantor in accordance with the terms of the Indenture);
- certain events in bankruptcy, insolvency, examinership or reorganization, voluntary or involuntary, relating to Medtronic Luxco, Medtronic or Medtronic, Inc.; and
- any other event of default provided with respect to notes of such series.

If an event of default, other than an event of default specified in the sixth bullet point above, occurs with respect to notes of any series and is continuing, either the applicable trustee or the holders of at least 25% in principal amount of the outstanding notes of that series may declare the principal amount of all notes of that series to be due and payable immediately; *provided*, *however*, that under certain circumstances the holders of a majority in aggregate principal amount of outstanding notes of that series may rescind and annul such declaration and its consequences. If an event of default specified in the sixth bullet point above occurs and is continuing, the entire principal amount of, and accrued interest, if any, on each series of notes then outstanding shall become immediately due and payable.

The applicable trustee, after the occurrence of a default with respect to any series of notes, shall give to the holders of notes of that series notice of all uncured defaults known to it (the term default to mean the events specified above without grace periods); *provided*, that, except in the case of default in the payment of principal of (or premium, if any) or interest, if any, on any note, the trustee shall be protected in withholding such notice if it in good faith determines that the withholding of such notice is in the interest of the holders of the notes of such series.

The holders of a majority in principal amount of the outstanding notes of any series affected will have the right, subject to certain limitations, to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee with respect to the notes of such series, and to waive certain defaults.

In case an event of default shall occur and be continuing, each trustee shall exercise such of its rights and powers under the Indenture, and use the same degree of care and skill in their exercise, as a prudent man would exercise or use under the circumstances in the conduct of his own affairs. Subject to such provisions, the trustees will be under no obligation to exercise any of their rights or powers under the Indenture at the request or direction of any of the holders of notes unless such holders shall have offered to the applicable trustee reasonable security or indemnity against the costs, expenses and liabilities which might be incurred by it in compliance with such request or direction.

The Indenture requires us to deliver to the trustees annual statements as to the performance of our obligations under the Indenture and as to any events of default thereunder.

A default in the payment of any of our notes or under any related guarantee, or a default with respect to our notes or any related guarantee that causes such notes to be accelerated, may give rise to a cross-default under our other indebtedness.

“Restricted Subsidiary” means (i) each of Medtronic Luxco and Medtronic, Inc. and (ii) any other subsidiary of Medtronic which owns or leases a Principal Property, except any subsidiary substantially all of the assets of which are located, or substantially all of the business of which is carried on, outside the United States and its territories and possessions.

“Principal Property” means any plant, office facility, warehouse, distribution center or equipment located within the United States (other than its territories or possessions) and owned by Medtronic or any subsidiary, the gross book value (without deduction of any depreciation reserves) of which on the date as of which the determination is being made exceeds 2% of the Consolidated Net Tangible Assets of Medtronic, except any such property which Medtronic’s board of directors, in its good faith opinion, determines is not of material importance to the business conducted by Medtronic and its subsidiaries, taken as a whole, as evidenced by a certified copy of a board resolution.

Modification of the Indenture

Modifications and amendments of the Indenture may be made by us and the applicable trustee with the consent of the holders of not less than a majority in aggregate principal amount of the outstanding notes of each series affected by the modification or waiver; *provided*, *however*, that no such modification or amendment may without the consent of the holder of each noteholder affected thereby, extend the stated maturity of the principal of, or any installment of principal of or interest on, any note, reduce the principal amount of, or premium or interest on, any note, change the place of payment where coin or currency in which the principal of, or any premium or interest on, any note is payable, impair the right to institute suit for the enforcement of any payment on or with respect to any note, reduce the percentage in principal amount of outstanding notes, the consent of the holders of which is required for modification or amendment of the Indenture or for waiver of compliance with certain provisions of the Indenture or for waiver of certain defaults or modify any of the above provisions.

The holders of not less than a majority in aggregate principal amount of the outstanding notes of each series may, on behalf of the holders of all notes of that series, waive compliance by us with certain restrictive provisions of the Indenture that may be amended by such majority. The holders of not less than a majority in aggregate principal amount of the outstanding notes of each series may, on behalf of the holders of all notes of such series, waive any past default under the Indenture, except a default (1) in the payment of principal of, or any premium or interest on, any note or (2) in respect of a covenant or provision of the Indenture which cannot be modified or amended without the consent of the holder of each note of the affected series.

Modifications and amendments of the Indenture may be made by us and the trustee without the consent of any holders of any series of notes for any of the following purposes:

- to evidence the succession of another person to us or any guarantor and the assumption by any such successor of our or such Guarantor's covenants under the Indenture and in the notes;

- to add to our covenants or the covenants applicable to any guarantor for the benefit of the holders or to surrender any right or power in the Indenture conferred upon us or any Guarantor;

- to add any additional events of default for the benefit of the holders;

- to secure the notes or any related guarantee;

- to evidence and provide for the acceptance of appointment hereunder by a successor trustee;

- to cure any ambiguity, to correct or supplement any provision in the Indenture or in any supplemental indenture which may be inconsistent with any other provision of such indenture or supplemental indenture, or to make any other provisions with respect to matters or questions arising under the Indenture; *provided* such action shall not adversely affect the interests of the holders in any material respect;

- to conform the Indenture or any supplemental indenture to the description of the notes set forth in any prospectus or prospectus supplement related to such series of notes;

- to comply with the requirements of the SEC in order to effect or maintain the qualifications of the indenture under the Trust Indenture Act of 1939, as amended (the "Trust Indenture Act");

- to add to or change any of the provisions of the Indenture to such extent as shall be necessary to permit or facilitate the issuance of notes in bearer form or to facilitate the issuance of notes in uncertificated form;

- to provide for the issuance and establish the forms or terms and conditions of notes of any series as permitted by the Indenture;

- to add or release a Guarantor as permitted by the Indenture; or

- to comply with the rules of any applicable securities depositary.

Notes will not be considered outstanding, and therefore will not be eligible to vote on any matter, if we have deposited or set aside in trust money for their payment or redemption. Notes will also not be eligible to vote if they have been fully defeased.

We will generally be entitled to set any day as a record date for the purpose of determining the holders of outstanding notes that are entitled to vote or take other action under the Indenture. In certain limited circumstances, the trustee will be entitled to set a record date for action by holders. If we or the trustee set a record date for a vote or other action to be taken, that vote or action may be taken only by persons who are holders of outstanding notes on the record date and must be taken within 180 days following the record date or a shorter period that we may specify (or as the trustee may specify, if it set the record date). We may shorten or lengthen (but not beyond 180 days) this period from time to time.

Other Provisions of the Notes

The Indenture contains provisions that restrict our ability, and the ability of certain of our subsidiaries, to incur secured debt and to engage in sale and leaseback transactions. The Indenture does not restrict our ability to convey or transfer our properties and assets other than as an entirety or substantially as an entirety to any other person. The Indenture contains no other restrictive covenants, including those that would afford holders of the notes protection in the event of a highly-leveraged transaction involving Medtronic Luxco or any of its affiliates or other events that may adversely affect our creditworthiness or the value of the notes. The Indenture also does not contain any

covenants relating to total unsecured indebtedness, interest coverage, stock repurchases, recapitalizations, dividends and distributions to shareholders, current ratios or acquisitions and divestitures.

Regarding the Trustees

The Indenture trustee's current address is Wells Fargo Bank, National Association, 600 South 4th Street, 6th Floor, Minneapolis, Minnesota 55415.

The Indenture provides that, except during the continuance of an event of default, the trustee will perform only such duties as are specifically set forth in the Indenture. During the existence of an event of default, the trustee will exercise such rights and powers vested in its exercise as a prudent person would exercise under the circumstances in the conduct of such person's own affairs.

The Indenture and certain provisions of the Trust Indenture Act contain limitations on the rights of the trustees, should a trustee become a creditor of us, Medtronic plc or Medtronic, Inc. to obtain payment of claims in certain cases or to realize on certain property received by it in respect of any such claim as security or otherwise. A trustee is permitted to engage in other transactions with us or any affiliate of ours. If there arises any conflicting interest (as defined in the Indenture or in the Trust Indenture Act), it must eliminate such conflict or resign.

We maintain ordinary banking relationships and credit facilities with Wells Fargo Bank, National Association. In addition, Wells Fargo Bank, National Association is the trustee for certain of our affiliates' other debt securities, is the transfer agent for Medtronic plc's ordinary shares, and from time to time provides services relating to our investment management, stock repurchase and foreign currency hedging programs.

Listing

The notes are listed on the New York Stock Exchange. Medtronic Luxco will use commercially reasonable efforts to maintain such listing and satisfy the requirements for such continued listing as long as the notes are outstanding. The New York Stock Exchange is not a regulated market for the purposes of MiFID II.

Governing Law

The Indenture and the notes are governed by and construed in accordance with the laws of the State of New York. For the avoidance of doubt, the applicability of Articles 84 to 94-8 of the Luxembourg law dated August 10, 1915 on commercial companies, as amended, shall be excluded.

No holder of notes may initiate proceedings against Medtronic Luxco based on Article 98 of the Luxembourg law dated August 10, 1915 on commercial companies, as amended.

Book-Entry System; Delivery and Form

Global Clearance and Settlement

The notes of each series are issued in the form of one or more global notes in fully registered form, without coupons, and deposited with, or on behalf of, a common depositary, and registered in the name of the nominee of the common depositary, for, and in respect of interests held through, Euroclear and Clearstream. Except as described herein, certificates will not be issued in exchange for beneficial interests in the global notes.

Except as set forth below, the global notes may be transferred, in whole and not in part, only to Euroclear or Clearstream or their respective nominees.

Beneficial interests in the global notes are be represented, and transfers of such beneficial interests will be effected, through accounts of financial institutions acting on behalf of beneficial owners as direct or indirect participants in Euroclear or Clearstream. Those beneficial interests are in denominations of €100,000 and integral multiples of €1,000 in excess thereof. Investors may hold notes directly through Euroclear or Clearstream, if they are participants in such systems, or indirectly through organizations that are participants in such systems.

We have been advised by Clearstream and Euroclear, respectively, as follows:

Clearstream

Clearstream has advised that it is incorporated under the laws of Luxembourg and licensed as a bank and professional depositary. Clearstream holds securities for its participating organizations and facilitates the clearance and settlement of securities transactions among its participants through electronic book-entry changes in accounts of its participants, thereby eliminating the need for physical movement of certificates. Clearstream provides to its participants, among other things, services for safekeeping, administration, clearance and settlement of internationally traded securities and securities lending and borrowing. Clearstream interfaces with domestic markets in several countries. Clearstream has established an electronic bridge with the Euroclear Operator (as defined below) to facilitate the settlement of trades between the nominees of Clearstream and Euroclear. As a registered bank in Luxembourg, Clearstream is subject to regulation by the Luxembourg Commission for the Supervision of the Financial Sector. Clearstream customers are recognized financial institutions around the world, including underwriters, securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations and may include the underwriters. Indirect access to Clearstream is also available to others, such as banks, brokers, dealers and trust companies that clear through, or maintain a custodial relationship with, a Clearstream participant, either directly or indirectly.

Distributions with respect to notes held beneficially through Clearstream will be credited to cash accounts of Clearstream participants in accordance with its rules and procedures.

Euroclear

Euroclear has advised that it was created in 1968 to hold securities for its participants and to clear and settle transactions between Euroclear participants through simultaneous electronic book-entry delivery against payment, thereby eliminating the need for physical movement of certificates and any risk from lack of simultaneous transfers of securities and cash. Euroclear includes various other services, including securities lending and borrowing and interfaces with domestic markets in several countries. All operations are conducted by the Euroclear Operator, and all Euroclear securities clearance accounts and Euroclear cash accounts are accounts with the Euroclear Operator. Euroclear participants include banks (including central banks), securities brokers and dealers and other professional financial intermediaries and may include the underwriters. Indirect access to Euroclear is also available to other firms that clear through or maintain a custodial relationship with a Euroclear participant, either directly or indirectly.

Securities clearance accounts and cash accounts with the Euroclear Operator are governed by the Terms and Conditions Governing Use of Euroclear and the related operating procedures of Euroclear, and applicable Belgian law (collectively, the “Terms and Conditions”). The Terms and Conditions govern transfers of securities and cash within Euroclear, withdrawals of securities and cash from Euroclear, and receipts of payments with respect to securities in Euroclear. All securities in Euroclear are held on a fungible basis without attribution of specific certificates to specific securities clearance accounts. The Euroclear Operator acts under the Terms and Conditions only on behalf of Euroclear participants, and has no records of or relationship with persons holding through Euroclear participants.

Distributions with respect to the notes held beneficially through Euroclear will be credited to the cash accounts of Euroclear participants in accordance with the Terms and Conditions.

Euroclear and Clearstream Arrangements

So long as Euroclear or Clearstream or their nominee or their common depositary is the registered holder of the global notes, Euroclear, Clearstream or such nominee, as the case may be, will be considered the sole owner or holder of the notes represented by such global notes for all purposes under the Indenture and the notes. Payments of principal, interest and additional amounts, if any, in respect of the global notes will be made to Euroclear, Clearstream, such nominee or such common depositary, as the case may be, as registered holder thereof. None of us, the trustee, any underwriter and any affiliate of any of the above or any person by whom any of the above is controlled (as such term is defined in the Securities Act) will have any responsibility or liability for any records

relating to or payments made on account of beneficial ownership interests in the global notes or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

Distributions of principal, premium, if any, and interest with respect to the global notes will be credited in euro to the extent received by Euroclear or Clearstream from the paying agent to the cash accounts of Euroclear or Clearstream customers in accordance with the relevant system's rules and procedures.

Because Euroclear and Clearstream can only act on behalf of participants, who in turn act on behalf of indirect participants, the ability of a person having an interest in the global notes to pledge such interest to persons or entities which do not participate in the relevant clearing system, or otherwise take actions in respect of such interest, may be affected by the lack of a physical certificate in respect of such interest.

Initial Settlement

We understand that investors that hold their notes through Clearstream or Euroclear accounts will follow the settlement procedures that are applicable to conventional eurobonds in registered form. Subject to applicable procedures of Clearstream and Euroclear, notes will be credited to the securities custody accounts of Clearstream and Euroclear participants on the business day following the settlement date, for value on the settlement date.

Secondary Market Trading

Because the purchaser determines the place of delivery, it is important to establish at the time of trading of any notes where both the purchaser's and seller's accounts are located to ensure that settlement can be made on the desired value date.

We understand that secondary market trading between Clearstream and/or Euroclear participants will occur in the ordinary way following the applicable rules and operating procedures of Clearstream and Euroclear. Secondary market trading will be settled using procedures applicable to conventional eurobonds in global registered form.

Investors will only be able to make and receive deliveries, payments and other communications involving the notes through Clearstream and Euroclear on days when those systems are open for business. Those systems may not be open for business on days when banks, brokers and other institutions are open for business in the United States.

In addition, because of time-zone differences, there may be problems with completing transactions involving Clearstream and Euroclear on the same business day as in the United States. U.S. investors who wish to transfer their interests in the notes, or to make or receive a payment or delivery of the notes, on a particular day, may find that the transactions will not be performed until the next business day in Luxembourg or Brussels, depending on whether Clearstream or Euroclear is used.

Clearstream or Euroclear will credit payments to the cash accounts of Clearstream customers or Euroclear participants, as applicable, in accordance with the relevant system's rules and procedures, to the extent received by its depositary. Clearstream or the Euroclear Operator, as the case may be, will take any other action permitted to be taken by a holder under the Indenture on behalf of a Clearstream customer or Euroclear participant only in accordance with its relevant rules and procedures.

Clearstream and Euroclear have agreed to the foregoing procedures in order to facilitate transfers of the notes among participants of Clearstream and Euroclear. However, they are under no obligation to perform or continue to perform those procedures, and they may discontinue those procedures at any time.

Exchange of Global Notes for Certificated Notes

Subject to certain conditions, the notes represented by the global notes are exchangeable for certificated notes in definitive form of like tenor in minimum denominations of €100,000 principal amount and multiples of €1,000 in excess thereof if:

(1) the common depositary notifies us that it is unwilling, unable or no longer qualified to continue as depositary for the global notes and we fail to appoint a successor depositary within 90 calendar days;

(2) Medtronic Luxco, at its option, notifies the trustee in writing that it elects to cause the issuance of certificated notes; or

(3) there has occurred and is continuing an Event of Default with respect to the notes.

In all cases, certificated notes delivered in exchange for any global note or beneficial interest therein will be registered in the names, and issued in any approved denominations, requested by or on behalf of the common depositary (in accordance with its customary procedures).

Payments

Payments (including principal, premium and interest) and transfers with respect to notes in certificated form may be executed at the office or agency maintained for such purpose in London (initially the corporate trust office of the paying agent) or, at Medtronic Luxco's option, by check mailed to the holders thereof at the respective addresses set forth in the register of holders of the notes (maintained by the registrar), provided that all payments (including principal, premium and interest) on notes in certificated form, for which the holders thereof have given wire transfer instructions, will be required to be made by wire transfer of immediately available funds to the accounts specified by the holders thereof. No service charge will be made for any registration of transfer, but payment of a sum sufficient to cover any tax or governmental charge payable in connection with that registration may be required.

Exhibit 10.69

MEDTRONIC plc

RESTRICTED STOCK UNIT AWARD AGREEMENT
AMENDED AND RESTATED 2013 STOCK AWARD AND INCENTIVE PLAN

Name:

Employee ID:

Client Grant ID:

Grant Date:

Grant Price:

Grant Type:

Shares Awarded:

1. **Restricted Stock Units Award**. Medtronic plc, an Irish public limited company (the "Company"), hereby awards to the individual named above Restricted Stock Units, in the number and on the Grant Date as each is set forth above. The Restricted Stock Units represent the right to receive ordinary shares of the Company, par value $0.0001 per share (the "Shares"), subject to the restrictions, limitations, and conditions contained in this Restricted Stock Unit Award Agreement (the "Agreement") and in the Medtronic plc Amended and Restated 2013 Stock Award and Incentive Plan (the "Plan"). Unless otherwise defined in the Agreement, a capitalized term in the Agreement will have the same meaning as in the Plan. In the event of any inconsistency between the terms of the Agreement and the Plan, the terms of the Plan will govern.

2. **Vesting & Distribution**. The Restricted Stock Units will vest 100% on the third anniversary of the Grant Date. The Company will issue to you a number of Shares equal to the number of your vested Restricted Stock Units (including any dividend equivalents described in Section 5, below) within six weeks following the applicable vesting date, provided that you have not incurred a Termination of Employment prior to such vesting date (the "Restricted Period"). Notwithstanding the preceding sentence, if you incur a Termination of Employment during the Restricted Period as a result of your death, Disability or Retirement, you will vest 100% on the third anniversary of the Grant Date, and the Company will issue you a number of Shares equal to the number of your vested Restricted Stock Units (including any dividend equivalents described in Section 5, below) within six weeks following your separation from service. Any portion of the Restricted Stock Units that does not vest in accordance with the foregoing will automatically be forfeited and canceled by the Company as of 11:00 p.m. CT (midnight ET) on the date of such Termination of Employment. Upon your Termination of Employment during the Restricted Period for any reason other than death, Disability or Retirement, the Restricted Stock Units will automatically be forfeited in full and canceled by the Company as of 11:00 p.m. CT (midnight ET) on the date of such Termination of Employment. For purposes of this Agreement, the terms "Disability" and "Retirement" shall have the meanings ascribed to those terms, as of the date of this Agreement, under any retirement plan of the Company which is qualified under Section 401 of the Code (which currently provides for retirement on or after age 55, provided you have been

employed by the Company and/or one or more Affiliates for at least ten years, or retirement on or after age 62), or under any disability or retirement plan of the Company or any Affiliate applicable to you due to employment by a non−U.S. Affiliate or employment in a non−U.S. location.

3. **Forfeiture**. If you have received or are entitled to receive delivery of Shares as a result of this Agreement within the period beginning six months prior to the date of your Termination of Employment and ending twelve months following the date of your Termination of Employment, the Company, in its sole discretion, may require you to return or forfeit the cash and/or Shares received or receivable with respect to this Restricted Stock Units award, in the event that you engage in any of the following activities:
    a. performing services for or on behalf of any competitor of, or competing with, the Company or any Affiliate, within six months of the date of your Termination of Employment;
    b. unauthorized disclosure of material proprietary information of the Company or any Affiliate;
    c. a violation of applicable business ethics policies or business policies of the Company or any Affiliate; or
    d. any other occurrence determined by the Committee.

    The Company's right to require forfeiture must be exercised not later than 90 days after the Company acquires actual knowledge of such an activity but in no event later than twelve months after your Termination of Employment. Such right shall be deemed to be exercised upon the Company's mailing written notice of such exercise to your most recent home address as shown on the personnel records of the Company. In addition to requiring forfeiture as described herein, the Company may exercise its rights under this Section 3 by terminating the Restricted Stock Units awarded under this Agreement.

    If you fail or refuse to forfeit the cash and/or shares of Common Stock demanded by the Company (the number of such shares of Common Stock as may be adjusted for any events described in Section 3.4 of the Plan), you shall be liable to the Company for damages equal to the number of Shares demanded times the highest closing price per share of the Common Stock during the period between the date of your Termination of Employment and the date of any judgment or award to the Company, together with all costs and attorneys' fees incurred by the Company to enforce this provision.

    For purposes of this Section 3, forfeiture of Common Stock shall be effected by the redemption of such Common Stock in accordance with the Articles of Association of the Company and to the extent permissible under applicable law.

    Notwithstanding the foregoing, this Section 3 shall have no application following a Change of Control, nor shall the Company's Incentive Compensation Forfeiture Policy apply following a Change of Control to the Restricted Stock Units awarded pursuant to this Agreement or to any proceeds in respect of such award.

4. **Change of Control**. Notwithstanding anything in Section 2 of this Agreement to the contrary, if a Change of Control of the Company occurs during the Restricted Period, then the Restricted Stock Units will become 100% vested upon such Change of Control, and the Company will issue to you a number of Shares equal to the number of Restricted Stock Units (including any dividend equivalents described in Section 5, below) within six weeks following the Change of Control, provided that no such vesting or issuance shall occur if the Restricted Stock Units are

replaced or continued by a Replacement Award that satisfies the requirements of Section 10.1(b) of the Plan. In the event that the Restricted Stock Units are replaced by a Replacement Award and you incur a Termination of Employment during the two years following a Change of Control by the Company without Cause or by you for Good Reason, such Replacement Award shall vest in full and be settled within six weeks following your Termination of Employment.

5. **Dividend Equivalents**. You are entitled to receive dividend equivalents on the Restricted Stock Units generally in the same manner and at the same time as if each Restricted Stock Unit were a Share. These dividend equivalents will be credited to you in the form of additional Restricted Stock Units. The additional Restricted Stock Units will be subject to the terms of this Agreement.

6. **Withhold Taxes**. You are responsible to promptly pay any Social Security and Medicare taxes (together, "FICA") due upon vesting of the Restricted Stock Units, and any Federal, State, and local taxes due upon distribution of the Shares. The Company and its Subsidiaries are authorized to deduct from any payment to you any such taxes required to be withheld. As described in Section 15.4 of the Plan and to the extent permissible under applicable law, you may elect to have the Company withhold a portion of the Shares issued upon settlement of the Restricted Stock Units to satisfy all or part of the withholding tax requirements. You may also elect, at the time you vest in the Restricted Stock Units, to pay your FICA liability due with respect to those Restricted Stock Units out of those units. If you choose to do so, the Company will reduce the number of your vested Restricted Stock Units accordingly. The amount that is applied to pay FICA will be subject to Federal, State, and local taxes.

7. **Limitation of Rights**. Except as set forth in the Agreement, until the Shares are issued to you in settlement of your Restricted Stock Units, you do not have any right in, or with respect to, any Shares (including any voting rights) by reason of this Agreement. Further, you may not transfer or assign your rights under the Agreement and you do not have any rights in the Company's assets that are superior to a general, unsecured creditor of the Company by reason of this Agreement.

8. **No Employment Contract**. Nothing contained in the Plan or Agreement creates any right to your continued employment or otherwise affects your status as an employee at will. You hereby acknowledge that the Company and you each have the right to terminate your employment at any time for any reason or for no reason at all.

9. **Amendment to Agreement Under Section 409A of the Code**. You acknowledge that the Agreement and the Plan are intended to be exempt from Section 409A of the Code, and that changes may need to be made to the Agreement to avoid adverse tax consequences under Section 409A of the Code. You agree that following the issuance of such rules, the Company may amend this Agreement as it deems necessary or desirable to avoid such adverse tax consequences; provided, however, that the Company shall accomplish such amendments in a manner that preserves your intended benefits under the Agreement to the greatest extent possible.

10. **Governing Law, Venue and Personal Jurisdiction**. Notwithstanding anything contrary in the Plan, the validity, enforceability, construction and interpretation of the Plan or Agreement shall be governed by the laws of the State of Minnesota. You irrevocably waive any right to have the laws of any state or nation or other legal jurisdiction other than the State of Minnesota apply to the Plan or Agreement. Any dispute regarding the Plan or Agreement shall be exclusively decided by a state court in the State of Minnesota, and you irrevocably waive any right to have any such disputes decided in any jurisdiction or venue other than a state court in the State of

Minnesota. You irrevocably consent to the personal jurisdiction of the state courts in the State of Minnesota for the purposes of any action arising out of or related to the Plan or Agreement, and irrevocably waive any right to remove any case commenced by Medtronic from a state court in the State of Minnesota to any federal court.

11. **Agreement**. You agree to be bound by the terms and conditions of this Agreement and the Plan. Your signature is not required in order to make this Agreement effective. You are deemed to consent to the application of all of the terms and conditions set forth in this Agreement and the Plan unless you contact HROC-Stock Administration at the address set forth below in writing within thirty (30) days of receiving the grant package. Receipt by the Company of your non-consent will nullify this award unless otherwise agreed to in writing by you and the Company.

Medtronic Stock Administration
Medtronic plc
c/o Medtronic, Inc.
800 53rd Ave NE #SLK32
Minneapolis, MN 55432

askhr@medtronic.com
888-422-1500

Exhibit 10.70

MEDTRONIC plc

NON-QUALIFIED STOCK OPTION AGREEMENT
AMENDED AND RESTATED 2013 STOCK AWARD AND INCENTIVE PLAN

Name:

Employee ID:

Client Grant ID:

Grant Date:

Grant Price:

Grant Type:

Shares Awarded:

Expiration Date:

1. **The Option**. Medtronic plc, an Irish public limited company (the "Company"), hereby grants to you, the individual named above, as of the above Grant Date, an option (the "Option") to purchase the above number of ordinary shares of the Company, par value $0.0001 per share (the "Common Stock"), for the above Option Price Per Share, on the terms and conditions set forth in this Non-Qualified Stock Option Agreement (this "Agreement") and in the Medtronic plc Amended and Restated 2013 Stock Award and Incentive Plan (the "Plan"). In the event of any inconsistency between the terms of the Agreement and the Plan, the terms of the Plan shall govern. Capitalized terms not defined in this Agreement shall have the meanings ascribed to them in the Plan.

2. **Exercise of Option**. The exercise of the Option is subject to the following conditions and restrictions:

    a. Expiration. Upon vesting of a portion of the Option, such portion may be exercised in whole or in part until the earlier of (i) the above Expiration Date, or (ii) the expiration of the applicable period following your Termination of Employment, as provided in Sections 2(c), (d) or (e) below.

    b. Schedule of Exercisability. The Option shall become vested and exercisable to the extent of 25% of the above number of shares of Common Stock on each of the first, second, third and fourth anniversaries of the Grant Date, provided that you have not incurred a Termination of Employment prior to each such date. Once a portion of the Option has become exercisable, that portion may be exercised at any time thereafter, subject to the provisions of Section 2(a) above.

    c. Death. In the event of your death, the Option shall continue to vest and become exercisable in accordance with the schedule of exercisability in Section 2(b) above , and once a portion of the Option becomes exercisable, the vested portion

of the Option may be exercised by your Successor (as defined below) at any time, or from time to time, within five years after the date of your death, subject to Section 2(g) below. For purposes of this Agreement, the term "Successor" shall mean the legal representative of your estate or the person or persons who may, by bequest, inheritance or valid beneficiary designation (as provided in Section 15.7 of the Plan), acquire the right to exercise the Option

d. Disability or Retirement. In the event of your Disability or Retirement (as each such term is defined below), the Option shall continue to vest and become exercisable in accordance with the schedule of exercisability in Section 2(b) above , and once a portion of the Option becomes exercisable, you may exercise the vested portion of your Option at any time, or from time to time, within five years after the date of Retirement or determination of Disability, subject to Section 2(g) below. For purposes of this Agreement, the terms "Disability" and "Retirement" shall have the meanings ascribed to those terms under any retirement plan of the Company which is qualified under Section 401 of the Code (which currently provides for retirement on or after age 55, provided you have been employed by the Company and/or one or more Affiliates for at least ten years, or retirement on or after age 62), or under any disability or retirement plan of the Company or any Affiliate applicable to you due to employment by a non-U.S. Affiliate or employment in a non-U.S. location, or as otherwise determined by the Committee.

e. Termination for Any Other Reason. In the event you incur a Termination of Employment for any reason other than those specified in Sections 2(c) and 2(d), any unvested portion of the Option will terminate as of 11:00 p.m. CT (midnight ET) on the date of your Termination of Employment. You may exercise that portion of the Option that was vested but unexercised as of the date of your Termination of Employment for ninety (90) days following the date of your Termination of Employment, subject to Section 2(g) below. At 11:00 p.m. CT (midnight ET) on the date that is 90 days after the date of your Termination of Employment, the Option will expire.

f. Change of Control. Notwithstanding any other provision of this Agreement, the Option shall be subject to the provisions of Section 10.1 of the Plan.

g. Expiration of Term. Notwithstanding the foregoing paragraphs (a)−(f), in no event shall the Option be exercisable after the Expiration Date.

3. **Manner of Exercise**. To exercise your Option, you must deliver notice of exercise (the "Notice") to the administrator (the "Administrator") designated by the Company to provide services relating to the administration of the Plan at the time of your exercise. The Notice must be given in the manner specified by the Administrator and must specify the number of shares of Common Stock (the "Shares") as to which the Option is being exercised and must be accompanied by payment of the purchase price for the Shares. Payment of the purchase price may be in cash or by check. To the extent permissible under applicable law, payment of the purchase price may also be made by instructing the Company to withhold a number of Shares having a Fair Market Value (based on the Fair Market Value of the Common Stock on the date the applicable Option is exercised) equal to the product of (i) the exercise price multiplied by (ii) the number of Shares in respect of which the Option shall have been exercised.

Exercise shall be deemed to occur on the earlier of (i) the date the Notice and the purchase price for the Shares as to which the Option is being exercised are received by the Administrator and (ii) the date you simultaneously exercise the Option and sell the Shares, using the proceeds from such sale to pay the purchase price.

4. **Withhold Taxes**. You are responsible for payment of any federal, state, local or other taxes which must be withheld upon the exercise of the Option, and you must promptly pay to the Company any such taxes. The Company and its subsidiaries are authorized to deduct from any payment owed to you any taxes required to be withheld with respect to the Shares, including social security and Medicare (FICA) taxes and federal, state and local income tax with respect to income arising from the exercise of the Option. The Company shall have the right to require the payment of any such taxes before issuing any Shares pursuant to an exercise of the Option. In lieu of all or any part of a cash payment, to the extent permissible under applicable law, you may elect to have a portion of the Shares otherwise issuable upon exercise of the Option withheld by the Company to satisfy all or part of the withholding tax requirements relating to the Option exercise with such Shares valued in the same manner as used in computing such withholding taxes. Any fractional Share amount due relating to such tax withholding will be rounded up to the nearest whole Share and the additional amount will be added to your federal withholding.

5. **Forfeitures**. If you have received or been entitled to receive payment in cash, delivery of Common Stock or a combination thereof pursuant to this Agreement within the period beginning six months prior to the date of your Termination of Employment and ending twelve months following the date of your Termination of Employment, the Company, in its sole discretion, may require you to return or forfeit the cash and/or Common Stock received or receivable with respect to this Option (or its economic value as of the date of the exercise of the Option), in the event that you engage in any of the following activities:

    a. performing services for or on behalf of any competitor of, or competing with, the Company or any Affiliate, within six months of the date of your Termination of Employment;

    b. unauthorized disclosure of material proprietary information of the Company or any Affiliate;

    c. a violation of applicable business ethics policies or business policies of the Company or any Affiliate; or

    d. any other occurrence determined by the Committee.

    The Company's right to require forfeiture must be exercised not later than 90 days after the Company acquires actual knowledge of such an activity, but in no event later than twelve months after your Termination of Employment. Such right shall be deemed to be exercised upon the Company's mailing written notice of such exercise to your most recent home address as shown on the personnel records of the Company. In addition to requiring forfeiture as described herein, the Company may exercise its rights under this Section 5 by preventing or terminating the exercise of any rights under this Option or the acquisition of Shares or cash thereunder.

    If you fail or refuse to forfeit the cash and/or Shares demanded by the Company (the number of such shares of Common Stock as may be adjusted for any events described in

Section 3.4 of the Plan), you shall be liable to the Company for damages equal to the number of Shares demanded times the highest closing price per share of the Common Stock during the period between the date of your Termination of Employment and the date of any judgment or award to the Company, together with all costs and attorneys' fees incurred by the Company to enforce this provision.

For purposes of this Section 5, forfeiture of Common Stock shall be effected by the redemption of such Common Stock in accordance with the Articles of Association of the Company and to the extent permissible under applicable law.

Notwithstanding the foregoing, this Section 5 shall have no application following a Change of Control, nor shall the Company's Incentive Compensation Forfeiture Policy apply following a Change of Control to this Option or to any proceeds in respect of this Option.

6. **Conversion to Stock Settled Appreciation Rights**. At any time following the Grant Date, the Company may convert this Option to a stock-settled Stock Appreciation Right. Upon exercise of a stock-settled Stock Appreciation Right, you shall receive shares of Common Stock with a value equal to the excess of (1) the Fair Market Value of the Shares on the date of exercise over (2) the Option Price Per Share multiplied by the number of Shares.

7. **Governing Law, Venue and Personal Jurisdiction**. Notwithstanding anything contrary in the Plan, the validity, enforceability, construction and interpretation of the Plan or Agreement shall be governed by the laws of the State of Minnesota. You irrevocably waive any right to have the laws of any state or nation or other legal jurisdiction other than the State of Minnesota apply to the Plan or Agreement. Any dispute regarding the Plan or Agreement shall be exclusively decided by a state court in the State of Minnesota, and you irrevocably waive any right to have any such disputes decided in any jurisdiction or venue other than a state court in the State of Minnesota. You irrevocably consent to the personal jurisdiction of the state courts in the State of Minnesota for the purposes of any action arising out of or related to the Plan or Agreement, and irrevocably waive any right to remove any case commenced by Medtronic from a state court in the State of Minnesota to any federal court.

8. **Agreement**. Your receipt of the Option and this Agreement constitutes your agreement to be bound by the terms and conditions of this Agreement and the Plan.

Medtronic Stock Administration
Medtronic plc
c/o Medtronic, Inc.
800 53rd Ave NE #SLK32
Minneapolis, MN 55432
askhr@medtronic.com
888-422-1500

Exhibit 21

Medtronic plc and Subsidiaries
At April 24, 2020

Company	Jurisdiction of Formation
2074417 Alberta ULC	Canada
A&E Hangers Taiwan Co., Ltd.	Taiwan
A&E Products (Far East) Limited	Hong Kong
A&E Products de Honduras S.A.	Honduras
A&E Products do Brasil Ltda.	Brazil
A&E Products Group, Inc.	Delaware
Ablation Frontiers L.L.C.	Delaware
Accucomp (Pty.) Ltd.	South Africa
Advanced Absorbent Products Holdings Limited	United Kingdom
Advanced Medical Technologies GmbH	Germany
Advanced Uro-Solutions, L.L.C.	Tennessee
AI Biomed Corp	California
Aircraft Medical Ltd.	United Kingdom
Airox	France
Airox, Inc.	Delaware
Arterial Vascular Engineering Canada, Company	Canada
Arterial Vascular Engineering UK Limited	United Kingdom
ATS Acquisition Corp.	Minnesota
AV Medical Technologies, Inc.	Delaware
AV Medical Technologies Ltd.	Israel
Auto Suture do Brasil Ltda.	Brazil
Auto Suture Holdings Pty Ltd	Australia
Auto Suture Puerto Rico, Inc.	Connecticut
Batts LLC	Delaware
Batts, Inc.	Delaware
Beacon Endoscopic LLC	Delaware
Beijing Libeier Bio-engineering Institute Co., Ltd.	China
Bellco Do Brasil	Brazil
Bellco Hoxen Medical (Hong Kong) Co. Limited	Hong Kong
Bellco Hoxen Medical (Shanghai) Co. Ltd.	China
Bellco S.r.l.	Italy
Between Investeringsgroep B.V.	Netherlands
Biostar Biomedikal Mühendislik Anonim Sirketi	Turkey
Boryung Bellco Korea Ltd.	South Korea
Bo Yao (Shanghai) Medical Device Co. Ltd.	China
CardioInsight Technologies Inc.	Delaware
Carlisle Philippines, Inc.	Philippines
Carmel Biosensors Ltd.	Israel
CCI Istanbul Teknolojik Hizmetler Limited Sirketi	Turkey
CDK U.K. Limited	United Kingdom
Changzhou InnoPedics Medical Device Co., Ltd	China
Changzhou Kangdi Medical Stapler Co., Ltd.	China

Changzhou Kanghui Medical Innovation Co., Ltd.	China
CircuLite GmbH	Germany
CircuLite, Inc.	Delaware
Clearum GmbH	Germany
Comercial Kendall (Chile) Limitada	Chile
Corventis Pte. Ltd.	Singapore
Covidien (CH) Holdings AG	Switzerland
Covidien (China) Medical Devices Technology Co., Ltd.	China
Covidien (CH) Holding AG	Switzerland
Covidien (Gibraltar) Limited	Gibraltar
Covidien (HKSAR) Co., Limited	Hong Kong
Covidien (Shanghai) Management Consulting Co., Ltd.	China
Covidien (UK) Commercial Limited	United Kingdom
Covidien (UK) Manufacturing Limited	United Kingdom
Covidien Adhesives Italia Srl	Italy
Covidien AG	Switzerland
Covidien Argentina S.A.	Argentina
Covidien Asia Investments Limited	Mauritius
Covidien Australia Pty Ltd	Australia
Covidien Canada Holdings LLC	Delaware
Covidien Caribbean, Inc.	Delaware
Covidien Delaware VI Corp.	Delaware
Covidien Deutschland GmbH	Germany
Covidien Eurasia LLC	Russia
Covidien France Holdings, Inc.	Connecticut
Covidien Group Holdings Limited	Bermuda
Covidien Group S.a.r.l.	Luxembourg
Covidien Healthcare Holding UK Limited	United Kingdom
Covidien Healthcare International Trading (Shanghai) Co., Ltd.	China
Covidien Holding Inc.	Massachusetts
Covidien Holdings International Corporation	Delaware
Covidien Holdings Ireland Limited	Ireland
Covidien Holdings S.a.r.l.	Luxembourg
Covidien Hong Kong No.2 Limited	Hong Kong
Covidien International (US) Holdings A, LLC	Delaware
Covidien International Finance S.A.	Luxembourg
Covidien International S.a.r.l.	Luxembourg
Covidien Israel Holdings Ltd	Israel
Covidien Israel Investments Ltd	Israel
Covidien Israel Surgical Research Ltd	Israel
Covidien Japan, Inc.	Japan
Covidien Limited	Ireland
Covidien llc	Delaware
Covidien Logistics BVBA	Belgium
Covidien LP	Delaware
Covidien Manufacturing Grenoble	France
Covidien Medical Products (Shanghai) Manufacturing L.L.C.	China
Covidien Peru S.A.	Peru
Covidien Philippines, Inc.	Philippines

Covidien Private Limited	Singapore
Covidien Pty Limited	Australia
Covidien Sales LLC	Delaware
Covidien Services Europe Limited	Ireland
Covidien Sigma Limited	Bermuda
Covidien Swiss Holding GmbH	Switzerland
Covidien Trevoux	France
Covidien UK Holding Ltd	United Kingdom
Covidien UK Limited	United Kingdom
Covidien Uruguay S.A.	Uruguay
Covidien US Holdings, Inc.	Delaware
Covidien Ventures Ltd.	Bermuda
Crospon Limited	Ireland
Davis & Geck Caribe Limited	Cayman Islands
Diabeter Nederland B.V.	Netherlands
Digital Surgery Limited	United Kingdom
Epix Therapeutics, Inc.	Delaware
ev3 Australia Pty Limited	Australia
Ev3, Inc.	Delaware
First Lafayette Holdings LLC	Delaware
Flip Technologies Limited	Ireland
Floreane Medical Implants	France
GC Holdings, Inc.	Delaware
Georgia Packaging, LLC	Delaware
Given Imaging (Asia) Company Limited	Hong Kong
Given Imaging (Los Angeles) LLC	California
Given Imaging B.V.	Netherlands
Given Imaging do Brazil Ltda.	Brazil
Given Imaging Ltd.	Israel
Given Imaging Pty Limited	Australia
Given Imaging Vietnam Co., Ltd.	Vietnam
Given Imaging, Inc.	Delaware
Graphic Controls (Barbados), Ltd.	Barbados
Haemopharm Biofluids S.r.l.	Italy
HeartWare International, Inc.	Delaware
HeartWare, Inc.	Delaware
HET Systems, LLC	Delaware
IHS LLC	Russia
IHS Argentina SA	Argentina
IHS Health Services Egypt LLC	Egypt
IHS Health Services Pakistan (Private) Limited	Pakistan
IHS Health Services Lebanon Sarl	Lebanon
IHS Managed Services SAS	Colombia
IHS Saglik Hizmetleri Ltd STI	Turkey
Inbrand Holdings Limited	United Kingdom
Inbrand Limited	United Kingdom
Inbrand UK Limited	United Kingdom
India Medtronic Private Limited	India
Integrated Health Solutions Chile S.A.	Chile

Integrated Health Solutions International Sàrl	Switzerland
Integrated Health Solutions Pty Ltd	Australia
Invatec S.p.A.	Italy
Invatec Technology Center GmbH	Switzerland
Kendall Company of South Africa (Pty) Limited, The	South Africa
Kendall de Mexico, S.A. de C.V.	Mexico
Kendall de Venezuela, C.A.	Venezuela
Kendall Innovadores en Cuidados al Paciente S.A.	Costa Rica
Kendall Ludlow Holding Corporation	Delaware
Kendall SAS	France
Kendall, S.A. (Panama)	Panama
KMS Colon, Panama, S.A.	Panama
KMS Montevideo, Uruguay, S.A.	Uruguay
Klue, Inc.	Delaware
Kyphon South Africa (Proprietary) Ltd.	South Africa
La Trevoltiane	France
Laboratoire Soludia SAS	France
Laser Associated Sciences LLC	Delaware
Lazarus Effect LLC	Delaware
Lazarus Effect, Inc.	Delaware
Life Design Systems, Inc.	Wisconsin
M-Smart Electronic Equipment Trading (Shanghai) Co. Ltd.	China
Magnolia Medical, LLC	Delaware
Makani II Unlimited Company	Ireland
Mallinckrodt DAR Srl	Italy
Mallinckrodt Holdings B.V.	Netherlands
Mallinckrodt Holdings, LLC	Delaware
Mallinckrodt Medical S.A.	Spain
Mallinckrodt Medical Unlimited Company	Ireland
Mallinckrodt US LLC	Delaware
Mazor Robotics Ltd.	Israel
MDT Turkey Finansal Danışmanlık Limited Şirketi	Turkey
Medtronic Medikal Teknoloji Ticaret Limited Sirketi Gebze Subesi	Turkey
Medefield Pty Limited	Australia
Medical Education Y. K.	Japan
Medical Medtronic Nigeria Limited	Nigeria
Medina Medical LLC	Delaware
Medina Medical, Inc.	Delaware
Medinse S de R.L. de C.V.	Mexico
Medtronic – Sequoia (Cayman) Innovation Investment Management Partners, Ltd	Cayman Islands
Medtronic (Africa) (Proprietary) Limited	South Africa
Medtronic (Chengdu) Management Consulting Co., Ltd.	China
Medtronic (Schweiz) A.G. (Medtronic (Suisse) S.A.)	Switzerland
Medtronic (Shanghai) Ltd.	China
Medtronic (Shanghai) Management Co. Ltd.	China
Medtronic (Taiwan) Ltd.	Taiwan
Medtronic (Thailand) Limited	Thailand
Medtronic 3F Therapeutics, Inc.	Delaware
Medtronic Ablation Frontiers LLC	Delaware

Medtronic Ablation Reorganization LLC	Delaware
Medtronic Adriatic d.o.o.	Croatia
Medtronic Advanced Energy Acquisition LLC	Delaware
Medtronic Advanced Energy LLC	Delaware
Medtronic Advanced Energy Luxembourg S.a.r.l.	Luxembourg
Medtronic AF Acquisition LLC	Delaware
Medtronic AF Luxembourg S.a r.l.	Luxembourg
Medtronic AG	Switzerland
Medtronic Aktiebolag	Sweden
Medtronic Angiolink, Inc.	Delaware
Medtronic Ardian Acquisition LLC	Delaware
Medtronic Ardian LLC	Delaware
Medtronic Ardian Luxembourg S.a.r.l.	Luxembourg
Medtronic Asia, Ltd.	Minnesota
Medtronic ATS Medical, Inc.	Minnesota
Medtronic Australasia Pty Ltd	Australia
Medtronic B.V.	Netherlands
Medtronic Bakken Research Center B.V.	Netherlands
Medtronic Bangladesh Pvt. Ltd.	Bangladesh
Medtronic Belgium S.A./N.V.	Belgium
Medtronic Bio-Medicus, Inc.	Minnesota
Medtronic BioPharma B.V.	Netherlands
Medtronic BioPharma Sàrl	Switzerland
Medtronic Braun, Inc.	Colorado
Medtronic Bulgaria EOOD	Bulgaria
Medtronic Canada ULC	Canada
Medtronic Care Management Services, LLC	Minnesota
Medtronic China Kanghui Holdings	Cayman Islands
Medtronic China Venture Fund (Cayman), L.P.	Cayman Islands
Medtronic China, LLC.	Minnesota
Medtronic Colombia S.A.	Colombia
Medtronic Comercial Ltda.	Brazil
Medtronic Communities Foundation	Minnesota
Medtronic CoreValve LLC	Delaware
Medtronic CryoCath LP	Canada
Medtronic CV Luxembourg S.a.r.l.	Luxembourg
Medtronic CV Reorganization, LLC	Delaware
Medtronic CV, LLC	Delaware
Medtronic Czechia s.r.o.	Czech Republic
Medtronic Danmark A/S	Denmark
Medtronic Diabetes (Chengdu) Co., Ltd.	China
Medtronic do Brasil Ltda.	Brazil
Medtronic Dominican Republic S.A.S.	Dominican Republic
Medtronic Dominicana (Manufactura), S.A.	Dominican Republic
Medtronic Egypt LLC	Egypt
Medtronic Empalme S. de R.L. de C.V.	Mexico
Medtronic Engineering and Innovation Center Private Limited	India
Medtronic Europe BVBA/SPRL	Belgium
Medtronic Europe Sàrl	Switzerland

Medtronic Fabrication SAS	France
Medtronic Finance Holdings ULC	Cayman Islands
Medtronic Finance Hungary Kft.	Hungary
Medtronic Finland Oy	Finland
Medtronic France S.A.S.	France
Medtronic G.m.b.H.	Germany
Medtronic Global Health Foundation	Minnesota
Medtronic Global Holdings GP S.à r.l.	Luxembourg
Medtronic Global Holdings S.C.A.	Luxembourg
Medtronic Group Holding, Inc.	Minnesota
Medtronic Hellas Medical Device Commercial S.A.	Greece
Medtronic Holding B.V.	Netherlands
Medtronic Holding Company B.V.	Netherlands
Medtronic Holding Company Sarl	Switzerland
Medtronic Holding Hungary Kft.	Hungary
Medtronic Holding Switzerland G.m.b.H.	Switzerland
Medtronic Holding, Inc.	Minnesota
Medtronic Holdings Sarl	Luxembourg
Medtronic Holdings Unlimited	British Virgin Islands
Medtronic Hong Kong Limited	Hong Kong
Medtronic Hong Kong Medical Limited	Hong Kong
Medtronic Hungaria Kereskedelmi Kft	Hungary
Medtronic Ibérica S.A.	Spain
Medtronic Innovation Center (Israel) Ltd	Israel
Medtronic Integrated Health Solutions LLC	Minnesota
Medtronic International Holding LLC	Minnesota
Medtronic International Investment LLC	Minnesota
Medtronic International Technology, Inc.	Minnesota
Medtronic International Trading Pte. Ltd.	Singapore
Medtronic International Trading Sàrl	Switzerland
Medtronic International Trading, Inc.	Minnesota
Medtronic International, Ltd.	Delaware
Medtronic Interventional Vascular, Inc.	Massachusetts
Medtronic Invatec LLC	Delaware
Medtronic IP Holding International Luxembourg S.a.r.l.	Luxembourg
Medtronic Ireland Limited	Ireland
Medtronic Ireland Manufacturing Unlimited Company	Ireland
Medtronic Irish Finco Unlimited Company	Ireland
Medtronic Italia S.p.A.	Italy
Medtronic Japan Co., Ltd.	Japan
Medtronic Jolife LLC	Delaware
Medtronic Kazakhstan Limited Liability Partnership	Kazakhstan
Medtronic KL Holdings LLC	Minnesota
Medtronic Korea Ltd.	South Korea
Medtronic Lateral, Inc.	Delaware
Medtronic Latin America, Inc.	Minnesota
Medtronic Limited	United Kingdom
Medtronic LLC	Russia
Medtronic Logistics LLC	Minnesota

Medtronic Luxembourg Global Holdings S.à r.l.	Luxembourg
Medtronic Malaysia Sdn. Bhd.	Malaysia
Medtronic Medical CR S de RL	Costa Rica
Medtronic Medical Device (Chengdu) Co., Ltd.	China
Medtronic Medikal Teknoloji Ticaret Limited Sirketi Gebze Subesi	Turkey
Medtronic Mediterranean Offshore SAL	Lebanon
Medtronic META FZ-LLC	United Arab Emirates
Medtronic Mexico S. de R.L. de C.V.	Mexico
Medtronic Micro Motion Sciences, Inc.	Delaware
Medtronic MiniMed, Inc.	Delaware
Medtronic Mlab Management Co., Ltd	China
Medtronic Monitoring, Inc.	Delaware
Medtronic Navigation Israel Ltd.	Israel
Medtronic Navigation, Inc.	Delaware
Medtronic New Zealand Limited	New Zealand
Medtronic Norge AS	Norway
Medtronic Oesterreich G.m.b.H.	Austria
Medtronic Canada ULC	Canada
Medtronic Pacific Trading, Inc.	Minnesota
Medtronic Pakistan (Private) Limited	Pakistan
Medtronic Philippines, Inc.	Philippines
Medtronic Poland Finance Sp.z.o.o.	Poland
Medtronic Poland Sp. z o.o.	Poland
Medtronic Portugal, Lda	Portugal
Medtronic PS Acquisition LLC	Delaware
Medtronic PS Medical, Inc.	California
Medtronic PS Reorganization LLC	Delaware
Medtronic Puerto Rico Operations Co.	Cayman Islands
Medtronic Romania SRL	Romania
Medtronic S. de R.L. de C.V.	Mexico
Medtronic S.A.I.C.	Argentina
Medtronic Saudi Arabia Company	Saudi Arabia
Medtronic Servicios S. de R.L. de C.V.	Mexico
Medtronic SG, LLC	Delaware
Medtronic Shared Services Americas S.A.S.	Colombia
Medtronic Shared Services SRL	Costa Rica
Medtronic Singapore Operations Pte. Ltd.	Singapore
Medtronic Slovakia s.r.o.	Slovakia
Medtronic Sofamor Danek Co., Ltd.	Japan
Medtronic Sofamor Danek Deggendorf GmbH	Germany
Medtronic Sofamor Danek South Africa (Proprietary) Limited	South Africa
Medtronic Sofamor Danek USA, Inc.	Tennessee
Medtronic Sofamor Danek, Inc.	Indiana
Medtronic Srbija d.o.o. Beograd-Novi Beograd	Serbia
Medtronic Sweden Finance AB	Sweden
Medtronic Trading Ltd.	Israel
Medtronic Trading NL BV	Netherlands
Medtronic Ukraine Limited Liability Company	Ukraine
Medtronic Urinary Solutions, Inc.	Ohio

Medtronic USA, Inc.	Minnesota
Medtronic Vascular Galway Unlimited Company	Ireland
Medtronic Vascular Holdings Unlimited Company	Ireland
Medtronic Vascular, Inc.	Delaware
Medtronic Ventor Technologies Ltd.	Israel
Medtronic Vietnam Company Limited	Vietnam
Medtronic VT, LLC	Delaware
Medtronic World Trade Corporation	Minnesota
Medtronic Xomed, Inc.	Delaware
Medtronic Xomed LLC	Delaware
Medtronic, Inc.	Minnesota
Medtronic, trgovina z medicinsko tehnologijo in opremo d.o.o.	Slovenia
Micro Therapeutics, Inc.	Maryland
MiniMed Distribution Corp.	Delaware
MiniMed Pty Ltd	Australia
MMJ, S.A. de C.V.	Mexico
MSCH LLC	Delaware
N.G.C. Medical Srl	Italy
NayaMed International Sàrl	Switzerland
Nederelandse Obesitas Kliniek Zuid B.V.	Netherlands
Nederlandse Obesitas Kliniek B.V.	Netherlands
Nederlandse Obesitas Kliniek West B.V.	Netherlands
Nederlandse Obesitas kliniek Zeeland B.V.	Netherlands
Nellcor Puritan Bennett Ireland Holdings Unlimited Company	Ireland
Nellcor Puritan Bennett Ireland Unlimited Company	Ireland
Nellcor Puritan Bennett LLC	Delaware
Nellcor Puritan Bennett Mexico, S.A. de C.V.	Mexico
New Wave Surgical, LLC	Delaware
Newport Medical Instruments, Inc	Delaware
NGC Medical UK Limited	United Kingdom
Nobles Medical Technology, Inc.	Delaware
Nurtino Health Ltd	Israel
Obesitas International B.V.	Netherlands
Obesitas Nederland B.V.	Netherlands
Old Colony State Insurance Company	Vermont
Oridion Capnography, Inc.	Massachusetts
Oridion Medical 1987 Ltd.	Israel
Oridion Systems Ltd.	Israel
Osteotech, Inc.	Delaware
Panmedica Pty Limited	Australia
Plastics Holding Corporation	Nevada
Polyken Technologies Europe, Inc.	Delaware
Polysuture Industria e Comercio Ltda.	Brazil
PT Medtronic Indonesia	Indonesia
PT. Covidien Indonesia	Indonesia
PTB International LLC	Delaware
Quro Obesity Marketing Management LLC	United Arab Emirates
Raychem Tecnologias, S. de R.L. de C.V.	Mexico
Retail Group de Mexico S.A. de C.V.	Mexico

Reverse Medical LLC	Delaware
RF Surgical Systems LLC	Minnesota
Sanatis GmbH	Germany
Sapheon LLC	California
Setagon, Inc.	Delaware
Shanghai Zhikang Medical Devices Co., Ltd.	China
Sherwood Medical Company I	Delaware
Sherwood Medical Industries Pty Ltd	Australia
Societe De Fabrication de Material Orthopedique En Abrege Sofamor	France
Sofradim Production	France
Sophono GmbH	Germany
Sophono, Inc.	Colorado
SpinalGraft Technologies, LLC	Tennessee
superDimension Ltd.	Israel
superDimension, Inc.	Delaware
Suzhou Medtronic Venture Capital Partnership Enterprise (L.P.)	China
Suzhou Medtronic-Sequoia Innovation Investment Management Co., Ltd.	China
Suzhou Mei Zhong Capital Investment Management Co., Ltd.	China
TGM Medical, Inc.	Delaware
THC Holdings Limited	Thailand
Medtronic Cash Pool LLC	Massachusetts
Titan Spine, Inc.	Delaware
Titan Spine Europe GmbH	Germany
Tissue Science Laboratories Limited	United Kingdom
Touch Surgery, Inc.	Delaware
Touch Surgery (Canada), Inc.	Canada
Trigate (Pty.) Ltd.	South Africa
Twelve Australia Pty Ltd	Australia
Twelve Medical Limited	United Kingdom
Twelve, Inc.	Delaware
U.S.S.C. Puerto Rico (NY), Inc.	New York
U.S.S.C. Puerto Rico, Inc.	Cayman Islands
United States Surgical Corporation	Delaware
USSC Financial Services Inc.	Connecticut
USSC FSC, Inc.	Barbados
USSC Medical GmbH	Germany
Valera Holdings S.a.r.l.	Luxembourg
Valleylab (Australia) Pty. Ltd	Australia
Valleylab Holding Corporation	Delaware
Verdana Holdings Limited	Gibraltar
Visionsense Corp.	Delaware
Visionsense Ltd.	Israel
Visualase, Inc.	Delaware
Vitatron Holding B.V.	Netherlands
Vitatron Medical España, S.A.	Spain
Vitatron Portugal - Comércio e Distribuição de Dispositivos Médicos, Lda	Portugal
VNUS Medical Technologies II, Inc.	Delaware
Warsaw Orthopedic Inc.	Indiana
WEM Equipamentos Electronicos Ltda.	Brazil

World Heart Corporation	Delaware
Zephyr Technology LLC	Delaware
Zorginitiatieven B.V.	Netherlands

Exhibit 22

Senior Notes, Issuers and Guarantors

Registered Senior Notes Issued Under	Issuer	Guarantors
Indenture, dated as of October 22, 2007	Covidien International Finance S.A.	[Covidien Ltd., Covidien plc,] Medtronic plc and Medtronic Global Holdings, S.C.A.
Indenture, dated as of March 12, 2009	Medtronic, Inc.	Medtronic plc and Medtronic Global Holdings, S.C.A.
Indenture, dated as of December 10, 2014	Medtronic, Inc.	Medtronic plc and Medtronic Global Holdings S.C.A.
Senior Indenture, dated as of March 28, 2017	Medtronic Global Holdings S.C.A.	Medtronic plc and Medtronic, Inc.

Exhibit 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-236739) and on Form S-8 (Nos. 333-201737 and 333-221962) of Medtronic plc of our report dated June 19, 2020 relating to the financial statements and financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Minneapolis, Minnesota
June 19, 2020

Exhibit 24

POWER OF ATTORNEY

Each of the undersigned directors of Medtronic Public Limited Company, an Irish public limited company, hereby constitutes and appoints each of BRADLEY E. LERMAN and MARTHA HA, acting individually or jointly, their true and lawful attorneys-in-fact and agents, with full power to act for them and in their name, place and stead, in any and all capacities, to do any and all acts and execute any and all documents which either such attorney and agent may deem necessary or desirable to enable Medtronic Public Limited Company to comply with the Securities Exchange Act of 1934, as amended, and any rules, regulations and requirements of the Securities and Exchange Commission in respect thereof, in connection with the filing with the Commission of Medtronic's Annual Report on Form 10-K for the fiscal year ended April 24, 2020, including specifically, but without limiting the generality of the foregoing, power and authority to sign the names of the undersigned directors to the Form 10-K and to any instruments and documents filed as part of or in connection with the Form 10-K or any amendments thereto; and the undersigned hereby ratify and confirm all actions taken and documents signed by each said attorney and agent as provided herein.

The undersigned have set their hands this 19th day of June, 2020.

/s/ Richard H. Anderson
Richard H. Anderson

/s/ Craig Arnold
Craig Arnold

/s/ Scott C. Donnelly
Scott C. Donnelly

/s/ Andrea Goldsmith, PH.D.
Andrea Goldsmith, PH.D.

/s/ Randall J. Hogan
Randall J. Hogan

/s/ Omar Ishrak
Omar Ishrak

/s/ Michael O. Leavitt
Michael O. Leavitt

/s/ James T. Lenehan
James T. Lenehan

/s/ Geoffrey S. Martha
Geoffrey S. Martha

/s/ Elizabeth G. Nabel, M.D.
Elizabeth G. Nabel, M.D.

/s/ Denise M. O'Leary
Denise M. O'Leary

/s/ Kendall J. Powell
Kendall J. Powell

Exhibit 31.1

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

I, Geoffrey S. Martha, certify that:

1. I have reviewed this Annual Report on Form 10-K of Medtronic Public Limited Company;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

June 19, 2020

/s/ Geoffrey S. Martha

Geoffrey S. Martha

Chief Executive Officer

Exhibit 31.2

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

I, Karen L. Parkhill, certify that:

1. I have reviewed this Annual Report on Form 10-K of Medtronic Public Limited Company;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

June 19, 2020

/s/ Karen L. Parkhill

Karen L. Parkhill
Executive Vice President and
Chief Financial Officer

Exhibit 32.1

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

In connection with this annual report on Form 10-K of Medtronic Public Limited Company for the fiscal year ended April 24, 2020, the undersigned hereby certifies, in his capacity as Chief Executive Officer of Medtronic Public Limited Company, for purposes of 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

June 19, 2020

/s/ Geoffrey S. Martha

Geoffrey S. Martha

Chief Executive Officer

Exhibit 32.2

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

In connection with this annual report on Form 10-K of Medtronic Public Limited Company for the fiscal year ended April 24, 2020, the undersigned hereby certifies, in her capacity as Chief Financial Officer of Medtronic Public Limited Company, for purposes of 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

June 19, 2020

/s/ Karen L. Parkhill

Karen L. Parkhill

Executive Vice President and
Chief Financial Officer