QUALCOMM INC/DE
Form 10-K
November 07, 2018

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-K
(Mark one)

þ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended September 30, 2018
OR

o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to .
Commission File Number 0-19528
QUALCOMM Incorporated
(Exact name of registrant as specified in its charter)

Delaware (State or Other Jurisdiction of Incorporation or Organization)	95-3685934 (I.R.S. Employer Identification No.)
5775 Morehouse Dr. San Diego, California (Address of Principal Executive Offices)	92121-1714 (Zip Code)

(858) 587-1121
(Registrant's telephone number, including area code)
Securities registered pursuant to section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
Common stock, $0.0001 par value	NASDAQ Stock Market

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 x No o
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes o No x
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 xNo o
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes x No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. o
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	x	Accelerated filer	o	Non-accelerated filer (Do not check if a smaller reporting company)	o	Smaller reporting company	o	Emerging growth company	o

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. o
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes o No x

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant at March 25, 2018 (the last business day of the registrant's most recently completed second fiscal quarter) was $79,468,272,443, based upon the closing price of the registrant's common stock on that date as reported on the NASDAQ Global Select Market.
The number of shares outstanding of the registrant's common stock was 1,212,162,586 at November 5, 2018.
DOCUMENTS INCORPORATED BY REFERENCE
Portions of the registrant's Definitive Proxy Statement in connection with the registrant's 2019 Annual Meeting of Stockholders, to be filed with the Commission subsequent to the date hereof pursuant to Regulation 14A, are incorporated by reference into Part III of this Report.

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In this document, the words “Qualcomm,” “we,” “our,” “ours” and “us” refer only to QUALCOMM Incorporated and its subsidiaries and not any other person or entity. This Annual Report (including, but not limited to, the section regarding Management’s Discussion and Analysis of Financial Condition and Results of Operations) contains forward-looking statements regarding our business, investments, financial condition, results of operations and prospects. Words such as “expects,” “anticipates,” “intends,” “plans,” “believes,” “seeks,” “estimates” and similar expressions variations of such words are intended to identify forward-looking statements, but are not the exclusive means of identifying forward-looking statements in this Annual Report. Additionally, statements concerning future matters such as the development of new products, enhancements or technologies, industry and market trends, sales levels, expense levels and other statements regarding matters that are not historical are forward-looking statements, but are not the exclusive means of identifying forward-looking statements in this Annual Report.

Although forward-looking statements in this Annual Report reflect our good faith judgment, such statements can only be based on facts and factors currently known by us. Consequently, forward-looking statements are inherently subject to risks and uncertainties and actual results and outcomes may differ materially from the results and outcomes discussed in or anticipated by the forward-looking statements. Factors that could cause or contribute to such differences in results and outcomes include without limitation those discussed under “Part I, Item 1A. Risk Factors” below, as well as those discussed elsewhere in this Annual Report. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report. We undertake no obligation to revise or update any forward-looking statements in order to reflect any event or circumstance that may arise after the date of this Annual Report. Readers are urged to carefully review and consider the various disclosures made in this Annual Report, which attempt to advise interested parties of the risks and factors that may affect our business, financial condition, results of operations and prospects.

PART I

Item 1. Business

We incorporated in California in 1985 and reincorporated in Delaware in 1991. We operate and report using a 52-53 week fiscal year ending on the last Sunday in September. Our 52-week fiscal years consist of four equal fiscal quarters of 13 weeks each, and our 53-week fiscal years consist of three 13-week fiscal quarters and one 14-week fiscal quarter. The financial results for our 53-week fiscal years and our 14-week fiscal quarters will not be exactly comparable to our 52-week fiscal years and our 13-week fiscal quarters. The fiscal year ended September 30, 2018 included 53 weeks. The fiscal years ended September 24, 2017 and September 25, 2016 included 52 weeks.

Overview

We are a global leader in the development and commercialization of foundational technologies and products used in mobile devices and other wireless products, including network equipment, broadband gateway equipment and consumer electronic devices. Our inventions helped power the growth in smartphones, which have connected billions of people. We are a pioneer in 3G (third generation) and 4G (fourth generation) wireless technologies and are now a leader in 5G (fifth generation) wireless technologies to empower a new era of intelligent, connected devices. Our technologies and products are also used in industry segments and applications beyond mobile, including automotive, IoT (Internet of Things), networking, computing and AI (artificial intelligence), such as machine learning, allowing more devices to connect and communicate with each other in new ways. We derive revenues principally from sales of integrated circuit products and licensing our intellectual property, including patents, software and other rights.

The foundational technologies we invent help power the modern mobile experience, impacting how the world connects, computes and communicates. We share these inventions broadly through our licensing program, ensuring wide ecosystem access to technologies at the core of mobile innovation, and through the sale of our wireless chipset platforms and other products, which accelerates consumer adoption of experiences empowered by these inventions. As a company, we collaborate across the ecosystem, including manufacturers, operators, developers, governments and industry standards organizations, to create a global environment to drive continued progress and growth.

We have a long history of driving innovation. We played a leading role in developing the inventions that serve as the foundation for 3G and 4G wireless technologies, and which serve as the basis for 5G wireless technologies. This includes the CDMA (Code Division Multiple Access) and OFDMA (Orthogonal Frequency Division Multiple Access) families of technologies, with the latter encompassing LTE (Long Term Evolution), which, along with TDMA (Time Division Multiple Access), are the primary digital technologies currently used to transmit a wireless device user’s

voice or data over radio waves using a public cellular wireless network. We own significant intellectual property, including patents, patent applications and trade secrets, applicable to products that implement any version of CDMA and OFDMA. Companies in the mobile communications industry generally recognize that any company seeking to develop, manufacture and/or sell

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subscriber units or infrastructure equipment that use CDMA-based and/or OFDMA-based technologies will require a license or other rights to use our patents.

We also develop and commercialize numerous other key technologies used in handsets and other wireless devices that contribute to end-user demand, and we own substantial intellectual property related to these technologies. Some of these inventions were contributed to and are being commercialized as industry standards, such as certain video and audio codecs, Wi-Fi, GPS (global positioning system) and Bluetooth. Other technologies widely used by wireless devices that we have developed are not related to any industry standards, such as operating systems, user interfaces, graphics and camera processing functionality, RF (radio frequency), RF front-end and antenna design and application processor architectures. Our patents cover a wide range of technologies across the entire wireless system (including wireless devices and infrastructure equipment) and not just what is embodied in chipsets.

We are organized on the basis of products and services and have three reportable segments. We conduct business primarily through our QCT (Qualcomm CDMA Technologies) semiconductor business and our QTL (Qualcomm Technology Licensing) licensing business. QCT develops and supplies integrated circuits (also known as chips or chipsets) and system software based on CDMA, OFDMA and other technologies for use in mobile devices, wireless networks, devices used in IoT, broadband gateway equipment, consumer electronic devices and automotive telematics and infotainment systems. QTL grants licenses to use portions of our intellectual property portfolio, which includes certain patent rights essential to and/or useful in the manufacture and sale of certain wireless products. Our QSI (Qualcomm Strategic Initiatives) reportable segment makes strategic investments. We also have nonreportable segments, including our cyber security solutions (formerly Qualcomm Government Technologies or QGOV), mobile health, small cells and other wireless technology and service initiatives.

Industry Trends

The mobile industry has experienced tremendous growth for more than 20 years, growing from less than 60 million global connections in 1994 (WCIS+, October 2017) to approximately 7.9 billion global connections estimated as of September 30, 2018 (GSMA Intelligence, November 2018). As the largest technology platform in the world, mobile has changed the way we connect, compute and communicate with one another. The scale and pace of innovation in mobile, especially around connectivity and computing capabilities, is also impacting industries beyond wireless, empowering new services, new business models and new experiences. Our inventions and licensing program have been integral to, and provided foundational technologies for, the evolution of the mobile industry.

Extending connectivity. 3G/4G multimode mobile broadband technology has been a key growth driver of mobile, providing users with fast, reliable, always-on connectivity. Estimated as of September 30, 2018, there were approximately 5.5 billion 3G/4G connections globally (CDMA-based, OFDMA-based and CDMA/OFDMA multimode) representing nearly 69% of total mobile connections (GSMA Intelligence, November 2018). By 2022, global 3G/4G connections are projected to reach 7.2 billion, with approximately 87% of these connections coming from emerging regions (including China) (GSMA Intelligence, November 2018).

3G/4G multimode mobile broadband continues to be an important platform for extending the reach and potential of the Internet. In 2010, the number of broadband connections using mobile technology surpassed those using fixed technologies (GSMA Intelligence, November 2018), making mobile networks the primary method of accessing the Internet for many people around the world. This is further amplified in emerging regions, where, as of September 30, 2018, 3G/4G mobile broadband connections are estimated to be approximately seven times the number of fixed Internet household connections (GSMA Intelligence November 2018 and PT June 2018). In China, 3G/4G LTE multimode services have experienced strong adoption since being launched in the fourth quarter of calendar 2013, with more than 1.3 billion connections estimated as of September 30, 2018 (GSMA Intelligence, November 2018). In India, mobile operators continue to expand their 4G multimode services, providing consumers with the benefits of advanced mobile broadband connectivity while creating new opportunities for device manufacturers and other members of the mobile ecosystem. 3G/4G mobile broadband may be the first and, in many cases, the only way that people in these regions access the Internet.

Looking ahead, we expect to continue to be a leader in the next generation of wireless technology, known as 5G. Initial commercial deployments of 5G, which will focus on enhanced mobile broadband services, are expected to begin in calendar 2019. In June 2018, 3GPP (the 3rd Generation Partnership Project), an industry standards development organization, completed the first global specifications for 5G NR (New Radio) (Release 15). The 5G NR

standard is expected to provide a unified connectivity network for all spectrum and service types based on OFDM (Orthogonal Frequency Division Multiplexing) technology, and it is designed to support faster data rates, lower network latency and wider bandwidths of spectrum. 5G NR is expected to enhance mobile broadband services, including ultra-high definition (4K) video streaming and

augmented and virtual reality applications, with multi-gigabit speeds and to bring more capacity, which may enable operators to offer new unlimited mobile data plans.

Incorporating many of the innovations developed for 4G, future generations of 5G (3GPP Release 16 and beyond) are expected to expand 5G NR technologies to new industries beyond traditional cellular communications that will create new business models and new services, such as autonomous vehicles and artificial intelligence-based platforms designed to bring greater autonomy to manufacturing and other industrial applications (known as Industrial IoT), through ultra-reliable, ultra-low latency communication links; and connecting a significant number of "things" (also known as IoT, including the connected home, smart cities, wearables and voice and music devices), with connectivity designed to meet ultra-low power, complexity and cost requirements. We expect these future generations of 5G, which build on the various 3G and 4G features addressing IoT, will further contribute to the trend of enabling cellular connectivity to non-handset categories of devices. By 2025, global 5G connections are projected to reach 1.3 billion worldwide, representing approximately 15% of total cellular connections (GSMA Intelligence, November 2018).

Most 5G devices are expected to include multimode support for 3G, 4G and Wi-Fi, enabling service continuity where 5G has yet to be deployed and simultaneous connectivity across 4G technology, while also allowing mobile operators to utilize current network deployments. At the same time, 4G is expected to continue to evolve in parallel with the development of 5G and become fundamental to many of the key 5G technologies (through multi-connectivity), such as support for unlicensed spectrum, gigabit LTE user data rates and LTE IoT to meet the needs of ultra-low power, complexity and cost applications. The first phase of 5G networks is expected to support mobile broadband services for the smartphone form factor both in lower spectrum bands below 6 GHz as well as higher bands above 6 GHz, including millimeter wave (mmWave). We continue to work closely with mobile operators and infrastructure companies around the world on 5G NR demonstrations and trials in preparation for commercial network launches. We are also enabling 5G commercialization with our 5G modem family compliant with the 3GPP-based 5G NR global system. As with previous generations of mobile networks, it will take time to proliferate new 5G networks. We expect that 4G LTE will continue to grow and serve as the anchor of the 5G mobile experience (through multi-connectivity) for many years to come.

Growth in smartphones. Smartphone adoption continues to expand globally, fueled by fast 3G/4G LTE multimode connectivity, powerful mobile processors, advanced multimedia features and enhanced location awareness capabilities, among others. In 2017, approximately 1.5 billion smartphones shipped globally, which is consistent year-over-year, with cumulative smartphone shipments between 2018 and 2022 projected to reach approximately 7.8 billion (IDC Quarterly Mobile Phone Tracker, 2018Q2). Most of this growth is projected to happen in emerging regions (including China), where smartphones accounted for approximately 70% of total handset shipments in 2017 and are projected to reach approximately 84% in 2022 (IDC Quarterly Mobile Phone Tracker, 2018Q2). Growth in smartphones has not only been driven by the success of premium-tier devices but also by the number of affordable handsets that are available in emerging regions, as well as the variety of flexible and affordable data plans being offered by mobile operators.

Consumer demand for new types of experiences empowered by 3G/4G LTE connectivity, combined with the needs of mobile operators and device manufacturers to provide differentiated features and services, is driving continued innovation within the smartphone. As a result, the smartphone has become the go-to device for social networking, music, gaming, email and web browsing, among others. It is expected that 5G connectivity will drive further innovations within the smartphone and increase consumer demand by offering enhanced connectivity, which in turn will enable new applications. Given its advanced capabilities and utility, the smartphone is replacing many traditional consumer electronics devices, including digital cameras, video cameras, standalone GPS units and music players. We have been a leading contributor to this innovation across multiple technology dimensions, including connectivity, intelligence, camera, audio, video, sensors and security.

Transforming other industries. With their significant scale, rapid development cycles and highly integrated solutions, industries beyond mobile, including automotive, IoT and computing, among others, are leveraging the same technology innovations found in today's leading smartphones to enhance existing products and services as well as to create new products and services. Our inventions that contribute to the formation of advanced cellular technologies, such as 3G/4G and now 5G connectivity, are helping to drive this transformation. 5G is expected to further accelerate this transformation. For example, in the automotive industry, approximately 74% of new vehicles sold are projected to

have cellular connectivity by 2025, representing an increase from 32% in 2017 (Strategy Analytics, October 2018). In addition, the installed base of IoT devices is projected to grow more than 50% between 2018 and 2022 (ABI Research, August 2018).

The proliferation of intelligent, connected things is also enabling new types of user experiences, as smartphones are able to interact with and control more of the objects around us. Through the addition of embedded sensors and computer intelligence, connected things are able to collect and share data, providing users with contextually relevant information and further increasing the device's utility and value.

Wireless Technologies Overview

The growth in the use of wireless devices worldwide and the demand for data services and applications requires continuous innovation to further improve the user experience, support new services, increase network capacity, make use of different frequency bands and allow for dense network deployments. To meet these requirements, different wireless communications technologies continue to evolve. For nearly three decades, we have invested heavily in research and development to drive the evolution of wireless technologies, including CDMA and OFDMA. As a result, we have developed and acquired (and continue to develop and acquire) significant related intellectual property. This intellectual property has been incorporated into the most widely accepted and deployed cellular wireless communications technology standards, and we have licensed it to several hundred licensees, including leading wireless device and infrastructure manufacturers.

Cellular wireless technologies. Relevant cellular wireless technologies can be grouped into the following categories.

TDMA-based. TDMA (Time Division Multiple Access)-based technologies are characterized by their access method allowing several users to share the same frequency channel by dividing the signal into different time slots. Most of these systems are classified as 2G (second generation) technology. The main examples of TDMA-based technologies are GSM (deployed worldwide), IS-136 (deployed in the Americas) and Personal Digital Cellular (PDC) (deployed in Japan).

The transition of wireless devices from 2G to 3G/4G technologies continued around the world with estimated 3G/4G connections up 16% year-over-year (GSMA Intelligence, November 2018). Estimated as of September 30, 2018, there were approximately 2.4 billion GSM connections worldwide, representing approximately 30% of total cellular connections, down from 39% as of September 30, 2017 (GSMA Intelligence, November 2018).

CDMA-based. CDMA-based technologies are characterized by their access method allowing several users to share the same frequency and time by allocating different orthogonal codes to individual users. Most of the CDMA-based technologies are classified as 3G technology.

There are a number of variants of CDMA-based technologies deployed around the world, in particular CDMA2000, EV-DO (Evolution Data Optimized), WCDMA (Wideband CDMA) and TD-SCDMA (Time Division-Synchronous CDMA) (deployed exclusively in China). CDMA-based technologies provide vastly improved capacity for voice and low-rate data services as compared to analog technologies and significant improvements over TDMA-based technologies such as GSM. To date, these technologies have seen many revisions. New specifications continue to be defined by 3GPP.

CDMA technologies ushered in a significant increase in broadband data services that continue to grow globally. According to GSMA Intelligence estimates as of September 30, 2018, there were approximately 2.3 billion CDMA-based connections worldwide, representing approximately 29% of total cellular connections, down year-over-year as consumers migrate to OFDMA-based technologies.

OFDMA-based. OFDMA-based technologies are characterized by their access method allowing several users to share the same frequency band and time by allocating different subcarriers to individual users. Most of the OFDMA-based technologies to be deployed through 2018 are classified as 4G technology. 5G will heavily leverage OFDM-based technologies. We continue to play a significant role in the development of LTE, LTE Advanced and LTE Advanced Pro, which are the predominant 4G technologies currently in use.

LTE is incorporated in 3GPP specifications starting from Release 8 and uses OFDMA in the downlink and single carrier FDMA (SC-FDMA) in the uplink. LTE has two modes, FDD (frequency division duplex) and TDD (time division duplex), to support paired and unpaired spectrum, respectively, and continues to evolve as 3GPP defines new specifications. The principal benefit of LTE is its ability to leverage a wide range of spectrum (bandwidths of up to 20 MHz or more through aggregation). LTE is designed to seamlessly interwork with 3G through 3G/4G multimode devices. Most LTE devices rely on 3G for voice services across the network, as well as for ubiquitous data services outside the LTE coverage area, and on 4G for data services inside the LTE coverage area. LTE's voice solution, VoLTE (voice over LTE), is being commercially deployed in a growing number of networks.

LTE Advanced brings many more enhancements, including carrier aggregation, advanced antenna techniques and optimization for small cells. Apart from improving the performance of existing networks, these releases also bring new enhancements under the umbrella of LTE Advanced Pro to which we have been a significant contributor,

including, LTE Direct for proximity-based device-to-device discovery, cellular vehicle-to-everything (C-V2X) communication, improved LTE broadcast, optimizations of narrowband communications designed for IoT (known as eMTC and NB-IoT) and the ability to use LTE Advanced in unlicensed spectrum (LTE Unlicensed) as well as in emerging shared spectrum bands in various regions (such as the Citizens Broadband Radio Service or CBRS in the United States). There will be multiple options for deploying LTE Unlicensed for different deployment scenarios.

- LTE-U, which relies on an LTE control carrier based on 3GPP Release 12, uses carrier aggregation to combine unlicensed and licensed spectrum in the downlink and has been introduced in early mobile operator deployments in the United States and evolves to Licensed Assisted Access (LAA).
- LAA, introduced as part of 3GPP Release 13, also aggregates unlicensed and licensed spectrum in both up and downlink and is being deployed globally by mobile operators. LAA is a key technology for many operators with limited licensed spectrum to deliver Gigabit LTE speeds.

There also have been ongoing efforts to make the interworking between LTE and Wi-Fi more seamless and completely transparent to the users. Further integration is achieved with LTE Wi-Fi Link Aggregation (LWA), which will utilize existing and new carrier Wi-Fi deployments.

According to GSMA Intelligence estimates as of September 30, 2018, there were approximately 3.2 billion global LTE connections worldwide, representing approximately 40% of total cellular connections.

According to the Global mobile Suppliers Association (GSA), as of October 2018, more than 865 wireless operators have commercially deployed or started testing LTE networks with 715 commercially launched in 208 countries, including 270 networks in 122 countries having commercially launched LTE Advanced networks featuring carrier aggregation (GSA, November 2018).

As we look forward, the wireless industry is actively developing and commercializing 5G technologies. Our inventions that serve as foundational technologies for 3G and 4G now also serve as foundational technologies for 5G. 5G is designed to transform the role of wireless technologies and incorporates advancements on 3G/4G features available today, including device-to-device capabilities and the use of all different types of spectrum (including licensed, unlicensed and shared spectrum). We continue to play a significant role in driving 5G from standardization to commercialization, including contributing to 3GPP standardization activities that are defining 5G NR and Next Generation Core (NGC) standards and their continued evolution.

5G NR is incorporated in 3GPP specifications starting from Release 15, which was completed in June 2018, and will be available in two architectural options: a non-standalone option where a data-only 5G NR link can be added to an existing 4G LTE deployment leveraging the existing 4G LTE core network; and a standalone option where 5G NR is deployed together with the 5G NGC network. The main advantages of 5G NR are its ability to target diverse services with very different technical requirements (from enhanced mobile broadband to massive IoT to mission critical services), its utilization of diverse types of spectrum (from the low bands to millimeter bands) and its ability to support diverse types of deployment scenarios. Predominant technological components of 5G NR include a scalable OFDM-based air interface with scalable OFDM numerology, a flexible slot-based framework with self-contained slot structure to address ultra-reliable, low-latency communication, new channel coding schemes to efficiently support large data blocks, multiple-input multiple-output (MIMO) and mobile millimeter wave to significantly increase the data rate offered to users. Like 3G and 4G LTE, 5G NR will support carrier aggregation across spectrum bands, across FDD and TDD, across licensed and unlicensed spectrum, but 5G NR will also support dual connectivity across LTE and 5G NR. A main benefit of 5G NR is its ability to take advantage of very wide channel bandwidth such as 800/400/100 MHz (to be compared with 4G LTE's 20 MHz maximum bandwidth which require carrier aggregation to combine spectrum beyond 20 MHz). As with previous cellular generations, 5G NR is designed to support seamless compatibility with 2G/3G/4G technologies through multimode devices.

Other (non-cellular) wireless technologies. There are other, non-cellular wireless technologies that have also been broadly adopted.

Wireless Local Area Networks. Wireless local area networks (WLAN), such as Wi-Fi, link two or more nearby devices wirelessly and usually provide connectivity through an access point. Wi-Fi systems are based on standards developed by the Institute of Electrical and Electronics Engineers (IEEE) in the 802.11 family of standards. 802.11ax, the latest standard, adds advanced features such as downlink and uplink OFDMA and uplink multiple-user MIMO to the 802.11 baseline standard. This technology primarily targets broadband connectivity for mobile devices, tablets, laptops and other consumer electronics devices using 2.4 GHz and 5 GHz spectrum. For 60GHz mmWave technology, 802.11ay adds wider channel bandwidth and the use of MIMO to the existing 802.11ad (also known as Gigabit Wi-Fi or WiGig) standard. 802.11ah was finalized in early 2017 and targets sub-1 GHz spectrum and is expected to be a solution for "connected home" applications that require long battery life. We played a leading role in the development of 802.11ac, 802.11ax, 802.11ay, 802.11ah, 802.11ad and 802.11p, and we are actively involved in innovative programs

developed in the context of the Wi-Fi Alliance.

Bluetooth. Bluetooth is a wireless personal area network that provides wireless connectivity between devices over short distances ranging from a few centimeters to a few hundred meters. Bluetooth technology provides wireless connectivity to a wide range of fixed or mobile consumer electronics devices. Bluetooth functionalities are standardized by the Bluetooth Special Interest Group in various versions of the specification (from 1.0 to 5.0), which include different functionalities, such

as enhanced data rate, low energy and mesh technologies. We are a leading contributor to Bluetooth technologies in the areas of mobile devices, HID (human interface device), A/V (audio/video) and mesh technologies.

Location Positioning Technologies. Location positioning technologies have evolved rapidly in the industry over the past few years in order to deliver an enhanced commercial location experience and comply with the new mandates on location for E911 calls from the United States Federal Communications Commission. We are a key developer of the Assisted-GPS (A-GPS), Assisted Global Navigation Satellite System (A-GNSS) and WLAN positioning technologies used in most cellular handsets today. For uses requiring the best reliability and accuracy for E911 services and navigational based services, A-GPS, A-GNSS and WLAN provide leading-edge solutions.

The industry continues to evolve to support additional inputs for improving the location experience. Our products and intellectual property now support multiple constellations for A-GNSS, including: GPS, GLONASS, Galileo and BeiDou; Wi-Fi-based and Bluetooth-based positioning for WLAN, including, Wi-Fi RSSI (received signal strength indication) and Wi-Fi RTT (round-trip time) signals for indoor location; observed time difference of arrival positioning for LTE access (e.g. in rural and indoor areas); and third-party inertial sensors. The combination of these different location solutions is used to ensure accurate location availability in all areas.

Other Significant Technologies used in Cellular and Certain Consumer Electronic Devices and Networks

We have played a leading role in developing and/or acquired many of the other technologies used across the wireless system, such as cellular and certain consumer electronic devices (and not just what is embodied in the chipsets) and networks, including:

- graphics and display processing functionality;
- video coding based on the HEVC (high efficiency video codec) standard, which is being deployed to support 4K video and immersive media content;
- audio coding, including EVS (enhanced voice services) and MPEG-H 3D Audio;
- the latest version of 3GPP’s codec for multimedia use and for voice/speech use;
- multimedia transport, including MPEG-DASH (Dynamic Adaptive Streaming over HTTP) enabling advanced multimedia experiences;
- camera and camcorder functions;
- operating system and user interface features;
- machine learning platforms;
- augmented reality (AR) and virtual reality (VR) features enabling new types of user experiences;
- security and content protection systems for enhanced device security without compromising the user experience;
- volatile (LP-DDR2, 3, 4) and non-volatile (eMMC) memory and related controllers;
- power management systems for improved battery life and device charging; and
- RFFE (radio frequency front-end) system products for improved signal performance and reduced power consumption, while simplifying the design for manufacturers to develop LTE multimode, multiband devices.

Acquisitions

NXP Semiconductors N.V. On October 27, 2016, we announced a definitive agreement (as amended on February 20, 2018 and April 19, 2018, the Purchase Agreement) under which Qualcomm River Holdings, B.V. (Qualcomm River Holdings), an indirect, wholly owned subsidiary of QUALCOMM Incorporated, proposed to acquire NXP Semiconductors N.V. (NXP). Pursuant to the Purchase Agreement, Qualcomm River Holdings commenced a tender offer to acquire all of the issued and outstanding common shares of NXP. On July 26, 2018, we terminated the Purchase Agreement and paid NXP a termination fee of $2.0 billion in cash in accordance with the terms of the Purchase Agreement.

RF360 Holdings. On February 3, 2017, we completed the formation of a joint venture with TDK Corporation (TDK), under the name RF360 Holdings Singapore Pte. Ltd. (RF360 Holdings), to enable delivery of radio frequency front-end (RFFE) modules and radio frequency (RF) filters into fully integrated products for mobile devices and Internet of Things (IoT) applications, among others. The joint venture is owned 51% by Qualcomm Global Trading Pte. Ltd. (Qualcomm Global Trading), a Singapore corporation and wholly-owned subsidiary of ours, and 49% by EPCOS AG (EPCOS), a German wholly-owned subsidiary of TDK. Certain intellectual property, patents and filter and module design and manufacturing assets were carved out of existing TDK businesses and are owned by the joint venture, and certain assets were acquired directly by affiliates of ours. Qualcomm Global Trading has the option to

acquire (and EPCOS has an option to sell)

EPCOS's interest in the joint venture for $1.15 billion in August 2019. The total purchase price was $3.1 billion. RF360 Holdings, which is included in our QCT segment, is a Singapore corporation with research and development and manufacturing and/or sales locations in the United States, Europe and Asia and its headquarters in Munich, Germany.

Operating Segments

We have three reportable segments. We conduct business primarily through QCT (Qualcomm CDMA Technologies) and QTL (Qualcomm Technology Licensing), while QSI (Qualcomm Strategic Initiatives) makes strategic investments. Revenues in fiscal 2018, 2017 and 2016 for our reportable segments were as follows (in millions, except percentage data):

	2018	2017	2016
QCT	$17,282	$16,479	$15,409
As a percent of total	76 %	74 %	65 %
QTL	$5,163	$6,445	$7,664
As a percent of total	23 %	29 %	33 %
QSI	$100	$113	$47
As a percent of total	—	1 %	—

QCT Segment. QCT is a leading developer and supplier of integrated circuits and system software based on CDMA, OFDMA and other technologies for use in wireless voice and data communications, networking, application processing, multimedia and global positioning system products. QCT's integrated circuit products are sold and its system software is licensed to manufacturers that use our products in mobile devices, tablets, laptops, data modules, handheld wireless computers and gaming devices, access points and routers, broadband gateway equipment, data cards and infrastructure equipment, other consumer electronics and automotive telematics and infotainment systems.

Our Mobile Station Modem (MSM) integrated circuits, which include the Mobile Data Modem, Qualcomm® Single Chip and Qualcomm® Snapdragon™ mobile platforms and processors and LTE modems, perform the core baseband modem functionality in wireless devices providing voice and data communications, as well as multimedia applications and global positioning functions. In addition, our Snapdragon mobile platforms and processors provide advanced application, graphics and AI processing capabilities. Because of our experience in designing and developing CDMA- and OFDMA-based products, we design both the baseband integrated circuit and the supporting system, including the RF (Radio Frequency), PM (Power Management) and wireless connectivity (such as Wi-Fi and Bluetooth) integrated circuits. This approach enables us to optimize the performance of the wireless device with improved product features and integration with the network system. QCT's system software helps enable the other device components to interface with the integrated circuit products and is the foundation software enabling manufacturers to develop devices utilizing the functionality within the integrated circuits. We also provide support, including reference designs and tools, to assist our customers in reducing the time required to design their products and bring their products to market.

QCT offers a broad portfolio of products, including both wireless device and infrastructure integrated circuits, in support of CDMA- and OFDMA-based technologies. Our integrated circuit products are included in a broad range of devices, from low-tier, entry-level devices for emerging regions (including China), which may use our Qualcomm Reference Design (QRD) products, to premium-tier devices. In fiscal 2018, QCT shipped approximately 855 million MSM™ integrated circuits for wireless devices worldwide, compared to approximately 804 million and 842 million in fiscal 2017 and 2016, respectively.

Our modems are built to work with increasingly complex networks. They support the latest communication technologies and adapt to network conditions and user needs in real time to enable delivery of faster, smoother data and voice connections. Our 3G/4G modem roadmap delivers the latest network technologies across multiple product tiers and devices. This roadmap is the result of our years of research into emerging network standards and the development of chipsets that take advantage of these new standards, while maintaining backward compatibility with existing standards.

Each Snapdragon mobile platform and processor is a highly integrated, mobile optimized system on a chip incorporating our advanced technologies, including a Snapdragon modem for fast, reliable mobile broadband connectivity, a high performance central processing unit (CPU), digital signal processor (DSP), graphics processing unit (GPU), image signal processor, multimedia subsystems, including high fidelity audio, high-definition video and

advanced imaging capabilities, our mobile security technology, and accurate location positioning engines. Our CPU cores are designed to deliver high levels of compute performance at low power, allowing manufacturers to design powerful, slim and power-efficient devices. Our Qualcomm® Adreno™ GPUs are also designed to deliver high quality graphics performance for visually rich 3D gaming and user interfaces. The heterogeneous compute architecture of our Snapdragon mobile platforms and processors is designed to

help ensure that the CPU, DSP and GPU work efficiently together, each being utilized only when needed, which enhances the processing capacity, speed and efficiency of our Snapdragon mobile platforms and processors and the battery life of devices using our platforms and processors.

Our portfolio of RF products includes QFE (Qualcomm Front End) radio frequency front-end (RFFE) components that are designed to simplify the RF design for LTE multimode, multiband mobile devices, reduce power consumption and improve radio performance. Through our RF360 Holdings joint venture, QCT offers an expanded portfolio of RFFE products for mobile devices, infrastructure, automotive and IoT applications. Our technologies provide comprehensive RFFE product offerings with system level performance from the modem and transceiver to the antenna tuner that include power tracking, tuning systems, switching, multimode-multiband power amplification, low noise amplifiers, complex transmit and receive modules, in addition to discrete filtering applications across cellular, infrastructure and automotive markets.

Our wireless products also consist of integrated circuits and system software for Wi-Fi, Bluetooth, Bluetooth Smart, frequency modulation (FM) and near field communications (NFC), as well as technologies that support location data and services, including GPS, GLONASS, BeiDou and Galileo. Our Wi-Fi, Bluetooth and FM products have been integrated with the Snapdragon mobile platforms and processors to provide additional connectivity for mobile devices, tablets, laptops, consumer electronics and automotive telematics and infotainment systems. QCT also offers standalone Wi-Fi, Bluetooth, Bluetooth Smart, applications processor and Ethernet products for mobile devices, consumer electronics, computers, IoT applications, other connected devices and automotive telematics and infotainment systems. Our networking products include Wi-Fi, Ethernet and Powerline chips, network processors and software. These products help enable home and business networks to support the growing number of connected devices, digital media, data services and other smart home applications.

QCT primarily utilizes a fabless production model, which means that we do not own or operate foundries for the production of silicon wafers from which our integrated circuits are made. Integrated circuits are die cut from silicon wafers that have completed the package assembly and test manufacturing processes. The semiconductor package supports the electrical contacts that connect the integrated circuit to a circuit board. Die cut from silicon wafers are the essential components of all of our integrated circuits and a significant portion of the total integrated circuit cost. We employ both turnkey and two-stage manufacturing models to purchase our integrated circuits. Under the turnkey model, our foundry suppliers are responsible for delivering fully assembled and tested integrated circuits. Under the two-stage manufacturing model, we purchase die in singular or wafer form from semiconductor manufacturing foundries and contract with separate third-party suppliers for manufacturing services such as wafer bump, probe, assembly and the majority of our final test requirements. RF360 Holdings uses certain internal fabrication facilities to manufacture RFFE modules and RF filter acoustic products, and its manufacturing operations consist of front-end and back-end processes. The front-end processes primarily take place at manufacturing facilities located in Germany and Singapore and involve the imprinting of substrate silicon wafers with the circuitry required for semiconductors to function (also known as wafer fabrication). The back-end processes involve the assembly, packaging and test of semiconductors to prepare RFFE modules and RF filter acoustic products for distribution. The back-end manufacturing facilities are located in China, Germany and Singapore.

Other than RF360 Holdings, we primarily rely on independent third-party suppliers to perform the manufacturing and assembly, and most of the testing, of our integrated circuits based primarily on our proprietary designs and test programs. Our suppliers also are responsible for the procurement of most of the raw materials used in the production of our integrated circuits. The primary foundry suppliers for our various digital, analog/mixed-signal, RF and PM integrated circuits are Global Foundries Inc., Samsung Electronics Co. Ltd., Semiconductor Manufacturing International Corporation, Taiwan Semiconductor Manufacturing Company and United Microelectronics Corporation. The primary semiconductor assembly and test suppliers are Advanced Semiconductor Engineering, Amkor Technology, Siliconware Precision Industries and STATSChipPAC. The majority of our foundry and semiconductor assembly and test suppliers are located in the Asia-Pacific region.

QCT's sales are primarily made through standard purchase orders for delivery of products. QCT generally allows customers to reschedule delivery dates within a defined time frame and to cancel orders prior to shipment with or without payment of a penalty, depending on when the order is canceled. The industry in which QCT operates is intensely competitive. QCT competes worldwide with a number of U.S. and international designers and manufacturers

of semiconductors. As a result of global expansion by foreign and domestic competitors, technological changes, lengthening replacement cycles for mobile devices, device manufacturer concentrations and the potential for further industry consolidation, we anticipate the industry to remain very competitive. We believe that the principal competitive factors for our products include performance, level of integration, quality, compliance with industry standards, price, time-to-market, system cost, design and engineering capabilities, new product innovation, growth and scaling of distribution channels and customer support. QCT also competes in both single- and multi-mode environments against alternative communications technologies including, but not limited to,

GSM/GPRS/EDGE and TDMA. Additional competitive factors exist for QCT product offerings that have expanded into adjacent industry segments outside traditional cellular industries, including IoT and automotive, the latter of which is subject to long design-in time frames, long product life cycles and a high degree of regulatory and safety requirements, necessitating suppliers to the industry to comply with stringent qualification processes, very low defect rates and high reliability standards, all of which results in a significant barrier to entry and may result in increased costs.

QCT's current competitors include, but are not limited to, companies such as Broadcom Limited, Cirrus Logic, Cypress Semiconductor Corporation, HiSilicon Technologies, Intel, Marvell Technology, Maxim Integrated Products, MediaTek, Microchip Technology Inc., Murata Manufacturing Co., Ltd., Nordic Semiconductor, Nvidia, NXP Semiconductors N.V., Qorvo Inc., Realtek Semiconductor, Renesas Electronics Corporation, Samsung Electronics, Sequans Communications S.A., Skyworks Solutions Inc. and Spreadtrum Communications (which is controlled by Tsinghua Unigroup). QCT also faces competition from products internally developed by our customers, including some of our largest customers, and from some early-stage companies. Our competitors devote significant amounts of their financial, technical and other resources to develop and market competitive products and, in some cases, to develop and adopt competitive digital communication or signal processing technologies, and those efforts may materially and adversely affect us. Although we have attained a significant position in the industry, many of our current and potential competitors may have advantages over us that include, among others: motivation by our customers in certain circumstances to utilize their own internally-developed integrated circuit products, to use our competitors' integrated circuit products and/or sell such products to others, including by bundling with other products, or to choose alternative technologies; lower cost structures and/or a willingness and ability to accept lower prices and lower or negative margins for their products, particularly in China; foreign government support of other technologies or competitors; better known brand names; ownership and control of manufacturing facilities and greater expertise in manufacturing processes; more extensive relationships with local distribution companies and original equipment manufacturers in certain geographic regions (such as China) and/or experience in adjacent industry segments outside traditional cellular industries (such as automotive and IoT); and/or a more established presence in certain regions.

QTL Segment. QTL grants licenses or otherwise provides rights to use portions of our intellectual property portfolio, which, among other rights, includes certain patent rights essential to and/or useful in the manufacture and sale of certain wireless products, including, without limitation, products implementing CDMA2000, WCDMA, CDMA TDD, LTE and/or 5G standards and their derivatives. We have historically licensed our cellular standard-essential patents together with other Qualcomm patents that may be useful to such licensed products because licensees typically have desired to obtain the commercial benefits of receiving such broad patent rights from us. However, we offer licenses to only our cellular standard-essential patents (including 3G, 4G and 5G) for both single mode and multi-mode devices worldwide. A number of our licensees have entered into standard-essential patent only agreements on a worldwide basis, and we expect more of our licensees may enter into such standard-essential patent only agreements in the future. Our licensees manufacture wireless products including mobile devices (also known as subscriber units, which include handsets), other consumer devices (e.g., tablets and laptops), machine-to-machine devices (e.g., telematics devices, meter reading devices), plug-in end user data modem cards, certain embedded modules for incorporation into end user products, infrastructure equipment required to establish and operate a network and equipment to test networks and subscriber units.

Since our founding in 1985, we have focused heavily on technology development and innovation. These efforts have resulted in a leading intellectual property portfolio related to, among other things, wireless technology. We have an extensive portfolio of United States and foreign patents, and we continue to pursue patent applications around the world. Our patents have broad coverage in many countries, including Brazil, China, India, Japan, South Korea, Taiwan, the United States and countries in Europe and elsewhere. A substantial portion of our patents and patent applications relate to digital wireless communications technologies, including patents that are essential or may be important to the commercial implementation of CDMA2000, WCDMA (UMTS), TD-SCDMA, TD-CDMA (Time Division CDMA), OFDMA-based LTE and OFDMA-based 5G products. Our patent portfolio is the most widely and extensively licensed in the industry, with more than 300 licensees. Additionally, we have a substantial patent portfolio related to key technologies used in communications and other devices and/or related services, some of which were developed in industry standards development bodies. These include certain video codecs, audio codecs, Wi-Fi,

memory interfaces, wireless power, GPS and positioning, broadcast and streaming protocols, and short-range communication functionalities, including NFC and Bluetooth. Our patents cover a wide range of technologies across the entire wireless system, including the device (handsets and other wireless devices) and not just what is embodied in the chipsets. Over the years, a number of companies have challenged our patent position, but companies in the mobile communications industry generally recognize that any company seeking to develop, manufacture and/or sell subscriber units or infrastructure equipment that use CDMA-based and/or OFDMA-based technologies will require a license or other rights to use our patents.

We have licensed or otherwise provided rights to use our patents to hundreds of companies on industry-accepted terms. Unlike some other companies in our industry that hold back certain key technologies, we offer companies substantially our

entire patent portfolio for use in cellular subscriber devices and cell site infrastructure equipment. Our strategy to make our patented technologies broadly available has been a catalyst for industry growth, helping to enable a wide range of companies offering a broad array of wireless products and features while increasing the capabilities of and/or driving down average and low-end selling prices for 3G handsets and other wireless devices. By licensing or otherwise providing rights to use our patents to a wide range of equipment manufacturers, encouraging innovative applications, supporting equipment manufacturers with integrated chipset and software products and focusing on improving the efficiency of the airlink for wireless operators, we have helped 3G CDMA evolve and grow and reduced device pricing, all at a faster pace than the 2G (second generation) technologies such as GSM that preceded it. Upon the initial deployment of OFDMA-based networks, the products implementing such technologies generally have been multimode and implement CDMA-based technologies. The licenses granted under our existing CDMA license agreements generally cover multimode CDMA/OFDMA (3G/4G) devices, and our licensees are obligated to pay royalties under their CDMA license agreements for such devices. Further, the majority of the leading handset and other wireless device companies (including Huawei, LG, Microsoft, Oppo, Samsung, Sony, vivo, Xiaomi and ZTE) have royalty-bearing licenses under our patent portfolio for use in LTE or other OFDMA-based products that do not implement any CDMA-based standards. As opportunities arise, we are expanding licenses granted under existing agreements to include 5G technologies through Release 15, both for multimode (i.e. 3G/4G/5G) devices as well as single mode 5G devices. In addition, new license agreements will include 5G technologies through Release 15 as a standard offering.

Standards bodies have been informed that we hold patents that might be essential for all 3G standards that are based on CDMA. We have committed to such standards bodies that we will offer to license our essential patents for these CDMA standards consistent with our commitments to those bodies. We have also informed standards bodies that we hold patents and pending patent applications that are potentially essential for LTE standards, including FDD and TDD versions and have committed to offer to license our essential patents for these LTE standards consistent with our commitments to those bodies. We have informed standards bodies that we hold patents and pending patent applications that are potentially essential for 5G technologies and have committed to offer to license our essential patents for these 5G standards consistent with our commitments to those bodies. We have made similar commitments with respect to certain other technologies implemented in industry standards.

QTL licensing revenues include license fees and royalties based on sales by licensees of products incorporating or using our intellectual property. License fees are fixed amounts paid in one or more installments. Royalties are generally based upon a percentage of the wholesale (i.e., licensee's) selling price of complete licensed products, net of certain permissible deductions (including transportation, insurance, packing costs and other items). We broadly provide per unit royalty caps that apply to certain categories of complete wireless devices, namely smartphones, tablets and laptops, which effectively provide for a maximum royalty amount per device. Revenues generated from royalties are subject to quarterly and annual fluctuations. The vast majority of QTL revenues have been generated through our licensees' sales of CDMA2000-based, WCDMA-based and LTE-based products (including 3G and 4G multi-mode devices), such as feature phones and smartphones. We have invested and continue to invest in both the acquisition and development of OFDMA technology and intellectual property and have generated the industry leading patent portfolio applicable to LTE, LTE Advanced and LTE Advanced Pro. Additionally, we have invested and continue to invest in the development of 5G which heavily leverages 3G and 4G technologies. Nevertheless, we face competition in the development of intellectual property for future generations of digital wireless communications technologies and services.

Separate and apart from licensing manufacturers of wireless devices and network equipment, we have entered into certain arrangements with competitors of our QCT segment, such as Broadcom Limited. A principal purpose of these arrangements is to provide our QCT segment and the counterparties certain freedom of operation with respect to each party's integrated circuits business. In every case, these agreements expressly reserve the right for QTL to seek royalties from the customers of such integrated circuit suppliers with respect to such suppliers' customers' sales of CDMA-, WCDMA- and OFDMA-based wireless devices into which such suppliers' integrated circuits are incorporated.

Our license agreements also may provide us with rights to use certain of our licensees' technology and intellectual property to manufacture and sell certain components (e.g., Application-Specific Integrated Circuits) and related

software, subscriber units and/or infrastructure equipment.

We are currently subject to various governmental investigations and private legal proceedings challenging our patent licensing practices, which may require us to change our patent licensing practices as described more fully in this Annual Report in "Part I, Item 1A. Risk Factors" under the heading "Changes in our patent licensing practices, whether due to governmental investigations, private legal proceedings challenging those practices or otherwise, could adversely impact our business and results of operations" and in "Notes to Consolidated Financial Statements, Note 7. Commitments and Contingencies."

QSI Segment. QSI makes strategic investments that are focused on opening new or expanding opportunities for our technologies and supporting the design and introduction of new products and services (or enhancing existing products or services) for voice and data communications and new industry segments. Many of these strategic investments are in early-stage companies in a variety of industries, including, but not limited to, automotive, IoT, mobile, data center and healthcare. Investments primarily include non-marketable equity instruments, which generally are recorded using the cost method or the equity method, and convertible debt instruments, which are recorded at fair value. In addition, QSI segment results include revenues and related costs associated with development contracts with one of our equity method investees. As part of our strategic investment activities, we intend to pursue various exit strategies for each of our QSI investments in the foreseeable future.

Other Businesses. Nonreportable segments include our cyber security solutions, mobile health, small cells and other wireless technology and service initiatives. Our nonreportable segments develop and sell products and services that include, but are not limited to: products and services for mobile health; license of chipset technology and products and services for use in data centers; products designed for implementation of small cells to address the challenge of meeting the increased demand for mobile data; development, other services and related products to U.S. government agencies and their contractors; and software products and content and push-to-talk enablement services to wireless operators.

Additional information regarding our operating segments is provided in this Annual Report in “Notes to Consolidated Financial Statements, Note 8. Segment Information.” Information regarding seasonality is provided in this Annual Report in “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the “Our Business and Operating Segments” section under the heading “Seasonality.”

Restructuring Plans

In the second quarter of fiscal 2018, we announced a Cost Plan designed to align our cost structure to our long-term margin targets. As part of this plan, we have initiated and continue to execute on a series of targeted actions across our businesses to reduce annual costs by $1 billion, excluding incremental costs resulting from any future acquisition of a business. We expect these cost reductions to be fully captured in fiscal 2019.

In the fourth quarter of fiscal 2015, we announced a Strategic Realignment Plan designed to improve execution, enhance financial performance and drive profitable growth as we worked to create sustainable long-term value for stockholders. As part of this, among other actions, we implemented a cost reduction plan, which included a series of targeted reductions across our businesses, particularly in QCT, and a reduction to our annual share-based compensation grants. Restructuring activities were initiated in the fourth quarter of fiscal 2015, and the cost reduction initiatives were achieved by the end of fiscal 2016 and other activities under the plan were completed by the end of fiscal 2017.

Additional information regarding our Cost Plan and Strategic Realignment Plan is provided in this Annual Report in “Notes to Consolidated Financial Statements, Note 10. Restructuring Plans.”

Corporate Structure

We operate our businesses through our parent company, QUALCOMM Incorporated, and multiple direct and indirect subsidiaries. We have developed our corporate structure in order to address various legal, regulatory, tax, contractual compliance, operations and other matters. Substantially all of our products and services businesses, including QCT, and substantially all of our engineering, research and development functions, are operated by QUALCOMM Technologies, Inc. (QTI), a wholly-owned subsidiary of QUALCOMM Incorporated, and QTI’s subsidiaries. QTL is operated by QUALCOMM Incorporated, which owns the vast majority of our patent portfolio. Neither QTI nor any of its subsidiaries has any right, power or authority to grant any licenses or other rights under or to any patents owned by QUALCOMM Incorporated.

Revenue Concentrations and Significant Customers

Revenues in fiscal 2018 and 2017 were negatively impacted by our continued dispute with Apple Inc. and Hon Hai Precision Industry Co., Ltd./Foxconn, its affiliates and other suppliers to Apple. We did not record any revenues in fiscal 2018 or the third or fourth quarter of fiscal 2017 for royalties due on sales of Apple’s products.

A small number of customers/licensees historically have accounted for a significant portion of our consolidated revenues. In fiscal 2018, revenues from Samsung Electronics, Xiaomi Corporation and suppliers to Apple Inc. each comprised more than 10% of consolidated revenues. Combined revenues from GuangDong OPPO Mobile

Telecommunications Corp. Ltd. and vivo Communication Technology Co., Ltd., and their respective affiliates, also comprised more than 10% of consolidated revenues in fiscal 2018 and 2017. In fiscal 2017 and 2016, revenues from Samsung Electronics and suppliers to Apple Inc. each comprised more than 10% of consolidated revenues.

Research and Development

The communications industry is characterized by rapid technological change, evolving industry standards and frequent new product introductions, requiring a continuous effort to enhance existing products and technologies and to develop new products and technologies. We have significant engineering resources, including engineers with substantial expertise in CDMA, OFDMA and a broad range of other technologies. Using these engineering resources, we expect to continue to invest in research and development in a variety of ways in an effort to extend the demand for our products, and to leverage that research and development in adjacent industry segments outside of traditional cellular industries (such as automotive, IoT and networking), including continuing the development of CDMA, OFDMA and other technologies (such as RFFE), developing alternative technologies for certain specialized applications, participating in the formulation of new voice and data communication standards and technologies, and assisting in deploying digital voice and data communications networks around the world. Our research and development team has a demonstrated track record of innovation in voice and data communication technologies and application processor technology, among others.

We continue to invest significant resources towards advancements in 4G OFDMA-based technologies (including LTE) and 5G OFDMA-based technologies. We also engage in acquisitions and other transactions, such as joint ventures, to meet certain technology needs, to obtain development resources or open or expand opportunities for our technologies and to support the design and introduction of new products and services (or enhancing existing products and services) for voice and data communications and new industry segments outside of the traditional cellular industry. Our most recent significant transaction was our RF360 Holdings joint venture with TDK Corporation.

We make investments to provide our integrated circuit customers with chipsets designed on leading-edge technology nodes that combine multiple technologies for use in consumer devices (e.g., smartphones, tablets and laptops), consumer electronics and other products (e.g., access points and routers, data cards and infrastructure equipment). In addition to 3G and 4G LTE technologies, our chipsets support other wireless and wired connectivity technologies, including Wi-Fi, Bluetooth, Ethernet, GPS, GLONASS, BeiDou, Galileo and Powerline communication. Our integrated chipsets often include multiple technologies, including advanced multimode modems, application processors and graphics engines, as well as the tools to connect these diverse technologies. We continue to support Android, Windows and other mobile client software environments in our chipsets.

We develop on our own, and with our partners, innovations that are integrated into our product portfolio to further expand the opportunity for wireless communications and enhance the value of our products and services. These innovations are expected to enable our customers to improve the performance or value of their existing services, offer these services more affordably and introduce revenue-generating broadband data services ahead of their competition. We have research and development centers in various locations throughout the world that support our global development activities and ongoing efforts to develop and/or advance 4G, 5G and a broad range of other technologies. We continue to use our substantial engineering resources and expertise to develop new technologies, applications and services and make them available to licensees to help grow the communications industry and generate new or expanded licensing opportunities.

We also make investments in opportunities that leverage our existing technical and business expertise to deploy new and expanded product areas, such as RFFE, and enter into adjacent industry segments, such as products for automotive, IoT (including the connected home, smart cities, wearables, voice and music and robotics), networking, computing and AI, such as machine learning, among others.

Sales and Marketing

Sales and marketing activities of our operating segments are discussed under Operating Segments. Other marketing activities include public relations, advertising, digital marketing and social media, participation in technical conferences and trade shows, development of business cases and white papers, competitive analyses, industry intelligence and other marketing programs, such as marketing development funds with our customers. Our Corporate Marketing department provides company information on our Internet site and through other channels regarding our products, strategies and technology to industry analysts and media.

Competition

Competition faced by our operating segments is discussed under Operating Segments. Competition in the communications industry throughout the world continues to increase at a rapid pace as consumers, businesses and

governments realize the potential of wireless communications products and services. We have facilitated competition in the wireless communications industry by licensing our technologies to a large number of manufacturers. Although we have attained a significant position in the traditional cellular industry, many of our current and potential competitors may have

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advantages over us that include, among others: motivation by our customers in certain circumstances to utilize their own internally-developed integrated circuit products, to use our competitors' integrated circuit products and/or sell such products to others, including by bundling with other products, or to choose alternative technologies; lower cost structures and/or a willingness and ability to accept lower prices and lower or negative margins for their products, particularly in China; foreign government support of other technologies or competitors; better known brand names; ownership and control of manufacturing facilities and greater expertise in manufacturing processes; more extensive relationships with local distribution companies and original equipment manufacturers in certain geographic regions (such as China) and/or experience in adjacent industry segments outside traditional cellular industries (such as automotive and IoT); and/or a more established presence in certain regions. These relationships may affect customers' decisions to purchase products or license technology from us. Accordingly, new competitors or alliances among competitors could emerge and rapidly acquire significant market positions to our detriment.

We expect competition to increase as our current competitors expand their product offerings and introduce new technologies and services in the future and as additional companies compete with our products or services based on 3G, 4G, 5G or other technologies. Although we intend to continue to make substantial investments in developing new products and technologies and improving existing products and technologies, our competitors may introduce alternative products, services or technologies that threaten our business. It is also possible that the prices we charge for our products and services may continue to decline as competition continues to intensify. See also the Risk Factor entitled "Our industry is subject to competition in an environment of rapid technological change that could result in decreased demand and/or declining average selling prices for our products and/or those of our customers and/or licensees."

Corporate Responsibility and Sustainability

We strive to better our local and global communities through ethical business practices, socially empowering technology applications, educational and environmental programs and employee diversity and volunteerism.

- Our Governance. We aim to demonstrate accountability, transparency, integrity and ethical business practices throughout our operations and interactions with our stakeholders.
- Our Products. We strive to meet or exceed industry standards for product responsibility and supplier management.
- Our Workplace. We endeavor to provide a safe and healthy work environment where diversity is embraced and various opportunities for training, growth and advancement are encouraged for all employees.
- Our Community. We have strategic relationships with a wide range of local organizations and programs that develop and strengthen communities worldwide.
- Our Environment. We aim to expand our operations while minimizing our carbon footprint, conserving water and reducing waste.
- Qualcomm® Wireless Reach™. We invest in strategic programs that foster entrepreneurship, aid in public safety, enhance delivery of health care, enrich teaching and learning and improve environmental sustainability through the use of advanced wireless technologies.

Employees

At September 30, 2018, we employed approximately 35,400 full-time, part-time and temporary employees, including employees from our RF360 Holdings consolidated joint venture. During fiscal 2018, the number of employees decreased by approximately 2,400 from 37,800 at September 24, 2017 primarily due to actions taken under our Cost Plan.

Available Information

Our Internet address is www.qualcomm.com. There we make available, free of charge, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission (SEC). We also make available on our Internet site public financial information for which a report is not required to be filed with or furnished to the SEC. Our SEC reports and other financial information can be accessed through the investor relations section of our Internet site. The information found on our Internet site is not part of this or any other report we file with or furnish to the SEC.

Executive Officers

Our executive officers (and their ages at September 30, 2018) are as follows:

Steve Mollenkopf, age 49, has served as Chief Executive Officer since March 2014 and as a director since December 2013. He served as Chief Executive Officer-elect and President from December 2013 to March 2014 and as President and Chief Operating Officer from November 2011 to December 2013. In addition, he served as Executive Vice President and Group President from September 2010 to November 2011 and as Executive Vice President and President, QCT from August 2008 to September 2010. Mr. Mollenkopf joined Qualcomm in 1994 as an engineer and throughout his tenure at Qualcomm has held several other technical and leadership positions. Mr. Mollenkopf served as a member of the board of directors of General Electric Company from November 2016 to April 2018. Mr. Mollenkopf holds a B.S. degree in Electrical Engineering from Virginia Tech and an M.S. degree in Electrical Engineering from the University of Michigan.

Cristiano R. Amon, age 48, has served as President, Qualcomm Incorporated since January 2018. He served as Executive Vice President, Qualcomm Technologies, Inc. (QTI, a subsidiary of Qualcomm Incorporated) and President, Qualcomm CDMA Technologies (QCT) from November 2015 to January 2018. He served as Executive Vice President, QTI and Co-President, QCT from October 2012 to November 2015, Senior Vice President, Qualcomm Incorporated and Co-President, QCT from June 2012 to October 2012 and as Senior Vice President, QCT Product Management from October 2007 to June 2012. Mr. Amon joined Qualcomm in 1995 as an engineer and throughout his tenure at Qualcomm held several other technical and leadership positions. Mr. Amon holds a B.S. degree in Electrical Engineering from UNICAMP, the State University of Campinas, Brazil.

George S. Davis, age 60, has served as Executive Vice President and Chief Financial Officer since March 2013. Mr. Davis is responsible for leading Finance, Information Technology and Investor Relations. Prior to joining Qualcomm, Mr. Davis was Chief Financial Officer of Applied Materials, Inc., a provider of manufacturing equipment, services and software to the semiconductor, flat panel display, solar photovoltaic and related industries, from November 2006 to March 2013. Mr. Davis held several other leadership positions at Applied Materials from November 1999 to November 2006. Prior to joining Applied Materials, Mr. Davis served 19 years with Atlantic Richfield Company in a number of finance and other corporate positions. Mr. Davis holds a B.A. degree in Economics and Political Science from Claremont McKenna College and an M.B.A. degree from the University of California, Los Angeles.

Brian T. Modoff, age 59, has served as Executive Vice President, Strategy and Mergers & Acquisitions since October 2015. Prior to joining Qualcomm, Mr. Modoff was a Managing Director in Equity Research at Deutsche Bank Securities Inc. (Deutsche Bank), a provider of financial services, from March 1999 to October 2015. Prior to joining Deutsche Bank, Mr. Modoff was a research analyst at several financial institutions from November 1993 to March 1999. Mr. Modoff holds a B.A. degree in Economics from California State University, Fullerton and a Master of International Management from the Thunderbird School of Global Management.

Alexander H. Rogers, age 61, has served as Executive Vice President and President, QTL since October 2016. He served as Senior Vice President and President, QTL from September 2016 to October 2016, Senior Vice President, Deputy General Counsel and General Manager, QTL from March 2016 to September 2016, Senior Vice President and Deputy General Counsel from October 2015 to March 2016 and Senior Vice President and Legal Counsel from April 2007 to October 2015. Mr. Rogers joined Qualcomm in January 2001 as an attorney and throughout his tenure at Qualcomm held several other leadership positions in the legal department. Prior to joining Qualcomm, Mr. Rogers was a partner at the law firm of Gray, Cary, Ware & Friedenrich (now DLA Piper). Mr. Rogers holds B.A. and M.A. degrees in English Literature from Georgetown University and a J.D. degree from Georgetown University Law Center.

Donald J. Rosenberg, age 67, has served as Executive Vice President, General Counsel and Corporate Secretary since October 2007. He served as Senior Vice President, General Counsel and Corporate Secretary of Apple Inc. from December 2006 to October 2007. From May 1975 to November 2006, Mr. Rosenberg held numerous positions at IBM Corporation, including Senior Vice President and General Counsel. Mr. Rosenberg has served as a member of the board of directors of NuVasive, Inc. since February 2016 and is presently NuVasive’s lead independent director. Mr. Rosenberg holds a B.S. degree in Mathematics from the State University of New York at Stony Brook and a J.D. degree from St. John’s University School of Law.

Michelle Sterling, age 51, has served as Executive Vice President, Human Resources since May 2015. She served as Senior Vice President, Human Resources from October 2007 to May 2015. Ms. Sterling joined Qualcomm in 1994 and throughout her tenure at Qualcomm has held several other human resources and leadership positions. Ms. Sterling holds a B.S. degree in Business Management from the University of Redlands.

James H. Thompson, age 54, has served as Executive Vice President, Engineering, Qualcomm Technologies, Inc. and Chief Technology Officer since March 2017. He served as Executive Vice President, Engineering, Qualcomm Technologies, Inc. from October 2012 to March 2017 and as Senior Vice President, Engineering, Qualcomm Incorporated from July 1998 to October 2012. Dr. Thompson joined Qualcomm in 1992 as a senior engineer and throughout his tenure at Qualcomm held several other technical and leadership positions. Dr. Thompson holds B.S., M.S. and Ph.D. degrees in Electrical Engineering from the University of Wisconsin.

Item 1A. Risk Factors

You should consider each of the following factors in evaluating our business and our prospects. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently consider immaterial may also negatively impact our business and results of operations and require significant management time and attention. In that case, the trading price of our common stock could decline. You should also consider the other information set forth in this Annual Report in evaluating our business and our prospects, including but not limited to our financial statements and the related notes, and “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

Risks Related to Our Businesses

Our revenues depend on commercial network deployments, expansions and upgrades of CDMA, OFDMA and other communications technologies, including 5G; our customers’ and licensees’ sales of products and services based on these technologies; and customers’ demand for our products and services.

We develop, patent and commercialize technology and products based on CDMA, OFDMA and other communications technologies, which are primarily wireless. We depend on operators of wireless networks and our customers and licensees to adopt and/or implement the latest generation of these technologies for use in their networks, devices and services. We also depend on our customers and licensees to develop devices and services based on these technologies with value-added features to drive consumer demand for new 3G/4G and 3G/4G/5G multi-mode devices, as well as 3G, 4G and 5G single-mode devices, as well as to establish the selling prices for such devices. Further, we depend on the timing of our customers’ and licensees’ deployments of new devices and services based on these technologies. Increasingly, we also depend on operators of wireless networks, our customers and licensees and other third parties to incorporate these technologies into new device types and into industries and applications beyond traditional cellular communications, such as automotive, IoT (including the connected home, smart cities, wearables, voice and music and robotics), networking, computing and artificial intelligence (AI), such as machine learning, among others.

We have historically been successful during wireless technology transitions. The next generation of wireless technologies is 5G, which we expect will empower a new era of connected devices and will be utilized not only in handsets but in new device types, industries and applications beyond traditional cellular communications, as described above (see also Part I, Item 1, “Business” for a further description of 5G). We expect initial commercial deployments of 5G devices to begin in calendar 2019. We believe it is important that we be a leader in 5G technology development, standardization, intellectual property creation and licensing, and develop, commercialize and be a leading supplier of 5G integrated circuit products and services in order to sustain and grow our business long-term.

Our revenues and/or growth in revenues could be negatively impacted, our business may be harmed and our substantial investments in these technologies may not provide us an adequate return, if:

- wireless operators and industries beyond traditional cellular communications deploy alternative technologies;
- wireless operators delay next-generation network deployments, particularly 5G, expansions or upgrades and/or delay moving 2G customers to 3G, 3G/4G multi-mode, 4G or 5G wireless devices;
- LTE, an OFDMA-based wireless technology, is not more widely deployed or further commercial deployment is delayed;
- government regulators delay making sufficient spectrum available for 3G, 4G and 5G wireless technologies, including unlicensed spectrum and shared spectrum technologies, thereby restricting the ability of wireless operators to deploy or expand the use of these technologies;
- wireless operators delay or do not drive improvements in 3G, 4G or 3G/4G multi-mode network performance and/or capacity;

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- our customers' and licensees' revenues and sales of products, particularly premium-tier products, and services using these technologies, and average selling prices (ASPs) of such products, decline, do not grow or do not grow as anticipated due to, for example, the maturity of smartphone penetration in developed regions;
- our intellectual property and technical leadership included in the 5G standardization effort is different than in 3G and 4G standards;
- the standardization and/or deployment of 5G technologies is delayed;
- we are unable to drive the adoption of our products and services into networks and devices, including devices beyond traditional cellular applications, based on CDMA, OFDMA and other communications technologies; and/or
- consumers' rates of replacement of smartphones and other computing devices decline, do not grow or do not grow as quickly as anticipated.

Our industry is subject to competition in an environment of rapid technological change that could result in decreased demand and/or declining average selling prices for our products and/or those of our customers and/or licensees.

Our products, services and technologies face significant competition. We expect competition to increase as our current competitors expand their product offerings or reduce the prices of their products as part of a strategy to attract new business and/or customers, as new opportunities develop, and as new competitors enter the industry. Competition in wireless communications is affected by various factors that include, among others: device manufacturer concentrations; vertical integration; growth in demand, consumption and competition in certain geographic regions; government intervention and/or support of national industries and/or competitors; evolving industry standards and business models; evolving methods of transmission of voice and data communications; increasing data traffic and densification of wireless networks; convergence and aggregation of connectivity technologies (including Wi-Fi and LTE) in both devices and access points; consolidation of wireless technologies and infrastructure at the network edge; networking and connectivity trends (including cloud services); use of licensed, shared and unlicensed spectrum; the evolving nature of computing (including demand for always on, always connected capabilities); the speed of technological change (including the transition to smaller geometry process technologies); value-added features that drive selling prices as well as consumer demand for new 3G, 3G/4G multi-mode, 4G and 5G devices; turnkey, integrated products that incorporate hardware, software, user interface, applications and reference designs; scalability; and the ability of the system technology to meet customers' immediate and future network requirements. We anticipate that additional competitors will introduce products as a result of growth opportunities in wireless communications, the trend toward global expansion by foreign and domestic competitors, technological and public policy changes and relatively low barriers to entry in certain segments of the industry. Additionally, the semiconductor industry has experienced and may continue to experience consolidation, which could result in significant changes to the competitive landscape.

We expect that our future success will depend on, among other factors, our ability to:

- differentiate our integrated circuit products with innovative technologies across multiple products and features (e.g., modem, radio frequency front-end (RFFE), graphics and/or other processors, camera and connectivity) and with smaller geometry process technologies that drive performance;
- develop and offer integrated circuit products at competitive cost and price points to effectively cover both emerging and developed geographic regions and all device tiers;
- drive the adoption of our integrated circuit products into the most popular device models and across a broad spectrum of devices, such as smartphones, tablets, laptops and other computing devices, automobiles, wearables and voice and music and other connected devices and infrastructure products;
- maintain and/or accelerate demand for our integrated circuit products at the premium device tier, while increasing the adoption of our products in mid- and low-tier devices, in part by strengthening our integrated circuit product roadmap for, and developing channel relationships in, emerging regions, such as China and India, and by providing turnkey products, which incorporate our integrated circuits, for low- and mid-tier smartphones, tablets and laptops;
- continue to be a leader in 4G and 5G technology evolution, including expansion of our LTE-based single-mode licensing program in areas where single-mode products are commercialized, and continue to innovate and introduce 4G and 5G turnkey, integrated products and services that differentiate us from our competition;
- be a leader serving original equipment manufacturers, high level operating systems (HLOS) providers, operators, cloud providers and other industry participants as competitors, new industry entrants and other factors continue to

affect the industry landscape;

- be a preferred partner (and sustain preferred relationships) providing integrated circuit products that support multiple operating system and infrastructure platforms to industry participants that effectively commercialize new devices using these platforms;
- increase and/or accelerate demand for our semiconductor component products, including RFFE, and our wired and wireless connectivity products, including networking products for consumers, carriers and enterprise equipment and connected devices;
- identify potential acquisition targets that will grow or sustain our business or address strategic needs, reach agreement on terms acceptable to us, close the transactions and effectively integrate these new businesses and/or technologies;
- create standalone value and/or contribute to the success of our existing businesses through acquisitions, joint ventures and other transactions (and/or by developing customer, licensee, vendor, distributor and/or other channel relationships) in new industry segments and/or disruptive technologies, products and/or services (such as products for automotive, IoT (including the connected home, smart cities, wearables, voice and music and robotics), networking, computing and AI, such as machine learning, among others);
- become a leading supplier of RFFE products, which are designed to address cellular radio frequency band fragmentation while improving radio frequency performance and assist original equipment manufacturers in developing multiband, multi-mode mobile devices;
- be a leader in 5G technology development, standardization, intellectual property creation and licensing and develop, commercialize and be a leading supplier of 5G integrated circuit products and services; and/or
- continue to develop brand recognition to effectively compete against better known companies in computing and other consumer driven segments and to deepen our presence in significant emerging regions.

Competition in any or all product tiers may result in the loss of certain business or customers, which would negatively impact our revenues, results of operations and cash flows. Such competition may also reduce average selling prices for our chipset products and/or the products of our customers and licensees. Certain of these dynamics are particularly pronounced in emerging regions where competitors may have lower cost structures and/or may have a willingness and ability to accept lower prices and/or lower or negative margins on their products (particularly in China). Reductions in the average selling prices of our chipset products, without a corresponding increase in volumes, would negatively impact our revenues, and without corresponding decreases in average unit costs, would negatively impact our margins. In addition, reductions in the average selling prices of our licensees' products, unless offset by an increase in volumes, would generally decrease total royalties payable to us, negatively impacting our licensing revenues.

We compete with many different semiconductor companies, ranging from multinational companies with integrated research and development, manufacturing, sales and marketing organizations across a broad spectrum of product lines, to companies that are focused on a single application market segment or standard product, including those that produce products for automotive, IoT and networking applications. Most of these competitors compete with us with respect to some, but not all, of our businesses. Companies that promote standards that are neither CDMA- nor OFDMA-based (e.g., GSM) as well as companies that design integrated circuits based on CDMA, OFDMA, Wi-Fi or their derivatives are generally competitors or potential competitors. Examples (some of which are strategic partners of ours in other areas) include Advanced Micro Devices, Inc., Broadcom Limited, Cirrus Logic, Cypress Semiconductor Corporation, HiSilicon Technologies, Intel, Marvell Technology, Maxim Integrated Products, MediaTek, Microchip Technology Inc., Murata Manufacturing Co., Ltd., Nordic Semiconductor, Nvidia, NXP Semiconductors N.V., Qorvo Inc., Realtek Semiconductor, Renesas Electronics Corporation, Samsung Electronics, Sequans Communications S.A., Skyworks Solutions Inc. and Spreadtrum Communications (which is controlled by Tsinghua Unigroup). Some of these current and potential competitors may have advantages over us that include, among others: motivation by our customers in certain circumstances to utilize their own internally-developed integrated circuit products, to use our competitors' integrated circuit products and/or sell such products to others, including by bundling with other products, or to choose alternative technologies; lower cost structures and/or a willingness and ability to accept lower prices and lower or negative margins for their products, particularly in China; foreign government support of other technologies or competitors; better known brand names; ownership and control of manufacturing facilities and greater expertise in manufacturing processes; more extensive relationships with local distribution companies and original equipment manufacturers in certain geographic regions (such as China) and/or experience in adjacent industry segments outside traditional cellular industries (such as automotive and IoT); and/or a more established presence in certain regions.

We derive a significant portion of our consolidated revenues from a small number of customers and licensees, which increasingly includes a small number of Chinese OEMs. If revenues derived from these customers or licensees decrease or the timing of such revenues fluctuates, our business and results of operations could be negatively affected.
Our QCT segment derives a significant portion of its revenues from a small number of customers, and we expect this trend to continue in the foreseeable future. Our industry is experiencing and may continue to experience concentration of device share among a few companies, particularly at the premium tier, contributing to this trend. Chinese OEMs continue to grow their device share in China and are increasing their device share in regions outside of China, and we derive a significant and increasing portion of our revenues from a small number of these OEMs.
In addition, certain of our largest integrated circuit customers develop their own integrated circuit products, which they have in the past chosen to utilize in certain of their devices, and may in the future choose to utilize in certain (or all) of their devices, rather than our products (and/or sell their integrated circuit products to third parties in competition with us). Also, Apple, which has historically been one of our largest customers, now utilizes products of one of our competitors in many of their devices rather than our products, is solely utilizing one or more or our competitor’s products in its next smartphone launch, and may continue to use our competitors’ products rather than our products in the future.
The loss of any one of our significant customers, a reduction in the purchases of our products by such customers or the cancelation of significant purchases by any of these customers, whether due to the use of their own integrated circuit products, our competitors’ integrated circuit products or otherwise, would reduce our revenues and could harm our ability to achieve or sustain expected results of operations, and a delay of significant purchases, even if only temporary, would reduce our revenues in the period of the delay. Any such reduction in revenues would also impact our cash resources available for other purposes, such as research and development. Further, the concentration of device share among a few companies, and the corresponding purchasing power of these companies, may result in lower prices for our products which, if not accompanied by a sufficient increase in the volume of purchases of our products, could have an adverse effect on our revenues and margins. In addition, the timing and size of purchases by our significant customers may be impacted by the timing of such customers’ new or next generation product introductions, over which we have no control, and the timing and/or success of such introductions may cause our revenues and results of operations to fluctuate. Accordingly, if current industry dynamics and concentrations continue, our QCT segment’s revenues will continue to depend largely upon, and be impacted by, future purchases, and the timing and size of any such future purchases, by these significant customers.
Further, Apple purchases our Mobile Data Modem (MDM) products, which do not include our integrated application processor technology, and which have lower revenue and margin contributions than our combined modem and application processor products. To the extent Apple takes device share from our other customers who purchase our integrated modem and application processor products, our revenues and margins may be negatively impacted.
Further, companies that develop HLOS for devices, including leading technology companies, now sell their own devices. If we fail to effectively partner or continue partnering with these companies, or with their partners or customers, they may decide not to purchase (either directly or through their contract manufacturers), or to reduce or discontinue their purchases of, our integrated circuit products.
In addition, there has been and continues to be litigation among certain of our customers and other industry participants, and the potential outcomes of such litigation, including but not limited to injunctions against devices that incorporate our products and/or intellectual property, or rulings on certain patent law or patent licensing issues that create new legal precedent, could impact our business, particularly if such action impacts one of our larger customers.
Although we have more than 300 licensees, our QTL segment derives a significant portion of its revenues from a limited number of licensees, which increasingly includes a small number of Chinese OEMs. In the event that one or more of our significant licensees fail to meet their reporting and/or payment obligations, or we are unable to renew or modify one or more of such license agreements, including standard-essential patent only license agreements, under similar terms, our revenues, results of operations and cash flows would be adversely impacted. Moreover, the future growth and success of our core licensing business will depend in part on the ability of our licensees to develop, introduce and deliver high-volume products that achieve and sustain customer acceptance. We have no control over the product development, sales efforts or pricing of products by our licensees, and our licensees might not be successful. Reductions in the average selling prices of wireless devices sold by our licensees, without a sufficient

increase in the volumes of such devices sold, would generally have an adverse effect on our licensing revenues. Such adverse impact may be muted by the per unit royalty caps that apply to certain categories of complete wireless devices, namely smartphones, tablets and laptops.

We derive a significant portion of our consolidated revenues from the premium-tier device segment. If sales of premium-tier devices decrease, and/or sales of our premium-tier integrated circuit products decrease, our results of operations could be negatively affected.

We derive a significant portion of our revenues from the premium-tier device segment, and we expect this trend to continue in the foreseeable future. We have experienced, and expect to continue to experience, slowing growth in the premium-tier device segment due to, among other factors, lengthening replacement cycles in developed regions, where premium-tier smartphones are common; increasing consumer demand in emerging regions, particularly China and India, where premium-tier smartphones are less common and replacement cycles are on average longer than in developed regions and are continuing to lengthen; and/or a maturing premium-tier smartphone industry in which demand is increasingly driven by new product launches and/or innovation cycles.

In addition, as discussed in the prior risk factor, our industry is experiencing concentration of device share among a few companies at the premium tier, which gives them significant supply chain leverage. Further, those companies may utilize their own internally-developed integrated circuit products, or our competitors' integrated circuit products, rather than our products in all or a portion of their devices. These dynamics may result in lower prices for and/or reduced sales of our premium-tier integrated circuit products.

A reduction in sales of premium-tier devices, or a reduction in sales of our premium-tier integrated circuit products (which have a higher revenue and margin contribution than our lower-tier integrated circuit products), may reduce our revenues and margins and may harm our ability to achieve or sustain expected financial results. Any such reduction in revenues would also impact our cash resources available for other purposes, such as research and development.

Efforts by some communications equipment manufacturers or their customers to avoid paying fair and reasonable royalties for the use of our intellectual property may require the investment of substantial management time and financial resources and may result in legal decisions and/or actions by governments, courts, regulators or agencies, Standards Development Organizations (SDOs) or other industry organizations that harm our business.

From time to time, companies initiate various strategies to attempt to renegotiate, mitigate and/or eliminate their need to pay royalties to us for the use of our intellectual property. These strategies have included: (i) litigation, often alleging infringement of patents held by such companies, patent misuse, patent exhaustion, patent invalidity and/or unenforceability of our patents and/or licenses, that we do not license our patents on fair, reasonable and nondiscriminatory (FRAND) terms, or some form of unfair competition or competition law violation; (ii) taking positions contrary to our understanding of their contracts with us; (iii) appeals to governmental authorities; (iv) collective action, including working with wireless operators, standards bodies, other like-minded companies and other organizations, on both formal and informal bases, to adopt intellectual property policies and practices that could have the effect of limiting returns on intellectual property innovations; (v) lobbying governmental regulators and elected officials for the purpose of seeking the reduction of royalty rates or the base on which royalties are calculated, of seeking to impose some form of compulsory licensing and/or of weakening a patent holder's ability to enforce its rights or obtain a fair return for such rights; and (vi) licensees using various strategies to attempt to shift their royalty obligation to their suppliers that results in lowering the wholesale (i.e., licensee's) selling price on which the royalty is calculated.

In addition, certain licensees have disputed, underreported, underpaid, not reported and/or not paid royalties owed to us under their license agreements or reported to us in a manner that is not in compliance with their contractual obligations, and certain companies have yet to enter into or have delayed entering into or renewing license agreements with us for their use of our intellectual property, and licensees and/or companies may continue to do so in the future. The fact that one or more licensees dispute, underreport, underpay, do not report and/or do not pay royalties owed to us may encourage other licensees to take similar actions and may encourage other licensees or unlicensed companies to delay entering into, or not enter into, new license agreements. Further, to the extent such licensees and/or companies increase their device share, the negative impact of their underreporting, underpayment, non-payment and/or non-reporting on our business, revenues, results of operations, financial condition and/or cash flows will be exacerbated.

We are currently subject to various litigation and governmental investigations and/or proceedings, some of which have arisen and may continue to arise out of the strategies described above. Certain legal matters are described more fully in this Annual Report in "Notes to Consolidated Financial Statements, Note 7. Commitments and Contingencies." The unfavorable resolution of one or more of these matters could have a material adverse effect on our business, revenues, results of operations, financial condition and/or cash flows. Depending on the type of matter, various remedies that could result from an unfavorable resolution include, among others, injunctions, monetary damages or

fines or other orders to pay money, the issuance of orders to cease certain conduct and/or modify our business practices, such as requiring us to reduce our royalty rates, reduce the base on which our royalties are calculated, grant patent licenses to chipset manufacturers and/or modify or renegotiate our existing license agreements, and/or determinations that all or portions of our license agreements are invalid or unenforceable. In addition, decisions or orders arising out of governmental investigations or proceedings could require us to renegotiate, or could encourage or embolden our licensees to demand to renegotiate, their license agreements with us (which could be on terms that are less favorable to us than existing terms), and such licensees may underreport, underpay, not report

or not pay royalties owed to us pending the conclusion of such negotiations. Further, a governmental body in a particular country or region may assert, and may be successful in imposing, remedies with effects that extend beyond the borders of that country or region. See also the Risk Factor entitled "Changes in our patent licensing practices, whether due to governmental investigations, private legal proceedings challenging those practices or otherwise, could adversely impact our business and results of operations."

In addition, in connection with our participation in SDOs, we, like other patent owners, generally have made contractual commitments to such organizations to license those of our patents that would necessarily be infringed by standard-compliant products as set forth in those commitments. Some manufacturers and users of standard-compliant products advance interpretations of these commitments that are adverse to our licensing business, including interpretations that would limit the amount of royalties that we could collect on the licensing of our patent portfolio. Further, some companies or entities have proposed significant changes to existing intellectual property policies for implementation by SDOs and other industry organizations with the goal of significantly devaluing standard-essential patents. For example, some have put forth proposals which would require a maximum aggregate intellectual property royalty rate for the use of all standard-essential patents owned by all of the member companies to be applied to the selling price of any product implementing the relevant standard. They have further proposed that such maximum aggregate royalty rate be apportioned to each member company with standard-essential patents based upon the number of standard-essential patents held by such company. Others have proposed that injunctions not be an available remedy for infringement of standard-essential patents and/or have made proposals that could severely limit damage awards and other remedies by courts for patent infringement (e.g., by severely limiting the base upon which the royalty percentage may be applied). A number of these strategies are purportedly based on interpretations of the policies of certain SDOs concerning the licensing of patents that are or may be essential to industry standards and on our (and/or other companies') alleged failure to abide by these policies.

Some SDOs, courts and governmental agencies have adopted and may in the future adopt some or all of these interpretations or proposals in a manner adverse to our interests, including in litigation to which we may not be a party.

We expect that such proposals, interpretations and strategies will continue in the future, and if successful, our business model would be harmed, either by limiting or eliminating our ability to collect royalties (or by reducing the royalties we can collect) on all or a portion of our patent portfolio, limiting our return on investment with respect to new technologies, limiting our ability to seek injunctions against infringers of our standard-essential patents, constraining our ability to make licensing commitments when submitting our technology for inclusion in future standards (which could make our technology less likely to be included in such standards) or forcing us to work outside of SDOs or other industry groups to promote our new technologies, and our revenues, results of operations and/or cash flows could be negatively impacted. In addition, the legal and other costs associated with asserting or defending our positions have been and continue to be significant. We assume that such challenges, regardless of their merits, will continue into the foreseeable future and will require the investment of substantial management time and financial resources.

Our business, particularly our licensing business, may suffer as a result of adverse rulings in government investigations or proceedings.

We are currently subject to various governmental investigations and/or proceedings, particularly with respect to our licensing business, and certain such matters are described more fully in this Annual Report in "Notes to Consolidated Financial Statements, Note 7. Commitments and Contingencies." Key allegations in those matters include, among others, that we do not license our cellular standard-essential patents separately from our other patents, that we violate FRAND licensing commitments by refusing to grant licenses to chipset makers, that our royalty rates are too high and/or that the base on which our royalties are calculated should be something less than the wholesale (i.e., licensee's) selling price of the applicable device (minus certain permitted deductions). The unfavorable resolution of one or more of these matters could have a material adverse effect on our business, results of operations, financial condition and/or cash flows. Depending on the type of matter, various remedies that could result from an unfavorable resolution include, among others, injunctions, monetary damages or fines or other orders to pay money, and/or the issuance of orders to cease certain conduct and/or modify our business practices, such as requiring us to reduce our royalty rates, reduce the base on which our royalties are calculated, grant patent licenses to chipset manufacturers and/or modify or renegotiate our existing license agreements, and/or determinations that all or portions of our license agreements are

invalid or unenforceable. In addition, decisions or orders arising out of such governmental investigations or proceedings could require us to renegotiate, or could encourage or embolden our licensees to demand to renegotiate, their license agreements with us (which could be on terms that are less favorable to us than existing terms), and such licensees may underreport, underpay, not report or not pay royalties owed to us pending the conclusion of such negotiations. Further, a governmental body in a particular country or region may assert, and may be successful in imposing, remedies with effects that extend beyond the borders of that country or region. See also the Risk Factor entitled

"Changes in our patent licensing practices, whether due to governmental investigations, private legal proceedings challenging those practices or otherwise, could adversely impact our business and results of operations."

Changes in our patent licensing practices, whether due to governmental investigations, private legal proceedings challenging those practices or otherwise, could adversely impact our business and results of operations.

We are currently subject to various governmental investigations and private legal proceedings challenging our patent licensing practices as described more fully in this Annual Report in "Notes to Consolidated Financial Statements, Note 7. Commitments and Contingencies." Key allegations in those matters include, among others, that we do not license our cellular standard-essential patents separately from our other patents, that we violate FRAND licensing commitments by refusing to grant licenses to chipset makers, that our royalty rates are too high and/or that the base on which our royalties are calculated should be something less than the wholesale (i.e., licensee's) selling price of the applicable device (minus certain permitted deductions). We believe that the ultimate intent of these investigations and legal proceedings is to reduce the amount of royalties that licensees are required to pay to us for their use of our intellectual property.

We have historically licensed our cellular standard-essential patents together with our other patents that may be useful to licensed products because licensees typically have desired to obtain the commercial benefits of receiving such broad patent rights from us. However, we also have licensed only our cellular standard-essential patents to certain licensees who have requested such licenses. In addition, in connection with our resolution with the China National Development and Reform Commission (NDRC), our standard practice in China since 2015 is to offer licenses to our 3G and 4G standard-essential Chinese patents for devices sold for use in China separately from our other patents.

In addition, we offer licenses to only our cellular standard-essential patents (including 3G, 4G and 5G) for both single mode and multi-mode devices worldwide. A number of our licensees have entered into standard-essential patent only agreements on a worldwide basis, and we expect more of our licensees may do so in the future. Our royalty rates for licenses to only our cellular standard-essential patents are lower than our royalty rates for licenses to substantially all of our patent portfolio. If more licensees choose a license to only our cellular standard-essential patents instead of a portfolio license than has historically been the case, our licensing revenues and earnings would be negatively impacted unless we were able to license our other patents at rates that offset all or a portion of any difference between the royalties previously received for licenses of substantially all of our patent portfolio as compared to licenses of only our cellular standard-essential patents and/or there was a sufficient increase in the overall volume of sales of devices upon which royalties are paid.

If we were required to grant patent licenses to chipset manufacturers (i.e., to implement a more complex, tiered licensing structure in which we license certain portions of our patent portfolio to chipset manufacturers and other portions to device manufacturers), we would incur additional transaction costs, which may be significant, and we could incur delays in recognizing revenues until license negotiations were completed. In addition, our licensing revenues and earnings would be negatively impacted if we were not able to obtain, in the aggregate, equivalent revenues under such a multi-level licensing structure.

If we were required to reduce the royalty rates we charge under our patent license agreements, our revenues, earnings and/or cash flows would be negatively impacted absent a sufficient increase in the volume of sales of devices upon which royalties are paid. Similarly, if we were required to reduce the base on which our royalties are calculated, our revenues, results of operations and/or cash flows would be negatively impacted unless there was a sufficient increase in the volume of sales of devices upon which royalties are paid and/or we were able to increase our royalty rates to offset the decrease in revenues resulting from such lower royalty base (assuming the absolute royalty dollars were below any relevant royalty caps).

To the extent that we were required to implement any of these new licensing practices by modifying or renegotiating our existing license agreements, we would incur additional transaction costs, which may be significant, and we could incur delays in recognizing revenues until license negotiations were completed. The impact of any such changes to our licensing practices could vary widely and by jurisdiction, depending on the specific outcomes and the geographic scope of such outcomes. In addition, if we were required to make modifications to our licensing practices in one jurisdiction, licensees and/or governmental agencies in other jurisdictions may attempt to obtain similar outcomes for themselves and/or for such other jurisdictions, as applicable.

The enforcement and protection of our intellectual property rights may be expensive, could fail to prevent misappropriation or unauthorized use of our intellectual property rights, could result in the loss of our ability to enforce one or more patents, and/or could be adversely affected by changes in patent laws, by laws in certain foreign jurisdictions that may not effectively protect our intellectual property rights and/or by ineffective enforcement of laws in such jurisdictions.

We rely primarily on patent, copyright, trademark and trade secret laws, as well as nondisclosure and confidentiality agreements, international treaties and other methods, to protect our proprietary information, technologies and processes, including our patent portfolio. Policing unauthorized use of our products, technologies and proprietary information is difficult and time consuming. The steps we have taken have not always prevented, and we cannot be certain the steps we will take in the future will prevent, the misappropriation or unauthorized use of our proprietary information and technologies, particularly in foreign countries where the laws may not protect our proprietary intellectual property rights as fully or as readily as U.S. laws or where the enforcement of such laws may be lacking or ineffective. Some industry participants who have a vested interest in devaluing patents in general, or standard-essential patents in particular, have mounted attacks on certain patent systems, increasing the likelihood of changes to established patent laws. In the United States, there is continued discussion regarding potential patent law changes and current and potential future litigation regarding patents, the outcomes of which could be detrimental to our licensing business. The laws in certain foreign countries in which our products are or may be manufactured or sold, including certain countries in Asia, may not protect our intellectual property rights to the same extent as the laws in the United States. We expect that the European Union will adopt a unitary patent system in the next few years that may broadly impact that region's patent regime. We cannot predict with certainty the long-term effects of any potential changes. In addition, we cannot be certain that the laws and policies of any country or the practices of any standards bodies, foreign or domestic, with respect to intellectual property enforcement or licensing or the adoption of standards, will not be changed in the future in a way detrimental to our licensing program or to the sale or use of our products or technologies.

We have had, and may in the future have, difficulty in certain circumstances in protecting or enforcing our intellectual property rights and/or contracts, including collecting royalties for use of our patent portfolio due to, among others: refusal by certain licensees to report and/or pay all or a portion of the royalties they owe to us; policies of foreign governments; challenges to our licensing practices under competition laws; adoption of mandatory licensing provisions by foreign jurisdictions (either with controlled/regulated royalties or royalty free); failure of foreign courts to recognize and enforce judgments of contract breach and damages issued by courts in the United States; and/or challenges before competition agencies to our licensing business and/or the pricing and integration of additional features and functionality into our chipset products. Certain licensees have disputed, underreported, underpaid, not reported and/or not paid royalties owed to us under their license agreements with us or reported to us in a manner that is not in compliance with their contractual obligations, and certain companies have yet to enter into or have delayed entering into or renewing license agreements for their use of our intellectual property, and such licensees and/or companies may continue to do so in the future. The fact that one or more licensees dispute, underreport, underpay, do not report and/or do not pay royalties owed to us may encourage other licensees to take similar actions and may encourage other licensees or unlicensed companies to delay entering into, or not enter into, new license agreements. Additionally, although our license agreements provide us with the right to audit the books and records of licensees, audits can be expensive, time consuming, incomplete and subject to dispute. Further, certain licensees may not comply with the obligation to provide full access to their books and records. To the extent we do not aggressively enforce our rights under our license agreements, licensees may not comply with their existing license agreements, and to the extent we do not aggressively pursue unlicensed companies to enter into license agreements with us for their use of our intellectual property, other unlicensed companies may not enter into license agreements. Similarly, we provide access to certain of our intellectual property and/or proprietary and/or confidential business information to our direct and indirect customers and licensees, who may wrongfully use such intellectual property and/or information and/or wrongfully disclose such intellectual property and/or information to third parties, including our competitors.

We have entered into litigation and/or arbitration in the past and may need to further litigate and/or arbitrate in the future to enforce our contract and/or intellectual property rights, protect our trade secrets or determine the validity and scope of proprietary rights of others. We are currently engaged in litigation matters related to protecting or enforcing our contract and/or intellectual property rights, and certain such matters are described more fully in this Annual Report in "Notes to Consolidated Financial Statements, Note 7. Commitments and Contingencies." As a result of any such litigation and/or arbitration, we could lose our ability to enforce one or more patents, portions of our license agreements could be determined to be invalid or unenforceable (which may in turn result in other licensees either not complying with their existing license agreements and/or initiating litigation) and/or we could incur substantial costs.

Any action we take to enforce our contract or intellectual property rights could be costly and could absorb significant management time and attention, which, in turn, could negatively impact our results of operations and/or cash flows. Further, even a positive resolution to our enforcement efforts may take time to conclude, which may reduce our revenues and cash resources available for other purposes, such as research and development, in the periods prior to conclusion. See also the Risk Factor entitled “Changes in our patent licensing practices, whether due to governmental investigations, private legal proceedings challenging those practices or otherwise, could adversely impact our business and results of operations.”

Our growth increasingly depends on our ability to extend our technologies, products and services into new and expanded product areas, such as RFFE, and adjacent industry segments and/or applications outside of traditional cellular

industries, such as automotive, IoT and networking, among others. Our research, development and other investments in these new and expanded product areas and industry segments, and related technologies, products and services, as well as in our existing technologies, products and services and new technologies, such as 5G, may not generate operating income or contribute to future results of operations that meet our expectations.

Our industry is subject to rapid technological change, evolving industry standards and frequent new product introductions, and we must make substantial research, development and other investments, such as acquisitions, in new products, services and technologies to compete successfully. Technological innovations generally require significant research and development efforts before they are commercially viable. While we continue to invest significant resources toward advancements primarily in support of 4G- and 5G-based technologies, we also innovate across a broad spectrum of opportunities to deploy new and expanded products and enter into adjacent industry segments and/or applications by leveraging our existing technical and business expertise and/or through acquisitions. In particular, our future growth significantly depends on new and expanded product areas, such as RFFE, and adjacent industry segments and/or applications, such as automotive, IoT (including the connected home, smart cities, wearables, voice and music and robotics), networking, computing and AI, such as machine learning, among others; our ability to develop leading and cost-effective technologies, products and services for new and expanded product areas and adjacent industry segments; and third parties incorporating our technology, products and services into devices used in these product areas, industry segments and/or applications. Accordingly, we intend to continue to make substantial investments in these new and expanded product areas, adjacent industry segments and/or applications, and in developing new products, services and technologies for these product areas, industry segments and/or applications. Our growth also depends significantly on our ability to develop 5G technologies, and to develop and commercialize products using 5G technologies.

However, our research, development and other investments in these new and expanded product areas, adjacent industry segments and/or applications, and corresponding technologies, products and services, as well as in our existing, technologies, products and services and new technologies, such as 5G, use of licensed, shared and unlicensed spectrum, and convergence of cellular and Wi-Fi, may not succeed due to, among other reasons: new industry segments, applications and/or consumer demand may not develop and/or grow as anticipated; our strategies and/or the strategies of our customers, licensees or partners may not be successful; improvements in alternate technologies in ways that reduce the advantages we anticipate from our investments; competitors' technologies, products or services being more cost effective, having more capabilities or fewer limitations or being brought to market faster than our new technologies, products and services; and competitors having longer operating histories in industry segments that are new to us. We may also underestimate the costs of or overestimate the future revenues and/or margins that could result from these investments, and these investments may not, or may take many years to, generate material returns. Further, the automotive industry is subject to long design-in time frames, long product life cycles and a high degree of regulatory and safety requirements, necessitating suppliers to the industry to comply with stringent qualification processes, very low defect rates and high reliability standards, all of which results in a significant barrier to entry and increased costs.

If our new technologies, products and/or services are not successful, or are not successful in the time frame we anticipate, we may incur significant costs and/or asset impairments, our business may not grow as anticipated, our revenues and/or margins may be negatively impacted, and/or our reputation may be harmed.

There are numerous risks associated with our operation and control of the manufacturing facilities of our joint venture with TDK, RF360 Holdings, including a higher portion of fixed costs relative to a fabless model, environmental compliance and liability, exposure to natural disasters, timely supply of equipment and materials and manufacturing difficulties.

Manufacturing facilities are characterized by a higher portion of fixed costs relative to a fabless model. In less favorable industry environments, in particular, we may be faced with a decline in the utilization rates of our manufacturing facilities due to decreases in demand for our products. During such periods, our manufacturing facilities could operate at lower capacity levels, while the fixed costs associated with full capacity continue to be incurred, resulting in lower gross profit.

We are subject to many environmental, health and safety laws and regulations in each jurisdiction in which we operate our manufacturing facilities, which govern, among other things, emissions of pollutants into the air, wastewater

discharges, the use and handling of hazardous substances, waste disposal, the investigation and remediation of soil and ground water contamination and the health and safety of our employees. We are also required to obtain and maintain environmental permits from governmental authorities for certain of our operations. We cannot make assurances that we will be at all times in compliance with such laws, regulations and permits. Certain environmental laws impose strict, and in certain circumstances, joint and several, liability on current or previous owners or operators of real property for the cost of investigation, removal or remediation of hazardous substances. Certain of these laws also assess liability on persons who arrange for hazardous

substances to be sent to disposal or treatment facilities when such facilities are found to be contaminated. In addition, we could also be held liable for consequences arising out of human exposure to hazardous substances or other environmental damage.

We have manufacturing facilities in Asia and Europe. If tsunamis, flooding, earthquakes, volcanic eruptions or other natural disasters or geopolitical conflicts were to damage, destroy or disrupt our manufacturing facilities, it could disrupt our operations, delay new production and shipments of inventory or result in costly repairs, replacements or other costs. In addition, natural disasters or geopolitical conflicts may result in disruptions in transportation, distribution channels or supply chains, or significant increases in the prices of raw materials.

Our manufacturing operations depend on securing raw materials and other supplies in adequate quality and quantity in a timely manner from multiple suppliers, and in some cases, we rely on a limited number of suppliers, particularly in Asia. Accordingly, there may be cases where supplies of raw materials and other products are interrupted by disaster, accident or some other event at a supplier, supply is suspended due to quality or other issues, or there is a shortage of supply due to a rapid increase in demand, which could impact production and prevent us from supplying products to our customers. If the supply-demand balance is disrupted, it may considerably increase costs of manufacturing due to increased prices we pay for raw materials or fuel. From time to time, suppliers may extend lead times, limit the amounts supplied to us or increase prices due to capacity constraints or other factors. Additionally, supply of and/or costs of raw materials may be negatively impacted by trade protection policies, such as tariffs, and/or escalating trade tensions, particularly with countries in Asia. Further, it may be difficult or impossible to substitute one piece of equipment for another or replace one type of material with another. A failure by our suppliers to deliver our requirements could result in disruptions to our manufacturing operations.

Our manufacturing processes are highly complex, require advanced and costly equipment and must be continuously modified to improve yields and performance. Difficulties in the production process can reduce yields or interrupt production, and as a result, we may not be able to deliver products or do so in a timely, cost-effective or competitive manner. Further, to remain competitive and/or meet customer demand, we may be required to improve our facilities and process technologies and carry out extensive research and development, each of which may require investment of significant amounts of capital, and may have a material adverse effect on our results of operations, financial condition and/or cash flows.

The continued and future success of our licensing programs requires us to continue to evolve our patent portfolio, and our licensing programs may be impacted by the proliferation of devices in new industry segments such as automotive and IoT, as well as the need to extend license agreements that are expiring and/or to cover additional future patents.

We own a very strong portfolio of issued and pending patents related to 3G, 4G, 5G and other technologies. It is critical that we continue to evolve our patent portfolio, particularly in 5G. If we do not maintain a strong portfolio that is applicable to current and future standards, products and services, particularly 5G, our future licensing revenues could be negatively impacted.

In addition, new connectivity and other services are emerging that rely on devices that may or may not be used on traditional cellular networks, such as devices used in the IoT and automotive industry segments. We also seek to diversify and broaden our technology licensing programs to new industry segments in which we can utilize our technology leadership. Standards, even de facto standards, that develop as these technologies mature, in particular those that do not include a base level of interoperability, may impact our ability to obtain royalties at all or that are equivalent to those that we receive for products used in cellular communications. Although we believe that our patented technologies are essential and useful to the commercialization of such services, any royalties we receive may be lower than those we receive from our current licensing program.

Further, the licenses granted to and from us under a number of our license agreements include only patents that are either filed or issued prior to a certain date. As a result, there are agreements with some licensees where later patents are not licensed by or to us. Additionally, many of our license agreements (including essentially all of our agreements in China and our recent worldwide SEP only agreements) are effective for a specified term. In order to license or to obtain a license to such later patents or after the expiration of a specified term, or to receive royalties after the specified time period, we will need to extend or modify such license agreements or enter into new license agreements with such licensees. Accordingly, to the extent not renewed on their terms or by election for an additional (generally multi-year) period, if applicable, we will need to extend or modify such license agreements or enter into new license

agreements with such licensees more frequently than we have done historically. We might not be able to renew those license agreements, or enter into new license agreements, in the future without affecting the material terms and conditions of our license agreements with such licensees, and such modifications or new agreements may negatively impact our revenues. If there is a delay in renewing a license agreement prior to its expiration, there would be a delay in our ability to recognize revenues related to that licensee's product sales.

Further, if we are unable to reach agreement on such modifications or new agreements, it could result in patent infringement litigation with such companies.

We depend on a limited number of third-party suppliers for the procurement, manufacture and testing of our products manufactured in a fabless production model. If we fail to execute supply strategies that provide technology leadership, supply assurance and low cost, our business and results of operations may be harmed. We are also subject to order and shipment uncertainties that could negatively impact our results of operations.

Our QCT segment primarily utilizes a fabless production model, which means that we do not own or operate foundries for the production of silicon wafers from which our integrated circuits are made. Other than the manufacturing facilities we now operate through our RF360 Holdings joint venture, we rely on independent third-party suppliers to perform the manufacturing and assembly, and most of the testing, of our integrated circuits. Our suppliers are also responsible for the procurement of most of the raw materials used in the production of our integrated circuits. We employ both turnkey and two-stage manufacturing models to purchase our integrated circuits. Under the turnkey model, our foundry suppliers are responsible for delivering fully assembled and tested integrated circuits. Under the two-stage manufacturing model, we purchase die in singular or wafer form from semiconductor manufacturing foundries and contract with separate third-party suppliers for manufacturing services such as wafer bump, probe, assembly and the majority of our final test requirements. The semiconductor manufacturing foundries that supply products to our QCT segment are primarily located in Asia, as are our primary warehouses where we store finished goods for fulfillment of customer orders. The following could have an adverse effect on our ability to meet customer demands and/or negatively impact our revenues, business operations, profitability and/or cash flows:

- a reduction, interruption, delay or limitation in our product supply sources;
- a failure by our suppliers to procure raw materials or to provide or allocate adequate manufacturing or test capacity for our products;
- our suppliers’ inability to react to shifts in product demand or an increase in raw material or component prices;
- our suppliers’ delay in developing leading process technologies, or inability to develop or maintain leading process technologies, including transitions to smaller geometry process technologies;
- the loss of a supplier or the inability of a supplier to meet performance, quality or yield specifications or delivery schedules;
- additional expense and/or production delays as a result of qualifying a new supplier and commencing volume production or testing in the event of a loss of or a decision to add or change a supplier; and/or
- natural disasters or geopolitical conflicts, particularly in Asia, impacting our suppliers.

Additionally, supply of and/or costs of raw materials may be negatively impacted by trade protection policies, such as tariffs, and/or escalating trade tensions, particularly with countries in Asia. While we have established alternate suppliers for certain technologies, we rely on sole- or limited-source suppliers for certain products, subjecting us to significant risks, including: possible shortages of raw materials or manufacturing capacity; poor product performance; and reduced control over delivery schedules, manufacturing capability and yields, quality assurance, quantity and costs. To the extent we have established alternate suppliers, these suppliers may require significant levels of support to bring complex technologies to production. As a result, we may invest a significant amount of effort and resources and incur higher costs to support and maintain such alternate suppliers. Further, any future consolidation of foundry suppliers could increase our vulnerability to sole- or limited-source arrangements and reduce our suppliers’ willingness to negotiate pricing, which could negatively impact our ability to achieve cost reductions and/or which could increase our manufacturing costs. Our arrangements with our suppliers may obligate us to incur costs to manufacture and test our products that do not decrease at the same rate as decreases in pricing to our customers. Our ability, and that of our suppliers, to develop or maintain leading process technologies, including transitions to smaller geometry process technologies, and to effectively compete with the manufacturing processes and performance of our competitors, could impact our ability to introduce new products and meet customer demand, could increase our costs (possibly decreasing our margins) and could subject us to the risk of excess inventories. Our inability to meet customer demand due to sole- or limited-sourcing and/or the additional costs that we incur because of these or other supply constraints or because of the need to support alternate suppliers could negatively impact our business, our results of operations and/or cash flows.

Although we have long-term contracts with our suppliers, many of these contracts do not provide for long-term capacity commitments. To the extent we do not have firm commitments from our suppliers over a specific time period or for any specific quantity, our suppliers may allocate, and in the past have allocated, capacity to the production and testing of products

for their other customers while reducing or limiting capacity to manufacture or test our products. Accordingly, capacity for our products may not be available when we need it or at reasonable prices. To the extent we do obtain long-term capacity commitments, we may incur additional costs related to those commitments and/or make non-refundable payments for capacity commitments that are not used.

One or more of our suppliers or potential alternate suppliers may manufacture CDMA- or OFDMA-based integrated circuits that compete with our products. Such suppliers could elect to allocate raw materials and manufacturing capacity to their own products and reduce or limit deliveries to us to our detriment.

In addition, we may not receive reasonable pricing, manufacturing or delivery terms from our suppliers. We cannot guarantee that the actions of our suppliers will not cause disruptions in our operations that could harm our ability to meet our delivery obligations to our customers or increase our cost of sales.

Additionally, we place orders with our suppliers using our and/or our customers' forecasts of customer demand, which are based on a number of assumptions and estimates. As we move to smaller geometry process technologies, the manufacturing lead-time increases. As a result, the orders we place with our suppliers are generally only partially covered by commitments from our customers. If we, or our customers, overestimate customer demand that is not under a binding commitment from our customer, we may experience increased excess and/or obsolete inventory, which would negatively impact our results of operations.

Claims by other companies that we infringe their intellectual property could adversely affect our business.

From time to time, companies have asserted, and may again assert, patent, copyright and other intellectual property rights against our products or products using our technologies or other technologies used in our industry. These claims have resulted and may again result in our involvement in litigation. We may not prevail in such litigation given, among other factors, the complex technical issues and inherent uncertainties in intellectual property litigation. If any of our products or services were found to infringe another company's intellectual property rights, we could be subject to an injunction or be required to redesign our products or services, which could be costly, or to license such rights and/or pay damages or other compensation to such other company. If we are unable to redesign our products or services, license such intellectual property rights used in our products or services or otherwise distribute our products (e.g., through a licensed supplier), we could be prohibited from making and selling such products or providing such services. In any potential dispute involving other companies' patents or other intellectual property, our chipset foundries, semiconductor assembly and test providers and customers could also become the targets of litigation. We are contingently liable under certain product sales, services, license and other agreements to indemnify certain customers, chipset foundries and semiconductor assembly and test service providers against certain types of liability and/or damages arising from qualifying claims of patent infringement by products or services sold or provided by us, or by intellectual property provided by us to our chipset foundries and semiconductor assembly and test service providers. Reimbursements under indemnification arrangements could have an adverse effect on our results of operations and/or cash flows. Furthermore, any such litigation could severely disrupt the supply of our products and the businesses of our chipset customers and their customers, which in turn could hurt our relationships with them and could result in a decline in our chipset sales and/or reductions in our licensees' sales, causing a corresponding decline in our chipset and/or licensing revenues. Any claims, regardless of their merit, could be time consuming to address, result in costly litigation, divert the efforts of our technical and management personnel or cause product release or shipment delays, any of which could have an adverse effect on our results of operations and cash flows.

We expect that we may continue to be involved in litigation and may have to appear in front of administrative bodies (such as the United States International Trade Commission) to defend against patent assertions against our products by companies, some of whom are attempting to gain competitive advantage or leverage in licensing negotiations. We may not be successful in such proceedings, and if we are not, the range of possible outcomes is very broad and may include, for example, monetary damages or fines or other orders to pay money, royalty payments, injunctions on the sale of certain of our integrated circuit products (and/or on the sale of our customers' devices using such products) and/or the issuance of orders to cease certain conduct and/or modify our business practices. Further, a governmental body in a particular country or region may assert, and may be successful in imposing, remedies with effects that extend beyond the borders of that country or region. In addition, a negative outcome in any such proceeding could severely disrupt the business of our chipset customers and their wireless operator customers, which in turn could harm our relationships with them and could result in a decline in our worldwide chipset sales and/or a reduction in our

licensees' sales to wireless operators, causing corresponding declines in our chipset and/or licensing revenues.
Certain legal matters, including certain claims by other companies that we infringe their intellectual property, are described more fully in this Annual Report in "Notes to Consolidated Financial Statements, Note 7. Commitments and Contingencies."

We may engage in strategic acquisitions, transactions or make investments, or be unable to consummate planned strategic acquisitions, which could adversely affect our results of operations or fail to enhance stockholder value.
We engage in strategic acquisitions and other transactions, including joint ventures, and make investments, which we believe are important to the future of our business, with the goal of maximizing stockholder value. We acquire businesses and other assets, including patents, technology, wireless spectrum and other intangible assets, enter into joint ventures or other strategic transactions and purchase minority equity interests in or make loans to companies that may be private and early-stage. Our strategic activities are generally focused on opening or expanding opportunities for our technologies and supporting the design and introduction of new products and services (or enhancing existing products or services) for voice and data communications and new industry segments. Recent material transactions include our RF360 Holdings joint venture with TDK Corporation and our acquisition of CSR plc. Many of our strategic activities entail a high degree of risk and require the use of domestic and/or foreign capital, and investments may not become liquid for several years after the date of the investment, if at all. Our strategic activities may not generate financial returns or result in increased adoption or continued use of our technologies, products or services. We may underestimate the costs and/or overestimate the benefits, including product, revenue, cost and other synergies and growth opportunities that we expect to realize, and we may not achieve those benefits. In some cases, we may be required to consolidate or record our share of the earnings or losses of companies in which we have acquired ownership interests. In addition, we may record impairment charges related to our strategic activities. Any losses or impairment charges that we incur related to strategic activities will have a negative impact on our financial condition and results of operations, and we may continue to incur new or additional losses related to strategic assets or investments that we have not fully impaired or exited.
Achieving the anticipated benefits of business acquisitions, including joint ventures and other strategic investments in which we have management and operational control, depends in part upon our ability to integrate the businesses in an efficient and effective manner and achieve anticipated synergies, and we may not be successful in these efforts. Such integration is complex and time consuming and involves significant challenges, including, among others: retaining key employees; successfully integrating new employees, technology, products, processes, operations (including manufacturing operations), sales and distribution channels, business models and business systems; retaining customers and suppliers of the businesses; consolidating research and development and/or supply operations; minimizing the diversion of management’s attention from ongoing business matters; consolidating corporate and administrative infrastructures; and managing the increased scale, complexity and globalization of our business, operations and employee base. We may not derive any commercial value from associated technologies or products or from future technologies or products based on these technologies, and we may be subject to liabilities that are not covered by indemnification protection that we may obtain, and we may become subject to litigation. Additionally, we may not be successful in entering or expanding into new sales or distribution channels, business or operational models (including manufacturing), geographic regions, industry segments and/or categories of products served by or adjacent to the associated businesses or in addressing potential new opportunities that may arise out of the combination.
If we do not achieve the anticipated benefits of business acquisitions or other strategic activities, our business and results of operations may be adversely affected, and we may not enhance stockholder value by engaging in these transactions.
In fiscal 2018, we terminated our proposed acquisition of NXP since the acquisition had not been approved by the State Administration for Market Regulation (SAMR) in China by the date specified in the acquisition agreement. As a result, we will not realize the benefits that we anticipated from the acquisition, including, but not limited to, increased revenues; accelerated revenue diversification; significantly expanded addressable markets and opportunities; accelerated entry into new industry segments and expansion in existing industry segments; new and expanded product offerings and technologies; accelerated expansion of sales and distribution channels; cost and other synergies; and earnings accretion from the acquisition. In addition, future acquisitions may now be more difficult, complex or expensive to the extent that our reputation for our ability to consummate acquisitions has been harmed. Further, if U.S./China trade relations remain strained, our ability to consummate any transaction that would require approval from SAMR may be severely impacted.
If we are unsuccessful in executing our cost plan, our business and results of operations may be adversely affected.

In the second quarter of fiscal 2018, we announced a cost plan designed to align our cost structure to our long-term margin targets. As part of this plan, we are implementing a series of targeted reductions across our businesses to reduce annual costs by $1 billion, excluding incremental costs resulting from any future acquisition of a business. We expect these cost reductions to be fully captured in fiscal 2019.

We cannot provide assurance that our cost plan will be successful, that anticipated cost savings will be realized, that our operations, business and financial results will improve and/or that these efforts will not disrupt our operations (beyond what is intended). Our ability to achieve the anticipated cost savings and other benefits within the expected time frames is subject

to many estimates and assumptions, which are subject to significant economic, competitive and other uncertainties, some of which are beyond our control. Further, we may experience delays in the timing of these efforts and/or higher than expected or unanticipated costs in implementing them. Moreover, changes in the size, alignment or organization of our workforce could adversely affect employee morale and retention, relations with customers and business partners, our ability to develop and deliver products and services as anticipated and/or impair our ability to realize our current or future business and financial objectives. If we do not succeed in these efforts, if these efforts are more costly or time-consuming than expected, if our estimates and assumptions are not correct, if we experience delays or if other unforeseen events occur, our business and results of operations may be adversely affected.

We are subject to various laws, regulations, policies and standards. Our business may suffer as a result of existing, or new or amended, laws, regulations, policies or standards and/or our failure or inability to comply with laws, regulations, policies or standards.

Our business, products and services, and those of our customers and licensees, are subject to various laws and regulations globally, as well as government policies and the specifications of international, national and regional communications standards bodies. Compliance with existing laws, regulations, policies and standards, the adoption of new laws, regulations, policies or standards, changes in the interpretation of existing laws, regulations, policies or standards, changes in the regulation of our activities by a government or standards body and/or rulings in court, regulatory, administrative or other proceedings relating to such laws, regulations, policies or standards, including, among others, those affecting licensing practices, competitive business practices, the use of our technology or products, protection of intellectual property, trade and trade protection, including tariffs, foreign currency, investments or loans, spectrum availability and license issuance, adoption of standards, the provision of device subsidies by wireless operators to their customers, taxation, export control, privacy and data protection, environmental protection, health and safety, labor and employment, human rights, corporate governance, public disclosure or business conduct could have an adverse effect on our business and results of operations.

Government policies, particularly in China, that regulate the amount and timing of funds that may flow out of a country may impact the timing of our receipt of payments from our customers and/or licensees in such country, which may negatively impact our cash flows.

Delays in government approvals or other governmental activities that could result from, among others, a decrease in or a lack of funding for certain agencies or branches of the government and/or political changes, could result in our incurring higher costs, could negatively impact our ability to timely consummate strategic transactions and/or could have other negative impacts on our business and the businesses of our customers and licensees.

National, state and local environmental laws and regulations affect our operations around the world. These laws may make it more expensive to manufacture, have manufactured and sell products, and our costs could increase if our vendors (e.g., suppliers, third-party manufacturers or utility companies) pass on their costs to us. The imposition of tariffs on raw materials or our products could have a negative impact on our revenues and/or results of operations. We are also subject to laws and regulations impacting the manufacturing operations of our RF360 Holdings joint venture. See the Risk Factor entitled “There are numerous risks associated with our operation and control of the manufacturing facilities of our joint venture with TDK, RF360 Holdings, including a higher portion of fixed costs relative to a fabless model, environmental compliance and liability, exposure to natural disasters, timely supply of equipment and materials and manufacturing difficulties.”

Regulations in the United States require that we determine whether certain materials used in our products, referred to as conflict minerals, originated in the Democratic Republic of the Congo or an adjoining country (collectively, the Covered Countries), or were from recycled or scrap sources. Other countries and/or regions are expected to impose similar requirements in the future. The verification and reporting requirements, in addition to customer demands for conflict free sourcing, impose additional costs on us and on our suppliers and may limit the sources or increase the prices of materials used in our products. Further, if we are unable to determine that the conflict minerals used in our products do not directly or indirectly finance or benefit armed groups in the Covered Countries, we may face challenges with our customers that place us at a competitive disadvantage, and our reputation may be harmed. Similarly, other laws and regulations have been adopted or proposed that require additional transparency regarding the employment practices of our suppliers, and any failure to maintain responsible sourcing practices could also adversely affect our relationships with customers and our reputation.

Laws, regulations, policies and standards are complex and changing and may create uncertainty regarding compliance. Laws, regulations, policies and standards are subject to varying interpretations in many cases, and their application in practice may evolve over time. As a result, our efforts to comply may fail, particularly if there is ambiguity as to how they should be applied in practice. Failure to comply with any law, regulation, policy or standard may adversely affect our business, results

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of operations and/or cash flows. New laws, regulations, policies and standards or evolving interpretations of legal requirements may cause us to incur higher costs as we revise current practices, policies and/or procedures and may divert management time and attention to compliance activities.

Our use of open source software may harm our business.

Certain of our software and our suppliers' software may contain or may be derived from "open source" software, and we have seen, and believe we will continue to see, an increase in customers requesting that we develop products, including software associated with our integrated circuit products, that incorporate open source software elements and operate in an open source environment, which, under certain open source licenses, may offer accessibility to a portion of a product's source code and may expose related intellectual property to adverse licensing conditions. Licensing of such software may impose certain obligations on us if we were to distribute derivative works of the open source software. For example, these obligations may require us to make source code for the derivative works available to our customers in a manner that allows them to make such source code available to their customers or license such derivative works under a particular type of license that is different than what we customarily use to license our software. Developing open source products, while adequately protecting the intellectual property rights upon which our licensing business depends, may prove burdensome and time-consuming under certain circumstances, thereby placing us at a competitive disadvantage, and we may not adequately protect our intellectual property rights. Also, our use and our customers' use of open source software may subject our products and our customers' products to governmental scrutiny and delays in product certification, which could cause customers to view our products as less desirable than our competitors' products. While we believe we have taken appropriate steps and employ adequate controls to protect our intellectual property rights, our use of open source software presents risks that could have an adverse effect on these rights and on our business.

Our stock price, earnings and the fair value of our investments are subject to substantial quarterly and annual fluctuations and to market downturns.

Our stock price and earnings have fluctuated in the past and are likely to fluctuate in the future. Factors that may have a significant impact on the market price of our stock and/or earnings include those identified throughout this Risk Factors section, volatility of the stock market in general and technology-based companies in particular, announcements concerning us, our suppliers, our competitors or our customers or licensees and variations between our actual financial results or guidance and expectations of securities analysts or investors, among others. Further, increased volatility in the financial markets and/or overall economic conditions may reduce the amounts that we realize in the future on our cash equivalents and/or marketable securities and may reduce our earnings as a result of any impairment charges that we record to reduce recorded values of marketable securities to their fair values.

In the past, securities class action litigation has been brought against companies following periods of volatility in the market price of their securities. Due to changes in our stock price, we are and may in the future be the target of securities litigation. Securities litigation could result in substantial uninsured costs and divert management's attention and our resources. Certain legal matters, including certain securities litigation brought against us, are described more fully in this Annual Report in "Notes to Consolidated Financial Statements, Note 7. Commitments and Contingencies."

There are risks associated with our indebtedness and our significant proposed stock repurchase program.

Our outstanding indebtedness and any additional indebtedness we incur, may have negative consequences on our business, including, among others:

- requiring us to use cash to pay the principal of and interest on our indebtedness, thereby reducing the amount of cash available for other purposes;
- limiting our ability to obtain additional financing for working capital, capital expenditures, acquisitions, stock repurchases, dividends or other general corporate and other purposes;
- limiting our flexibility in planning for, or reacting to, changes in our business and our industry; and/or
- increasing our vulnerability to interest rate fluctuations to the extent a portion of our debt has variable interest rates.

Our ability to make payments of principal and interest on our indebtedness depends upon our future performance, which is subject to general economic conditions, industry cycles and financial, business and other factors, including factors which negatively impact our cash flows, such as licensees withholding some or all of the royalty payments they owe to us or paying fines in connection with regulatory investigations, many of which are beyond our control. If we are unable to generate sufficient cash flow from operations in the future to service our debt, we may be required to,

among other things: refinance or restructure all or a portion of our indebtedness; reduce or delay planned capital or operating expenditures; or sell selected assets. Such measures might not be sufficient to enable us to service our debt. In addition, any such refinancing, restructuring

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or sale of assets might not be available on economically favorable terms or at all, and if prevailing interest rates at the time of any such refinancing and/or restructuring are higher than our current rates, interest expense related to such refinancing and/or restructuring would increase. If there are adverse changes in the ratings assigned to our debt securities by credit rating agencies, our borrowing costs, our ability to access debt in the future and/or the terms of such debt could be adversely affected.

We have implemented a stock repurchase program to repurchase up to $30 billion of our outstanding common stock. This stock repurchase program has significantly reduced and will continue to reduce the amount of cash that we have available to fund our operations, including research and development, working capital, capital expenditures, acquisitions, investments, dividends and other corporate purposes; and increases our exposure to adverse economic, market, industry and competitive conditions and developments, and other changes in our business and our industry. In addition, this significant decrease in our cash reserves exacerbates the risks described above associated with our indebtedness.

Our business and operations could suffer in the event of security breaches of our information technology systems, or other misappropriation of our intellectual property or proprietary or confidential information.

Third parties regularly attempt to gain unauthorized access to our information technology systems, and most of such attempts are increasingly more sophisticated. These attempts, which might be related to industrial or other espionage, criminal hackers or state-sponsored intrusions, include trying to covertly introduce malware to our computers and networks, including those in our manufacturing operations, and impersonating authorized users, among others. Such attempts could result in the misappropriation, theft, misuse, disclosure or loss or destruction of the intellectual property, or the proprietary, confidential or personal information, of us or our employees, customers, licensees, suppliers or other third parties, as well as damage to or disruptions in our information technology systems. These threats are constantly evolving, thereby increasing the difficulty of successfully defending against them or implementing adequate preventative measures.

We seek to detect and investigate all security incidents and to prevent their recurrence but attempts to gain unauthorized access to our information technology systems may be successful, and in some cases, we might be unaware of an incident or its magnitude and effects. The misappropriation, theft, misuse, disclosure or loss or destruction of the intellectual property, or the proprietary, confidential or personal information, of us or our employees, customers, licensees, suppliers or other third parties could harm our competitive position, reduce the value of our investment in research and development and other strategic initiatives, cause us to lose business, damage our reputation, subject us to legal or regulatory proceedings, cause us to incur other loss or liability and/or otherwise adversely affect our business. We expect to continue to devote significant resources to the security of our information technology systems.

In addition, employees and former employees, in particular former employees who become employees of our competitors, customers or licensees, may misappropriate, use, publish or provide to our competitors, customers or licensees our intellectual property and/or proprietary or confidential business information. Similarly, we provide access to certain of our intellectual property and/or proprietary and/or confidential business information to our direct and indirect customers and licensees, who may wrongfully use such intellectual property and/or information and/or wrongfully disclose such intellectual property and/or information to third parties, including our competitors.

Potential tax liabilities could adversely affect our results of operations.

We are subject to income taxes in the United States and numerous foreign jurisdictions, including Singapore where our QCT segment's non-U.S. headquarters is located. Significant judgment is required in determining our provision for income taxes. We regularly are subject to examination of our tax returns and reports by taxing authorities in the United States federal jurisdiction and various state and foreign jurisdictions, most notably in countries where we earn a routine return and the tax authorities believe substantial value-add activities are performed. Our current examinations are at various stages with respect to assessments, claims, deficiencies and refunds. We continually assess the likelihood and amount of potential adjustments and adjust the income tax provision, income taxes payable and deferred taxes in the period in which the facts give rise to a revision become known. Although we believe that our tax estimates are reasonable at September 30, 2018, the final determination of tax audits and any related legal proceedings could materially differ from amounts reflected in our historical income tax provisions and accruals. In such case, our income tax provision, results of operations and/or cash flows in the period or periods in which that

determination is made could be negatively affected.

On December 22, 2017, tax reform legislation known as the Tax Cuts and Jobs Act (the Tax Legislation) was enacted in the United States. Given the amount and complexity of the changes in tax law resulting from the Tax Legislation, we have not finalized the accounting for the income tax effects of the Tax Legislation. This includes the provisional amounts recorded related to the repatriation tax on deemed repatriated earnings and profits of U.S.-owned foreign subsidiaries (Toll Charge). Further, we are in the process of analyzing the effects of new taxes due on certain foreign income, such as GILTI (global intangible low-taxed income), BEAT (base-erosion anti-abuse tax), FDII (foreign-derived intangible income) and limitations

on interest expense deductions (if certain conditions apply) that are effective starting in fiscal 2019, and other provisions of the Tax Legislation. The impact of the Tax Legislation related to the Toll Charge may differ from this estimate, possibly materially, during the one-year measurement period due to, among other things, further refinement of our calculations, changes in interpretations and assumptions we have made, guidance that may be issued and actions we may take as a result of the Tax Legislation.

We have tax incentives in Singapore provided that we meet specified employment and other criteria, and as a result of the expiration of these incentives, our Singapore tax rate is expected to increase in fiscal 2022 and again in fiscal 2027. If we do not meet the criteria required to retain such incentives, our Singapore tax rate could increase prior to fiscal 2022, and our results of operations and cash flows could be adversely affected.

Tax rules may change in a manner that adversely affects our future reported results of operations or the way we conduct our business.

Further changes in the tax laws of foreign jurisdictions could arise as a result of the base erosion and profit shifting (BEPS) project that was undertaken by the Organization for Economic Co-operation and Development (OECD). The OECD, which represents a coalition of member countries, recommended changes to numerous long-standing tax principles related to transfer pricing. These changes, as adopted by countries, may increase tax uncertainty and may adversely affect our provision for income taxes, results of operations and/or cash flow. We have not yet determined what changes, if any, may be needed to our operations or structure to address BEPS. If our effective tax rates were to increase, particularly in the United States or Singapore, our results of operations, cash flows and/or financial condition could be adversely affected.

Global, regional or local economic conditions, or political actions including trade protection policies such as tariffs, that impact the mobile communications industry or the other industries in which we operate could negatively affect the demand for our products and services and our customers' or licensees' products and services, which may negatively affect our revenues.

A decline in global, regional or local economic conditions or a slow-down in economic growth, or political actions including trade protection policies such as tariffs, particularly in geographic regions with high concentrations of wireless voice and data users or high concentrations of our customers or licensees, could have adverse, wide-ranging effects on demand for our products and for the products and services of our customers or licensees, particularly equipment manufacturers or others in the wireless communications industry who buy their products, such as wireless operators. Any prolonged economic downturn or "trade war" may result in a decrease in demand for our products or technologies; the products of our customers or licensees; the insolvency of key suppliers, customers or licensees; delays in reporting and/or payments from our licensees and/or customers; failures by counterparties; and negative effects on wireless device inventories. In addition, our customers' ability to purchase or pay for our products and services and network operators' ability to upgrade their wireless networks could be adversely affected by economic conditions, leading to a reduction, cancelation or delay of orders for our products or services.

We may not be able to attract and retain qualified employees.

Our future success depends largely upon the continued service of our executive officers and other key management and technical personnel, and on our ability to continue to identify, attract, retain and motivate them, which may become increasingly difficult in an environment of cost reductions. Implementing our business strategy requires specialized engineering and other talent, as our revenues are highly dependent on technological and product innovations. The market for employees in our industry is extremely competitive. Further, existing immigration laws make it more difficult for us to recruit and retain highly skilled foreign national graduates of universities in the United States, making the pool of available talent even smaller. If we are unable to attract and retain qualified employees, our business may be harmed.

Currency fluctuations could negatively affect future product sales or royalty revenues, harm our ability to collect receivables or increase the U.S. dollar cost of our products.

Our customers sell their products throughout the world in various currencies. Our consolidated revenues from international customers and licensees as a percentage of our total revenues were greater than 90% in each of the last three fiscal years. Adverse movements in currency exchange rates may negatively affect our business, revenues, results of operations and/or cash flows due to a number of factors, including, among others:

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Our products and those of our customers and licensees that are sold outside the United States may become less price-competitive, which may result in reduced demand for those products and/or downward pressure on average selling prices;

- Certain of our revenues that are derived from products that are sold in foreign currencies could decrease, resulting in lower revenues, cash flows and margins;
- Certain of our revenues, such as royalties, that are derived from licensee or customer sales denominated in foreign currencies could decrease, resulting in lower revenues and cash flows;
- Our foreign suppliers may raise their prices if they are impacted by currency fluctuations, resulting in higher than expected costs and lower margins;
- Certain of our costs that are denominated in foreign currencies could increase, resulting in higher than expected costs and cash outflows; and/or
- Foreign exchange hedging transactions that we engage in to reduce the impact of currency fluctuations may require the payment of structuring fees, limit the U.S. dollar value of royalties from licensees' sales that are denominated in foreign currencies, cause earnings volatility if the hedges do not qualify for hedge accounting and expose us to counterparty risk if the counterparty fails to perform.

Failures in our products or services or in the products or services of our customers or licensees, including those resulting from security vulnerabilities, defects or errors, could harm our business.

The use of devices containing our products to interact with untrusted systems or otherwise access untrusted content creates a risk of exposing the system hardware and software in those devices to malicious attacks. While we continue to focus on this issue and are taking measures to safeguard our products from cybersecurity threats, device capabilities continue to evolve, enabling more elaborate functionality and applications, and increasing the risk of security failures. Further, our products are inherently complex and may contain defects or errors that are detected only when the products are in use. Because our products and services are responsible for critical functions in our customers' products and/or networks, security failures, defects or errors in our products or services could have an adverse impact on us, on our customers and/or on the end users of our customers' products. Such adverse impact could include shipment delays; product liability claims or recalls; write-offs of our inventories, property, plant and equipment and/or intangible assets; unfavorable purchase commitments; a shift of business to our competitors; a decrease in demand for connected devices and wireless services; damage to our reputation and our customer relationships; regulatory actions; and other financial liability or harm to our business. Further, security failures, defects or errors in the products of our customers or licensees could have an adverse impact on our results of operations and/or cash flows due to a delay or decrease in demand for our products or services generally, and our premium-tier products in particular, among other factors. Development of products and features in new domains of technology and the migration to integrated circuit technologies with smaller geometric feature sizes are complex and add risk to manufacturing yields and reliability. Further, manufacturing, testing, marketing and use of our products and those of our customers and licensees entail the risk of product liability.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

At September 30, 2018, we occupied the following facilities (square footage in millions):

	United States	Other Countries	Total
Owned facilities	4.5	0.3	4.8
Leased facilities	1.1	5.1	6.2
Total	5.6	5.4	11.0

Our headquarters as well as certain research and development, manufacturing and network management hub operations are located in San Diego, California. Additionally, our QCT segment's non-United States headquarters is located in Singapore. Our consolidated RF360 Holdings joint venture with TDK leases manufacturing facilities in Germany, China and Singapore. We also own and lease properties around the world for use as sales and administrative offices and research and development centers, primarily in the United States and India. Our facility leases expire at varying dates through 2026, not including renewals that are at our option. Several other owned and leased facilities are under construction totaling approximately 437,000 additional square feet.

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We believe that our facilities are suitable and adequate for our present purposes and that the productive capacity in facilities that are not under construction is substantially utilized. We do not identify or allocate facilities by operating segment. Additional information on net property, plant and equipment by geography is provided in this Annual Report in "Notes to Consolidated Financial Statements, Note 8. Segment Information." In the future, we may need to purchase, build or lease additional facilities to meet the requirements projected in our long-term business plan.

Item 3. Legal and Regulatory Proceedings

Information regarding legal and regulatory proceedings is provided in this Annual Report in "Notes to Consolidated Financial Statements, Note 7. Commitments and Contingencies." We are also engaged in numerous other legal actions arising in the ordinary course of our business and, while there can be no assurance, we believe that the ultimate outcome of these other legal actions will not have a material adverse effect on our business, results of operations, financial condition or cash flows.

Item 4. Mine Safety Disclosures

Not applicable.

Part II

Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information and Dividends

Our common stock is traded on the NASDAQ Global Select Market (NASDAQ) under the symbol “QCOM.” At November 5, 2018, there were 6,887 holders of record of our common stock.

We intend to continue to pay quarterly dividends, subject to capital availability and our view that cash dividends are in the best interests of our stockholders. Future dividends may be affected by, among other items, our views on potential future capital requirements, including those relating to research and development, creation and expansion of sales and distribution channels, investments and acquisitions, legal risks, withholding of payments by one or more of our significant licensees and/or customers, fines by government agencies and/or adverse rulings by a court or arbitrator in a legal matter, stock repurchase programs, debt issuances, changes in federal and state income tax law and changes to our business model.

Share-Based Compensation

We primarily issue restricted stock units under our equity compensation plans, which are part of a broad-based, long-term retention program that is intended to attract and retain talented employees and directors and align stockholder and employee interests.

Our 2016 Long-Term Incentive Plan (2016 Plan) provides for the grant of both incentive and nonstatutory stock options, stock appreciation rights, restricted stock, unrestricted stock, restricted stock units, performance units, performance shares, deferred compensation awards and other stock-based awards. Restricted stock units generally vest over periods of three years from the date of grant. Stock options vest over periods not exceeding five years and are exercisable for up to ten years from the grant date. The Board of Directors may amend or terminate the 2016 Plan at any time, with certain amendments also requiring stockholder approval.

Additional information regarding our share-based compensation plans and plan activity for fiscal 2018, 2017 and 2016 is provided in this Annual Report in “Notes to Consolidated Financial Statements, Note 5. Employee Benefit Plans.”

Issuer Purchases of Equity Securities

Issuer purchases of equity securities during the fourth quarter of fiscal 2018 were:

	Total Number of Shares Purchased	Average Price Paid Per Share (1)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (2)
	(In thousands)		(In thousands)	(In millions)
June 25, 2018 to July 22, 2018	—	$ ——		$ 9,000
July 23, 2018 to August 26, 2018	—	—	—	30,000
August 27, 2018 to September 30, 2018				
Accelerated share repurchases (3)	178,397		178,397	14,000
Other repurchases (4)	76,205	67.50	76,205	8,856
Total	254,602		254,602	

(1) Average Price Paid Per Share excludes cash paid for commissions.

(2) On July 26, 2018, we announced a repurchase program authorizing us to repurchase up to $30 billion of our common stock replacing the existing $10 billion stock repurchase authorization. At September 30, 2018, $8.9 billion remained authorized for repurchase. The stock repurchase program has no expiration date. Since September 30, 2018, we repurchased and retired 8.5 million shares of common stock for $542 million.

(3) In September 2018, we entered into three accelerated share repurchase agreements (ASR Agreements) to repurchase an aggregate of $16.0 billion of our common stock. During the fourth quarter of fiscal 2018, 178.4 million shares were initially delivered to us under the ASR Agreements and were retired. Pursuant to the terms of the ASR Agreements, the final number of shares and the average

purchase price will be determined at the end of the applicable purchase periods, which are scheduled to occur in August 2019 but may occur earlier in certain circumstances.
(4) Other repurchases result from the completion of a “modified Dutch auction” tender offer in August 2018.

Item 6. Selected Financial Data

The following data should be read in conjunction with the annual consolidated financial statements, related notes and other financial information appearing elsewhere herein.

	Years Ended (1)				
	September 30, 2018	September 24, 2017	September 25, 2016	September 27, 2015	September 28, 2014
	(In millions, except per share data)				
Statement of Operations Data:					
Revenues	$22,732	$ 22,291	$ 23,554	$ 25,281	$ 26,487
Operating income	742	2,614	6,495	5,776	7,550
(Loss) income from continuing operations (2)	(4,864)	2,465	5,702	5,268	7,534
Discontinued operations, net of income taxes	—	—	—	—	430
Net (loss) income attributable to Qualcomm (2)	(4,864)	2,466	5,705	5,271	7,967
Per Share Data:					
Basic (loss) earnings per share attributable to Qualcomm:					
Continuing operations	$(3.32)	$ 1.67	$ 3.84	$ 3.26	$ 4.48
Discontinued operations	—	—	—	—	0.25
Net (loss) income	(3.32)	1.67	3.84	3.26	4.73
Diluted (loss) earnings per share attributable to Qualcomm:					
Continuing operations	(3.32)	1.65	3.81	3.22	4.40
Discontinued operations	—	—	—	—	0.25
Net (loss) income	(3.32)	1.65	3.81	3.22	4.65
Dividends per share announced	2.38	2.20	2.02	1.80	1.54
Balance Sheet Data:					
Cash, cash equivalents and marketable securities (3)	$12,123	$ 38,578	$ 32,350	$ 30,947	$ 32,022
Total assets (3)	32,686	65,486	52,359	50,796	48,574
Short-term debt (4)	1,005	2,495	1,749	1,000	—
Long-term debt (5)	15,365	19,398	10,008	9,969	—
Other long-term liabilities (6)	1,225	2,432	895	817	428
Total stockholders' equity (3)	928	30,746	31,768	31,414	39,166

(1) Our fiscal year ends on the last Sunday in September. The fiscal year ended September 30, 2018 included 53 weeks. The fiscal years ended September 24, 2017, September 25, 2016, September 27, 2015 and September 28, 2014 each included 52 weeks.

(2) Revenues in fiscal 2018 were negatively impacted by our continued dispute with Apple and its contract manufacturers, partially offset by $600 million paid under an interim agreement with the other licensee in dispute (which dispute was previously disclosed). Operating income in fiscal 2018 was further negatively impacted by a $2.0 billion charge related to the NXP termination fee, a $1.2 billion charge related to the fine imposed by the European Commission and $629 million in charges related to our Cost Plan, partially offset by a $676 million benefit resulting from the settlement with the Taiwan Fair Trade Commission (TFTC). Additionally, net loss for fiscal 2018 was negatively impacted by the $5.7 billion charge related to the Tax Legislation.

Revenues in fiscal 2017 were negatively impacted by actions taken by Apple and its contract manufacturers and the previously disclosed dispute with another licensee, who did not fully report or fully pay royalties due in the last three quarters of fiscal 2017, as well as a $940 million reduction to revenues recorded related to the BlackBerry arbitration. Operating income was further negatively impacted by $927 million and $778 million in charges related to the fines imposed by the Korea Fair Trade Commission and TFTC, respectively.

(3) In the fourth quarter of fiscal 2018, we announced a stock repurchase program authorizing us to repurchase up to $30 billion of our common stock. Under this program, we completed a tender offer and paid an aggregate of $5.1

billion to repurchase shares of our common stock and entered into three accelerated share repurchase agreements to repurchase an aggregate of $16.0 billion of our

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common stock, resulting in significant reductions to the balances of our cash, cash equivalents and marketable securities, total assets and total stockholders’ equity.

(4) Short-term debt was comprised of outstanding commercial paper and, in fiscal 2017, the current portion of long-term debt.

(5) Long-term debt was comprised of floating- and fixed-rate notes.

(6) Other long-term liabilities in this balance sheet data exclude unearned revenues.

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

In addition to historical information, the following discussion contains forward-looking statements that are subject to risks and uncertainties. Actual results may differ materially from those referred to herein due to a number of factors, including but not limited to risks described in “Part I, Item 1A. Risk Factors” and elsewhere in this Annual Report. The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and related notes included in “Part II, Item 8. Financial Statements and Supplementary Data” of this Annual Report.

Fiscal 2018 Overview

Revenues were $22.7 billion, an increase of 2% from fiscal 2017, with net loss attributable to Qualcomm of $4.9 billion, compared to net income of $2.5 billion in fiscal 2017. Highlights and other events from fiscal 2018 included:

- The transition of wireless networks and devices to 3G/4G (CDMA-single mode, OFDMA-single mode and CDMA/OFDMA multi-mode) continued around the world. 3G/4G connections increased to approximately 5.5 billion, up 17% year-over-year, and represent approximately 69% of total mobile connections at the end of fiscal 2018, up from 60% at the end of fiscal 2017.[(1)]
- We continue to invest significant resources toward advancements primarily in support of 4G- and 5G-based technologies as well as other technologies to extend the demand for our products and generate new or expanded licensing opportunities, including within adjacent industry segments outside traditional cellular industries, such as automotive, the Internet of Things (IoT) and networking.
- QCT results in fiscal 2018 were positively impacted by results from our RF360 Holdings joint venture, which was formed in the second quarter of fiscal 2017, and higher demand from OEMs in China, partially offset by lower modem sales to Apple.
- QTL results were negatively impacted by our continued dispute with Apple and its contract manufacturers (who are Qualcomm licensees). We did not record any revenues in fiscal 2018 for royalties due on sales of Apple’s products. QTL revenues in fiscal 2018 included $600 million paid under an interim agreement with the other licensee in dispute (which dispute was previously disclosed). This represents a partial payment for royalties due after the second quarter of fiscal 2017 by that other licensee while negotiations continue. This payment does not reflect the full amount of royalties due under the underlying license agreement.
- In the first quarter of fiscal 2018, tax reform legislation known as the Tax Cuts and Jobs Act (the Tax Legislation) was enacted in the United States. As a result of such enactment, net loss for fiscal 2018 included an estimated $5.7 billion charge to income tax expense, comprised of a one-time tax on deemed repatriated earnings and profits of U.S.-owned foreign subsidiaries (the Toll Charge) of $5.2 billion and a charge of $438 million resulting from the remeasurement of deferred tax assets and liabilities that existed at the end of fiscal 2017 at a lower enacted corporate tax rate Further, our federal statutory income tax rate for fiscal 2018 reflected a blended rate of approximately 25%.
- In January 2018, the European Commission (EC) issued a decision finding that certain terms of an agreement with Apple violate European Union competition law and imposed a fine of 997 million Euros ($1.2 billion), which was recorded as a charge to other expenses in the first quarter of fiscal 2018. We provided financial guarantees to satisfy the obligation in lieu of cash payment while we appeal the EC’s decision.
- In the second quarter of fiscal 2018, we announced a Cost Plan designed to align our cost structure to our long-term margin targets, under which we continue to execute on a series of targeted actions across our businesses to reduce annual costs by $1 billion, excluding incremental costs resulting from any future acquisition of a business. We expect these cost reductions to be fully captured in fiscal 2019. We recorded restructuring and restructuring-related charges of $687 million in fiscal 2018 related to our Cost Plan.
- In the fourth quarter of fiscal 2018, we reached a settlement with the Taiwan Fair Trade Commission (TFTC) resolving the TFTC’s investigation alleging that we violated the Taiwan Fair Trade Act. As a result of the settlement, the parties agreed that the amounts we paid towards the previously imposed fine will be retained by the TFTC, and no other amounts will be due. As a result, in the fourth quarter of fiscal 2018 we reversed the remaining $676 million accrual that was initially recorded in fiscal 2017 as a benefit to other expense.
- In the fourth quarter of fiscal 2018, we terminated the definitive agreement under which we proposed to acquire NXP Semiconductors N.V. (NXP). In accordance with the terms of the purchase agreement, we paid NXP a termination fee of $2.0 billion, which was recorded as a charge to other expense in the fourth quarter of fiscal 2018.

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- In the fourth quarter of fiscal 2018, following the termination of our agreement to acquire NXP, we announced a stock repurchase program authorizing us to repurchase up to $30 billion of our common stock, the large majority of which we expect to complete by the end of fiscal 2019. In August 2018, we completed a tender offer and paid an aggregate of $5.1 billion to repurchase 76.2 million shares of our common stock. In September 2018, we entered into three accelerated share repurchase agreements to repurchase an aggregate of $16.0 billion of our common stock resulting in an initial delivery to us of 178.4 million shares of our common stock.

(1) According to GSMA Intelligence estimates as of November 5, 2018 (estimates excluded Wireless Local Loop).

Our Business and Operating Segments

We develop and commercialize foundational technologies and products used in mobile devices and other wireless products, including network equipment, broadband gateway equipment and consumer electronics devices. We derive revenues principally from sales of integrated circuit products and licensing our intellectual property, including patents, software and other rights.

We are organized on the basis of products and services and have three reportable segments. We conduct business primarily through our QCT (Qualcomm CDMA Technologies) semiconductor business and our QTL (Qualcomm Technology Licensing) licensing business. QCT develops and supplies integrated circuits and system software based on CDMA, OFDMA and other technologies for use in mobile devices, wireless networks, devices used in IoT, broadband gateway equipment, consumer electronic devices and automotive telematics and infotainment systems. QTL grants licenses to use portions of its intellectual property portfolio, which includes certain patent rights essential to and/or useful in the manufacture and sale of certain wireless products. Our QSI (Qualcomm Strategic Initiatives) reportable segment makes strategic investments. We also have nonreportable segments, including our cyber security solutions (formerly Qualcomm Government Technologies or QGOV), mobile health, small cells and other wireless technology and service initiatives.

Our reportable segments are operated by QUALCOMM Incorporated and its direct and indirect subsidiaries. Substantially all of our products and services businesses, including QCT, and substantially all of our engineering, research and development functions, are operated by Qualcomm Technologies, Inc. (QTI), a wholly-owned subsidiary of QUALCOMM Incorporated, and QTI’s subsidiaries. QTL is operated by QUALCOMM Incorporated, which owns the vast majority of our patent portfolio. Neither QTI nor any of its subsidiaries has any right, power or authority to grant any licenses or other rights under or to any patents owned by QUALCOMM Incorporated.

Further information regarding our business and operating segments is provided in “Part I, Item 1. Business” of this Annual Report.

Seasonality. Many of our products and/or much of our intellectual property are incorporated into consumer wireless devices, which are subject to seasonality and other fluctuations in demand. As a result, QCT has tended historically to have stronger sales toward the end of the calendar year as manufacturers prepare for major holiday selling seasons. Similarly, because QTL has historically recognized royalty revenues when royalties are reported by licensees, QTL has tended to record higher royalty revenues in the first calendar quarter when licensees report their sales made in the fourth calendar quarter. These trends may or may not continue in the future, in part depending on the amount of QCT revenues from modem sales for iPhone products and QTL royalties on sales of Apple’s products, both of which have been significant drivers of our historical seasonality. Further, starting in the first quarter of fiscal 2019, seasonal trends for QTL will be impacted by the adoption of the new guidance related to revenue recognition pursuant to which we will be required to estimate and recognize sales-based royalties in the period in which the associated sales occur, resulting in an acceleration of revenue recognition by one quarter compared to the current method.

We have also experienced fluctuations in revenues due to the timing of conversions and expansions of 3G and 4G networks by wireless operators and the timing of launches of flagship wireless devices and consumer demand for wireless devices that incorporate our products and/or intellectual property. The seasonal trends for QTL have been, and may in the future be, impacted by disputes and/or resolutions with licensees.

Results of Operations

Revenues (in millions)

	2018	2017	2016	2018 vs. 2017 Change	2017 vs. 2016 Change

Equipment and services	$17,400	$16,647	$15,467	$ 753	$1,180
Licensing	5,332	5,644	8,087	(312)	(2,443)
	$22,732	$22,291	$23,554	$ 441	$(1,263)

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2018 vs. 2017

The increase in revenues in fiscal 2018 was primarily due to:

+$962 million reduction to licensing revenues recorded in fiscal 2017 related to the BlackBerry arbitration
+$745 million in higher equipment and services revenues from our QCT segment
-$1.3 billion in lower licensing revenues from our QTL segment
-$100 million reduction to licensing revenues recorded in fiscal 2018 related to a portion of a business arrangement that resolved a legal dispute

2017 vs. 2016

The increase in revenues in fiscal 2017 was primarily due to:

+$1.1 billion in higher equipment and services revenues from our QCT segment
+$66 million in higher equipment and services revenues from our QSI segment
-$1.2 billion in lower licensing revenues from our QTL segment
-$962 million reduction to licensing revenues recorded in fiscal 2017 related to the BlackBerry arbitration
-$103 million in lower licensing revenues of one of our nonreportable segments

Revenue Concentrations

In fiscal 2018, revenues from Samsung Electronics, Xiaomi Corporation and suppliers to Apple Inc. each comprised more than 10% of consolidated revenues. In fiscal 2018 and 2017, combined revenues from GuangDong OPPO Mobile Telecommunications Corp. Ltd. and vivo Communication Technology Co., Ltd., and their respective affiliates, also comprised more than 10% of consolidated revenues. In fiscal 2017 and 2016, revenues from Samsung Electronics and suppliers to Apple Inc. each comprised more than 10% of consolidated revenues. QCT and QTL segment revenues related to the products of these customers/licensees comprised 52%, 58% and 54% of total consolidated revenues in fiscal 2018, 2017 and 2016, respectively.

Revenues from customers in China (including Hong Kong) and South Korea comprised 67% and 14%, respectively, of total consolidated revenues for fiscal 2018, compared to 65% and 16%, respectively, for fiscal 2017, and 57% and 17%, respectively, for fiscal 2016. We report revenues from external customers by country based on the location to which our products or services are delivered, which for QCT is generally the country in which our customers manufacture their products, or for licensing revenues, the invoiced addresses of our licensees. As a result, the revenues by country presented herein are not necessarily indicative of either the country in which the devices containing our products and/or intellectual property are ultimately sold to consumers or the country in which the companies that sell the devices are headquartered. For example, China revenues could include revenues related to shipments of integrated circuits for a company that is headquartered in South Korea but that manufactures devices in China, which devices are then sold to consumers in Europe and/or the United States.

Costs and Expenses (in millions)

	2018	2017	2016	2018 vs. 2017 Change	2017 vs. 2016 Change
Cost of revenues	$10,244	$9,792	$9,749	$ 452	$ 43
Gross margin	55 %	56 %	59 %		

2018 vs. 2017

The decrease in margin percentage in fiscal 2018 was primarily due to:

-decrease in higher margin QTL licensing revenues as a proportion of total revenues
-reduction to licensing revenues recorded in fiscal 2018 related to a portion of a business arrangement that resolved a legal dispute
+reduction to licensing revenues recorded in fiscal 2017 related to the BlackBerry arbitration

2017 vs. 2016

The decrease in margin percentage in fiscal 2017 was primarily due to:

-decrease in higher margin QTL licensing revenues as a proportion of total revenues
-reduction to licensing revenues recorded in fiscal 2017 related to the BlackBerry arbitration
+increase in QCT margin

Our margin percentage may continue to fluctuate in future periods depending on the mix of segment results as well as products sold, competitive pricing, new product introduction costs and other factors, including disputes and/or resolutions with licensees.

	2018	2017	2016	2018 vs. 2017 Change	2017 vs. 2016 Change
Research and development	$5,625	$5,485	$5,151	$ 140	$ 334
% of revenues	25 %	25 %	22 %		

2018 vs. 2017

The dollar increase in research and development expenses in fiscal 2018 was primarily due to:

+ $168 million, net of cost decreases driven by actions initiated under our Cost Plan, in higher costs related to the development of wireless and integrated circuit technologies, including 5G technologies and RFFE technologies from our RF360 Holdings joint venture, which was formed in the second quarter of fiscal 2017, and related software products
- $30 million impairment charge on certain intangible assets recorded in fiscal 2017

2017 vs. 2016

The dollar increase in research and development expenses in fiscal 2017 was primarily due to:

+ $372 million, net of cost decreases driven by actions initiated under our 2015 Strategic Realignment Plan, in higher costs related to the development of integrated circuit technologies, including 5G technologies and RFFE technologies from our RF360 Holdings joint venture, which was formed in the second quarter of fiscal 2017, and related software products

In fiscal 2018, all of the costs ($474 million) related to pre-commercial research and development of 5G technologies were included in unallocated corporate research and development expenses. Beginning in the first quarter of fiscal 2019, all research and development costs associated with 5G technologies will be included in segment results. Additionally, beginning in the first quarter of fiscal 2019, certain research and development costs associated with early research and development that have historically been included in our QCT segment will be allocated to our QTL segment. The net effect of these changes is expected to negatively impact QTL's EBT in fiscal 2019 by approximately $500 million and to not have a significant impact on QCT EBT in fiscal 2019.

	2018	2017	2016	2018 vs. 2017 Change	2017 vs. 2016 Change
Selling, general and administrative	$2,986	$2,658	$2,385	$ 328	$ 273
% of revenues	13 %	12 %	10 %		

2018 vs. 2017

The dollar increase in selling, general and administrative expenses in fiscal 2018 was primarily due to:

+ $325 million in higher litigation costs, with total litigation costs of $554 million and $229 million in fiscal 2018 and fiscal 2017, respectively
+ $45 million in bad debt expense recorded in fiscal 2018
+ $42 million in higher professional fees and costs related to other legal matters, which was primarily driven by Broadcom's withdrawn takeover proposal, partially offset by lower third-party acquisition and integration services fees
- $40 million in lower amortization, primarily from our RF360 Holdings joint venture
- $37 million in lower share-based compensation expense, primarily due to actions initiated under our Cost Plan

2017 vs. 2016

The dollar increase in selling, general and administrative expenses in fiscal 2017 was primarily due to:

+ $136 million in higher professional services fees, primarily related to third-party acquisition and integration services resulting from the proposed acquisition of NXP
+ $70 million in higher costs related to litigation and other legal matters
+ $33 million in higher employee-related expenses, primarily related to our RF360 Holdings joint venture, which was formed in the second quarter of fiscal 2017

2018	2017	2016	2018 vs. 2017 Change	2017 vs. 2016 Change

Other	$3,135	$1,742	$(226)	$1,393	$1,968

2018

Other expenses in fiscal 2018 consisted of:

+ $2.0 billion charge related to the NXP termination fee
+ $1.2 billion charge related to the EC fine
+ $629 million in restructuring and restructuring-related charges related to our Cost Plan
- $676 million benefit related to the settlement of the TFTC investigation

2017

Other expenses in fiscal 2017 consisted of:

+ $927 million charge related to the Korea Fair Trade Commission (KFTC) fine, including related foreign currency losses
+ $778 million charge related to the TFTC fine
+ $37 million in restructuring and restructuring-related charges related to our 2015 Strategic Realignment Plan

2016

Other income in fiscal 2016 consisted of:

+ $380 million gain on the sale of wireless spectrum
+ $48 million gain on the sale of our business that provided augmented reality applications
- $202 million in restructuring and restructuring-related charges related to our 2015 Strategic Realignment Plan

Interest Expense and Investment and Other Income, Net (in millions)

	2018	2017	2016	2018 vs. 2017 Change	2017 vs. 2016 Change
Interest expense	$768	$494	$297	$ 274	$ 197
Investment and other income, net					
Interest and dividend income	$625	$619	$611	$ 6	$ 8
Net realized gains on marketable securities	41	456	239	(415)	217
Net realized gains on other investments	83	74	49	9	25
Impairment losses on marketable securities and other investments	(75)	(177)	(172)	102	(5)
Equity in net losses of investees	(145)	(74)	(84)	(71)	10
Net gains (losses) on foreign currency transactions	37	(30)	—	67	(30)
Net (losses) gains on derivative instruments	(27)	32	(8)	(59)	40
	$539	$900	$635	$ (361)	$ 265

The increases in interest expense in fiscal 2018 and 2017 were primarily due to the issuance of an aggregate principal amount of $11.0 billion of unsecured floating- and fixed-rate notes in May 2017 (May 2017 Notes), of which $4.0 billion were repaid between May and August 2018, and fees related to the Bridge and Term Loan Facilities entered into during the first quarter of fiscal 2017, which terminated in July 2018. In the first quarter of fiscal 2017, we began divesting a substantial portion of our marketable securities portfolio in order to finance, in part, the then proposed acquisition of NXP. As a result, we recorded net realized gains and impairment losses on such marketable securities that we sold and expected to sell before their anticipated recovery, respectively, in fiscal 2017. The net gains on foreign currency transactions in fiscal 2018, which were partially offset by losses on derivative instruments, were primarily attributable to currency exchange rate movements on amounts accrued for the EC and TFTC fines, as well as the impact of currency exchange rate movements on certain monetary assets and liabilities of our RF360 Holdings joint venture.

Income Tax Expense (in millions)

	2018	2017	2016	2018 vs. 2017 Change	2017 vs. 2016 Change
Income tax expense	$5,377	$555	$1,131	$ 4,822	$ (576)
Effective tax rate	N/M	18 %	17 %		

N/M - Not meaningful

The following table summarizes the primary factors that caused our annual tax provision to differ from the expected income tax provision at the United States federal statutory rate (in millions):

	2018	2017	2016
Expected income tax provision at federal statutory tax rate	$127	$1,057	$2,392
State income tax provision, net of federal benefit	2	8	19
Toll Charge from U.S. tax reform	5,236	—	—
Benefits from foreign income taxed at other than U.S. rates	(834)	(963)	(1,068)
Valuation allowance on deferred tax asset related to NXP termination fee	494	—	—
Remeasurement of deferred taxes due to changes in statutory rate due to U.S. tax reform	438	—	—
Benefits related to research and development tax credits	(136)	(81)	(143)
Nondeductible charges and reversals related to the EC, KFTC and TFTC investigations	(119)	363	—
Taxes on undistributed foreign earnings	87	—	—
Impact of changes in tax reserves and audit settlements for prior year tax positions	—	111	—
Worthless stock deduction of domestic subsidiary	—	—	(101)
Other	82	60	32
Income tax expense	$5,377	$555	$1,131

The Tax Cuts and Jobs Act (the Tax Legislation) in the United States enacted on December 22, 2017 significantly revised the United States corporate income tax by, among other things, lowering the corporate income tax rate to 21% effective January 1, 2018, implementing a modified territorial tax system and imposing a one-time repatriation tax on deemed repatriated earnings and profits of U.S.-owned foreign subsidiaries (the Toll Charge). As a fiscal-year taxpayer, certain provisions of the Tax Legislation impacted us in fiscal 2018, including the change in the corporate income tax rate and the Toll Charge, while other provisions will be effective starting at the beginning of fiscal 2019, including the implementation of a modified territorial tax system. Accordingly, our federal statutory income tax rate for fiscal 2018 reflected a blended rate of approximately 25%.

As a result of the Tax Legislation, we recorded a charge of $5.7 billion to income tax expense in fiscal 2018, comprised of $5.2 billion related to the estimated Toll Charge and $438 million resulting from the remeasurement of U.S. deferred tax assets and liabilities that existed at the end of fiscal 2017 at a lower enacted corporate income tax rate, which included a $135 million tax benefit in fiscal 2018 related to the remeasurement of a U.S. deferred tax liability that was established as a result of a change in one of our positions due to Tax Legislation.

Income tax expense for fiscal 2018 was further negatively impacted by the charge recorded in the fourth quarter of fiscal 2018 related to the termination fee paid to NXP, which did not result in a tax benefit after the consideration of realizability of such loss. Fiscal 2018 and 2017 income tax expense was also impacted by the EC, KFTC and TFTC fines, and settlement with the TFTC, which are not deductible for tax purposes and portions of which were attributable to foreign jurisdictions and to the United States. These impacts were partially offset in fiscal 2018 and 2017 by lower U.S. revenues primarily related to decreased royalty revenues from Apple’s contract manufacturers and, for fiscal 2017, the BlackBerry arbitration.

Income tax expense for fiscal 2017 also reflected the increase in our Singapore tax rate as a result of the expiration of certain of our tax incentives in March 2017, which was substantially offset by tax benefits resulting from the increase in our Singapore tax rate that will be in effect when certain deferred tax assets are scheduled to reverse. During the third quarter of fiscal 2018, we entered into a new tax incentive agreement in Singapore that results in a reduced tax rate from March 2017 through March 2022, provided that we meet specified employment and investment criteria in Singapore. Our Singapore tax rate will increase in March 2022 as a result of expiration of these incentives and again in March 2027 upon the expiration of tax incentives under a prior agreement. As a result of this new tax incentive, our income tax expense for fiscal 2018 was reduced by approximately $130 million.

Unrecognized tax benefits were $217 million and $372 million at September 30, 2018 and September 24, 2017, respectively. The decrease in unrecognized tax benefits in fiscal 2018 was primarily due to an agreement with the IRS related to tax positions on the classification of income in our fiscal 2016 federal income tax return. We believe that it is reasonably possible that the total amounts of unrecognized tax benefits at September 30, 2018 may increase or decrease in the next 12 months.

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As a result of the Tax Legislation, in fiscal 2019, several of our foreign subsidiaries will make tax elections to be treated as U.S. branches for federal income tax purposes (commonly referred to as "check-the-box" elections) effective beginning in fiscal 2018 and 2019. We believe that, by these foreign subsidiaries being treated as U.S. branches for federal income taxes, rather than controlled foreign corporations, we will significantly reduce the risk of being subject to GILTI (global intangible low-taxed income) and BEAT (base-erosion anti-abuse tax) taxes, both of which are effective for us starting in fiscal 2019. As a result of making these check-the-box elections in the first quarter of fiscal 2019, we expect to record an estimated tax benefit of $525 million to $575 million due to establishing new U.S. net deferred tax assets resulting from the difference between the GAAP basis and the U.S. federal tax carryover basis of the existing assets and liabilities of those foreign subsidiaries, primarily related to customer incentive liabilities that have not been deducted for tax purposes.

We are subject to income taxes in the United States and numerous foreign jurisdictions and are currently under examination by various tax authorities worldwide, most notably in countries where we earn a routine return and tax authorities believe substantial value-add activities are performed. These examinations are at various stages with respect to assessments, claims, deficiencies and refunds. We continually assess the likelihood and amount of potential adjustments and adjust the income tax provision, income taxes payable and deferred taxes in the period in which the facts give rise to a revision become known. As of September 30, 2018, we believe that adequate amounts have been reserved for based on facts known. However, the final determination of tax audits and any related legal proceedings could materially differ from amounts reflected in our income tax provision and the related accruals.

Segment Results

The following should be read in conjunction with the fiscal 2018, 2017 and 2016 results of operations for each reportable segment included in this Annual Report in "Notes to Consolidated Financial Statements, Note 8. Segment Information."

QCT Segment

(in millions)	2018	2017	2016	2018 vs. 2017 Change	2017 vs. 2016 Change
Revenues					
Equipment and services	$17,060	$16,315	$15,183	$ 745	$1,132
Licensing	222	164	226	58	(62)
Total revenues	$17,282	$16,479	$15,409	$ 803	$1,070
EBT (1)	$2,966	$2,747	$1,812	$ 219	$935
EBT as a % of revenues	17 %	17 %	12 %	—	5 %

(1) Earnings (loss) before taxes.

Equipment and services revenues mostly relate to sales of Mobile Station Modem (MSM) and accompanying Radio Frequency (RF), Power Management (PM) and wireless connectivity integrated circuits. Approximately 855 million, 804 million and 842 million MSM integrated circuits were sold during fiscal 2018, 2017 and 2016, respectively.

2018 vs. 2017

The increase in QCT equipment and services revenues in fiscal 2018 was primarily due to:

+ $825 million in higher RFFE product revenues primarily related to revenues from our RF360 Holdings joint venture, which was formed in the second quarter of fiscal 2017, and reflected the impact of eliminating a one-month reporting lag in fiscal 2018
+ $737 million in higher MSM and accompanying unit shipments primarily due to by higher demand from OEMs in China, partially offset by a decline in share at Apple
- $719 million decrease due to lower average selling prices and unfavorable product mix
- $83 million in lower connectivity product revenues

QCT EBT as a percentage of revenues remained flat in fiscal 2018 primarily due to an unchanged gross margin percentage, driven by the net effect of lower average selling prices and lower-margin product mix, offset by lower average unit costs.

QCT accounts receivable decreased by 25% in fiscal 2018 from $1.81 billion to $1.36 billion, primarily due to the timing of integrated circuit shipments. QCT inventories decreased by 17% in fiscal 2018 from $2.02 billion to $1.68

billion primarily due to a decrease in the overall quantity of units on hand.

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2017 vs. 2016

The increase in QCT equipment and services revenues in fiscal 2017 was primarily due to:

+ $676 million in higher RFFE revenues, primarily related to revenues from our RF360 Holdings joint venture
+ $492 million increase due to higher shipments of connectivity products primarily related to adjacent industry segments outside of traditional cellular industries
+ $469 million increase due to the net impact of higher-priced product mix and lower average selling prices
- $553 million decrease primarily due to lower MSM and accompanying RF and PM unit shipments driven primarily by a decline in share at Apple, partially offset by higher demand from OEMs in China

QCT EBT as a percentage of revenues increased in fiscal 2017 primarily due to:

+ increase in gross margin percentage primarily driven by higher-margin product mix and lower average unit costs, partially offset by lower average selling prices and higher excess inventory charges
- a combined increase of 1% in research and development and selling, general and administrative expenses primarily related to our RF360 Holdings joint venture

QTL Segment

(in millions)	2018	2017	2016	2018 vs. 2017 Change	2017 vs. 2016 Change
Licensing revenues	$5,163	$6,445	$7,664	$(1,282)	$(1,219)
EBT	$3,525	$5,175	$6,528	$(1,650)	$(1,353)
EBT as a % of revenues	68 %	80 %	85 %	(12 %)	(5 %)

QTL results in fiscal 2018 and fiscal 2017 were negatively impacted by our continued dispute with Apple and its contract manufacturers (who are our licensees). We did not record any revenues in fiscal 2018 or the third or fourth quarter of fiscal 2017 for royalties due on sales of Apple’s products. QTL revenues in fiscal 2018 included $600 million paid under an interim agreement with the other licensee in dispute. This represents a partial payment for royalties due after the second quarter of fiscal 2017 by that other licensee while negotiations continue, and it does not reflect the full amount of royalties due under the underlying license agreement. We did not record any revenues in the third or fourth quarter of fiscal 2017 for royalties due on the sales of the other licensee’s products, and the other licensee underpaid royalties due in the second quarter of fiscal 2017, which negatively impacted QTL revenues by an estimated amount in excess of $150 million. Royalty revenues related to the products of Apple’s contract manufacturers and the other licensee in dispute were approximately $1.7 billion in fiscal 2017. Revenues related to the products of Apple’s contract manufacturers and the other licensee in dispute comprised a total of approximately $1.35 billion in the third and fourth quarters of fiscal 2016.

2018 vs. 2017

Excluding the impact of the aforementioned continued dispute with Apple and its contract manufacturers, as well as the dispute with the other licensee, QTL licensing revenues in fiscal 2018 further decreased primarily due to:

- $177 million in lower royalty revenues recognized related to devices sold in prior periods from certain other licensees

QTL EBT as a percentage of revenue decreased in fiscal 2018 primarily due to:

- higher selling, general and administrative expenses resulting primarily from higher litigation costs
- lower QTL revenues

QTL accounts receivable decreased by 15% in fiscal 2018 from $1.74 billion to $1.47 billion, primarily due to the timing of the collection of payments from certain of our licensees.

2017 vs. 2016

Excluding the impact of the aforementioned continued dispute with Apple and its contract manufacturers, as well as the with the other licensee, QTL licensing revenues in fiscal 2017 increased primarily due to:

+ higher royalty revenues recognized related to devices sold in prior periods
+ higher revenues per unit
- recognition of revenues in fiscal 2016 relating to the termination of an infrastructure license agreement resulting from the merger of two licensees
- lower recognition of unearned license fees

QTL EBT as a percentage of revenue decreased in fiscal 2017 primarily due to the decrease in QTL revenues.

QSI Segment

(in millions)	2018	2017	2016	2018 vs. 2017 Change	2017 vs. 2016 Change
Equipment and services revenues	$100	$113	$47	$ (13)	$ 66
EBT	$24	$65	$386	$ (41)	$ (321)

2018 vs. 2017

The decrease in QSI EBT in fiscal 2018 was primarily due to:

- $14 million decrease in net gains on investments
- $14 million increase in our share of losses in equity method investments
- $13 million decrease resulting from lower revenues from certain development contracts with one of our equity method investees

2017 vs. 2016

The decrease in QSI EBT in fiscal 2017 was primarily due to:

- $380 million gain recorded in fiscal 2016 from the sale of wireless spectrum

+ $41 million increase resulting from higher revenues and costs associated with certain development contracts with one of our equity method investees

Looking Forward

In the coming years, we expect continued growth in consumer demand for 3G/4G multi-mode and 4G products and services and new consumer demand for 5G products and services around the world, driven primarily by smartphones. We also expect growth in new device categories and industries, driven by the expanding adoption of certain technologies that are already commonly used in smartphones by industry segments outside traditional cellular industries, such as automotive, IoT and networking.

As we look forward to the next several months and beyond, we expect our business to be impacted by the following key items:

- In the second quarter of fiscal 2018, we announced a cost plan designed to align our cost structure to our long-term margin targets. As part of this plan, we continue to execute on a series of targeted actions across our businesses to reduce annual costs by $1 billion, excluding incremental costs resulting from any future acquisition of a business. We expect these cost reductions to be fully captured in fiscal 2019. In connection with this plan, we expect to incur additional restructuring and restructuring-related charges of up to $100 million, and we incurred $687 million in restructuring and restructuring-related charges in fiscal 2018.
- Regulatory authorities in certain jurisdictions continue to investigate our business practices, and other regulatory authorities may do so in the future. Unfavorable resolutions of one or more of these matters have had and could in the future have a material adverse effect on our business with remedies that include, among others, injunctions, monetary damages or fines or other orders to pay money, and the issuance of orders to cease certain conduct and/or modify our business practices. Additionally, certain of our direct and indirect customers and licensees, including Apple, have pursued, and others may in the future pursue, litigation or arbitration against us related to our business. Unfavorable resolutions of one or more of these matters have in the past had a material adverse effect on our business and could in the future have a material adverse effect on our business including, among others, monetary damages, the loss of our ability to enforce one or more of our patents, and/or portions of our license agreements could be determined to be invalid or unenforceable. These activities have required, and we expect that they will continue to require, the investment of significant management time and attention and have resulted, and we expect that they will continue to result, in increased legal costs until the respective matters are resolved. See “Notes to Consolidated Financial Statements, Note 7. Commitments and Contingencies” and “Risk Factors” included in this Annual Report.
- We are currently in dispute with Apple surrounding what we believe is an attempt by Apple to reduce the amount of royalties that its contract manufacturers (who are our licensees) are required to pay to us for use of our intellectual property. In fiscal 2018, such contract manufacturers did not fully report, and did not pay, royalties due on sales of Apple products. We have taken action against Apple’s contract manufacturers to compel them to pay the required royalties, and against Apple, as described more fully in this Annual Report in “Notes to Consolidated Financial

Statements, Note 7. Commitments and Contingencies." We did not record any revenues in fiscal 2018 or in the third and fourth quarters of fiscal 2017 for royalties due on sales of Apple's products, and as a result, QTL revenues and EBT were negatively impacted by these continued disputes. We expect these companies will continue to take such actions in the future, resulting in increased legal costs and negatively impacting our future revenues, as well as our financial condition, results of operations and cash flows until the respective disputes are resolved. In the third

quarter of fiscal 2018, we entered into an interim agreement with the other licensee in dispute in which that licensee agreed to pay $700 million as partial payment for royalties due after the second quarter of fiscal 2017. That licensee paid $600 million in fiscal 2018 as a partial payment while negotiations continue. This payment does not reflect the full amount of royalties due under the underlying license agreement. If we do not reach a final agreement with that other licensee, it may not make any other payments or may not make full payments under the underlying license agreement, which may result in increased legal costs, due to exercising the dispute resolution provision in the license agreement, and will negatively impact our future revenues, as well as our financial condition, results of operations and cash flows until the dispute is resolved.

- To position QTL for stability on a long-term basis, we have announced that our cellular standard-essential patent only licensing terms, including 3G, 4G and 5G through Release 15 for both single mode and multi-mode devices worldwide, will remain at the same rate, consistent with our licensing program established in China for 3G and 4G devices. A number of our licensees have entered into cellular standard-essential patent only agreements on a worldwide basis, and we expect more of our licensees may enter into such cellular standard-essential patent only agreements in the future. In addition, in fiscal 2018, we have reduced the per unit royalty cap on smartphones, which is the base on which our royalties are calculated. While we expect these developments to enhance stability for the long term, they will negatively impact QTL royalty revenues.
- We expect our business, particularly QCT, to continue to be impacted by industry dynamics, including:
- Concentration of device share among a few companies within the premium tier, resulting in significant supply chain leverage for those companies, and exacerbating the negative impact to our business and financial results if any of those companies do not utilize our chipsets;
- Decisions by companies to utilize their own internally-developed integrated circuit products and/or sell such products to others, including by bundling with other products, increasing competition;
- Decisions by certain companies to utilize our competitors' integrated circuit products in all or a portion of their devices. For example, we have not been the sole supplier of modems for iPhone products beginning with products that launched in September 2016, as Apple utilizes modems from one or more of our competitors in a portion of such devices. Apple is solely using one or more of our competitors' modems, rather than our modems, in its 2018 iPhone release and may take similar actions in the future. Accordingly, QCT revenues from modem sales for iPhones have declined in fiscal 2018, are expected to further decline in fiscal 2019 and may fluctuate in the future, in part depending on the extent of Apple's utilization of competitors' modems and the mix of the various versions of its products that are sold. Overall, QCT revenues, as well as profitability, may similarly decline unless offset by sales of integrated circuit products to other customers, including those outside of traditional cellular industries, such as the IoT, automotive and networking. Apple's sourcing of integrated circuit products does not impact our licensing revenues since our licensing revenues from Apple products are not dependent upon whether such products include our chipsets;
- Intense competition, particularly in China, as our competitors expand their product offerings and/or reduce the prices of their products as part of a strategy to attract new and/or retain existing customers;
- Continued growth of device share by Chinese OEMs in China and in regions outside of China;
- Lengthening replacement cycles in developed regions, where the smartphone industry is mature, premium-tier smartphones are common and consumer demand is increasingly driven by new product launches and/or innovation cycles;
- Lengthening replacement cycles in emerging regions as smartphone penetration increases; and
- Increasing consumer demand for 3G/4G smartphone products in emerging regions driven by availability of lower-tier 3G/4G devices.
- Current U.S./China trade relations may negatively impact our business, growth prospects and results of operations.
- We expect the ongoing rollout of 4G services in emerging regions will encourage competition and growth, bringing the benefits of 3G/4G LTE multi-mode to consumers.
- We continue to invest significant resources to develop our wireless baseband chips, and our converged computing/communications (Snapdragon) chipsets, which incorporate technologies in the following areas, among others: advancements in 4G and 5G, OFDM-based Wi-Fi, RFFE, connectivity, power management, graphics, audio and

video codecs, multimedia, artificial intelligence (AI) and virtual/augmented reality, and all of which contribute to the expansion of our intellectual property portfolio. We are also investing in targeted opportunities that leverage our existing technical and business expertise to deploy new business models and enter and/or expand into new industry segments and applications, such as products for automotive, IoT (including the connected home, smart cities, wearables, voice and music and robotics), networking, computing and AI, such as machine learning, among others.

- We expect initial commercial 5G network deployments and device launches to begin in calendar 2019. We believe that 5G technologies will empower a new era of smartphones and connected devices. We also believe that 5G will drive transformation across industries beyond traditional cellular communications that will create new business models and new services. We believe it is important that we remain a leader in 5G technology development, standardization, intellectual property creation and licensing of 5G technologies, and to be a leading developer and supplier of 5G integrated circuit products and services in order to sustain and grow our business long term.

In addition to the foregoing business and market-based matters, we continue to devote resources to working with and educating participants in the wireless value chain and governments as to the benefits of our licensing program and our extensive technology investments in promoting a highly competitive and innovative wireless industry. However, we expect that certain companies may continue to be dissatisfied with the need to pay reasonable royalties for the use of our technology and not welcome the success of our licensing program in enabling new, highly cost-effective competitors to their products. We expect that such companies, and/or governments or regulators, will continue to challenge our business model in various forums throughout the world.

Further discussion of risks related to our business is presented in “Part I, Item 1A. Risk Factors” included in this Annual Report.

Liquidity and Capital Resources

Our principal sources of liquidity are our existing cash, cash equivalents and marketable securities, cash generated from operations, cash provided by our debt programs and proceeds from the issuance of common stock under our stock option and employee stock purchase plans. The following table presents selected financial information related to our liquidity as of and for the years ended September 30, 2018 and September 24, 2017 (in millions):

	2018	2017	$ Change	% Change
Cash, cash equivalents and marketable securities	$12,123	$38,578	$(26,455)	(69 %)
Accounts receivable, net	2,904	3,632	(728)	(20 %)
Inventories	1,693	2,035	(342)	(17 %)
Short-term debt	1,005	2,495	(1,490)	(60 %)
Long-term debt	15,365	19,398	(4,033)	(21 %)
Net cash provided by operating activities	3,895	5,001	(1,106)	(22 %)
Net cash provided by investing activities	4,381	18,463	(14,082)	(76 %)
Net cash (used) provided by financing activities	(31,487)	5,571	(37,058)	N/M

N/M = Not meaningful

The net decrease in cash, cash equivalents and marketable securities was primarily due to $22.6 billion in payments to repurchase shares of our common stock, $5.5 billion in repayment of long-term debt, $3.5 billion in cash dividends paid and $784 million in capital expenditures, partially offset by net cash provided by operating activities and the release of the restriction on $2.0 billion of deposits used to collateralize the letters of credit related to our proposed acquisition of NXP upon termination of the letters of credit. Net cash provided by operating activities decreased primarily due to the $2.0 billion termination fee paid to NXP and the continued actions taken by Apple and its contract manufacturers who did not report or pay royalties due in fiscal 2018, partially offset by the effect of the $940 million payment in connection with the BlackBerry arbitration in fiscal 2017 and the $927 million payment of the fine related to the KFTC investigation in fiscal 2017.

Our days sales outstanding, on a consolidated basis, decreased to 49 days at September 30, 2018 compared to 56 days at September 24, 2017. The decrease in accounts receivable and the related days sales outstanding were primarily due to the timing of integrated circuit shipments and the collection of receivables from certain licensees. The decrease in inventories was primarily due to a decrease in the overall quantity of units on hand.

Debt. Our 2016 Amended and Restated Revolving Credit Facility provides for unsecured revolving facility loans, swing line loans and letters of credit in the aggregate amount of $5.0 billion, of which $530 million and $4.47 billion will expire

in February 2020 and November 2021, respectively. At September 30, 2018, no amounts were outstanding under the revolving credit facility.

We have an unsecured commercial paper program, which provides for the issuance of up to $5.0 billion of commercial paper. Net proceeds from this program are used for general corporate purposes. At September 30, 2018, we had $1.0 billion of commercial paper outstanding with weighted-average net interest rates of 2.35% and weighted-average remaining days to maturity of 16 days.

In July 2018, as a result of our termination of the NXP acquisition, the 2018 Revolving Credit Facility, 2016 Term Loan Facility and 2018 Term Loan Facility that were established primarily to fund the proposed acquisition of NXP were terminated in accordance with their terms. We had not borrowed any funds under these facilities. In addition, upon our payment of the NXP termination fee, the four letters of credit for which we had deposited aggregate funds of $2.0 billion as collateral for the potential termination fee payable to NXP were terminated, and we were no longer restricted from using the funds.

In May 2017, we issued an aggregate principal amount of $11.0 billion in nine tranches of unsecured floating- and fixed-rate notes, with maturity dates starting in 2019 through 2047. Effective interest rates were between 2.70% and 4.47% at September 30, 2018. Interest is payable in arrears quarterly for the floating-rate notes and semi-annually for the fixed-rate notes.

In May 2018, we initiated private offerings to exchange and repurchase certain of our notes issued in May 2017 that were subject to special mandatory redemption provisions that required redemption on the first to occur of (i) the termination of the NXP purchase agreement or (ii) June 1, 2018 if the NXP transaction had not closed as of such date. We exchanged $122 million of notes and repurchased $71 million of notes in the aggregate. In July 2018, we repurchased $3.8 billion of notes subject to the special mandatory redemption provisions that were not exchanged in the May 2018 private offerings. In August 2018, subsequent to the termination of the NXP purchase agreement, we repurchased the $122 million of new notes issued in May 2018.

In May 2015, we issued an aggregate principal amount of $10.0 billion in eight tranches of unsecured floating- and fixed-rate notes, of which $8.5 billion remains outstanding with maturity dates in 2020 through 2045. Effective interest rates were between 2.93% and 4.73% at September 30, 2018. Interest is payable in arrears quarterly for the floating-rate notes and semi-annually for the fixed-rate notes.

We may issue additional debt in the future. The amount and timing of such additional debt will be subject to a number of factors, including the cash flow generated by our operations, acquisitions and strategic investments, acceptable interest rates and changes in corporate income tax law, among other factors.

Additional information regarding our outstanding debt at September 30, 2018 is provided in this Annual Report in “Notes to Consolidated Financial Statements, Note 6. Debt.”

Income Taxes. The Tax Legislation, which was signed into law during the first quarter of fiscal 2018, resulted in an estimated $5.2 billion charge related to the Toll Charge. We currently estimate that we will pay $2.5 billion for the Toll Charge after application of certain tax credits, which is payable in installments over eight years (8% in each of the first five years, 15% in year six, 20% in year seven and 25% in year eight) beginning on January 15, 2019. This amount may be reduced by excess tax benefits generated in fiscal 2019.

We have historically asserted our intention to indefinitely reinvest the operating earnings of certain non-U.S. subsidiaries outside the United States based on our plans for use and/or investment outside of the United States and our belief that our sources of cash and liquidity in the United States would be sufficient to meet future domestic cash needs. The Tax Legislation eliminated certain material tax effects on the repatriation of cash to the United States. Future repatriation of cash and other property held by our foreign subsidiaries will generally not be subject to U.S. federal income tax. As a result, we reevaluated our historic assertion, and as of September 30, 2018, we no longer consider substantially all of our foreign earnings to be indefinitely reinvested in our foreign subsidiaries.

Additional information regarding our income taxes is provided in this Annual Report in “Notes to Consolidated Financial Statements, Note 3. Income Taxes.”

Capital Return Program. The following table summarizes stock repurchases, before commissions, and dividends paid during fiscal 2018, 2017 and 2016 (in millions, except per-share amounts):

	Stock Repurchase Program			Dividends		Total
	Shares	Average Price Paid Per Share (1)	Amount	Per Share	Amount	Amount
2018	278.8	$ 65.41	$ 22,569	$ 2.38	$ 3,466	$ 26,035
2017	22.8	58.87	1,342	2.20	3,252	4,594
2016	73.8	53.16	3,922	2.02	2,990	6,912

(1) Average Price Paid Per Share in fiscal 2018 excludes the impact of the three accelerated share repurchase agreements executed in September 2018 as the final number of shares and average purchase price will be determined at the end of the applicable purchase periods.

In the fourth quarter of fiscal 2018, following the termination of the agreement to acquire NXP, we announced a stock repurchase program authorizing us to repurchase up to $30.0 billion of our common stock, the large majority of which we expect to complete by the end of fiscal 2019. This replaced the existing $10.0 billion stock repurchase authorization announced on May 9, 2018. In August 2018, we completed a "modified Dutch auction" tender offer and paid an aggregate of $5.1 billion, excluding fees and related expenses, to repurchase 76.2 million shares of our common stock. In September 2018, we entered into three accelerated share repurchase agreements (ASR Agreements) to repurchase an aggregate of $16.0 billion of our common stock. During the fourth quarter of fiscal 2018, 178.4 million shares were initially delivered to us under the ASR Agreements and were retired. Pursuant to the terms of the ASR Agreements, the final number of shares and the average purchase price will be determined at the end of the applicable purchase periods, which are scheduled to occur in August 2019 but may occur earlier in certain circumstances. At September 30, 2018, $8.9 billion remained authorized for repurchase under our stock repurchase program. Since September 30, 2018, we repurchased and retired 8.5 million shares of common stock for $542 million. Our stock repurchase program has significantly reduced and will continue to reduce the amount of cash that we have available to fund our operations including research and development, working capital, capital expenditures, acquisitions, investments, dividends and other corporate purposes; and increases our exposure to adverse economic, market, industry and competitive conditions and developments, and other changes in our business and our industry. This stock repurchase program has no expiration date. However, we periodically evaluate repurchases as a means of returning capital to stockholders to determine when and if repurchases are in the best interests of our stockholders and may accelerate, suspend, delay or discontinue repurchases at any time.

On October 23, 2018, we announced a cash dividend of $0.62 per share on our common stock, payable on December 20, 2018 to stockholders of record as of the close of business on December 6, 2018. We intend to continue to use cash dividends as a means of returning capital to stockholders, subject to capital availability and our view that cash dividends are in the best interests of our stockholders, among other factors.

Additional Capital Requirements. We believe our cash, cash equivalents and marketable securities, our expected cash flow generated from operations and our expected financing activities will satisfy our working and other capital requirements for at least the next 12 months based on our current business plans. Recent and expected working and other capital requirements, in addition to the above matters, also include the items described below.

- We expect the majority of the charges incurred in connection with our Cost Plan will result in cash payments. Our restructuring accrual was $83 million at September 30, 2018, and we expect to incur additional restructuring and restructuring-related charges of up to $100 million.
- Our purchase obligations at September 30, 2018, some of which relate to research and development activities and capital expenditures, totaled $3.7 billion and $630 million for fiscal 2019 and 2020, respectively, and $210 million thereafter.
- Our research and development expenditures were $5.6 billion in fiscal 2018 and $5.5 billion in fiscal 2017, and we expect to continue to invest heavily in research and development for new technologies, applications and services for

voice and data communications.

- Cash outflows for capital expenditures were $784 million in fiscal 2018 and $690 million in fiscal 2017. We expect to continue to incur capital expenditures in the future to support our business, including research and development activities. Future capital expenditures may be impacted by transactions that are currently not forecasted.

- The EC imposed a fine on us, of which $1.2 billion was accrued at September 30, 2018 (based on the exchange rate at September 30, 2018, including related foreign currency gains and accrued interest). In the third quarter of 2018, we provided financial guarantees in lieu of cash payment to satisfy the obligation while we appeal the EU's decision. The fine is accruing interest at a rate of 1.50% per annum while it is outstanding.
- In August 2019, we have the option to acquire (and the minority owner has the option to sell) the minority ownership interest in the RF360 Holdings joint venture for $1.15 billion. The accreted value of such amount was included in other current liabilities at September 30, 2018.
- We expect to continue making strategic investments and acquisitions, the amounts of which could vary significantly, to open new opportunities for our technologies, obtain development resources, grow our patent portfolio or pursue new businesses.

Contractual Obligations/Off-Balance Sheet Arrangements

We have no significant contractual obligations not fully recorded on our consolidated balance sheets or fully disclosed in the notes to our consolidated financial statements. We have no material off-balance sheet arrangements as defined in Regulation S-K 303(a)(4)(ii).

The following table summarizes the payments due by fiscal period for our outstanding contractual obligations at September 30, 2018 (in millions):

	Total	2019	2020-2021	2022-2023	Beyond 2023	No Expiration Date
Purchase obligations (1)	$4,513	$3,673	$ 794	$ 45	$1	$ —
Operating lease obligations	413	117	169	84	43	—
Capital lease obligations (2)	31	14	16	1	—	—
Equity funding and financing commitments (3)	316	35	75	8	—	198
Long-term debt (4)	15,500	—	2,000	4,000	9,500	—
Other long-term liabilities (5)(6)	3,318	337	560	225	1,708	488
Total contractual obligations	$24,091	$4,176	$ 3,614	$ 4,363	$11,252	$ 686

(1) Total purchase obligations included commitments to purchase integrated circuit product inventories of $2.6 billion, $322 million, $62 million and $24 million for each of the four years from fiscal 2019 through 2022, respectively; there were no such purchase commitments thereafter. Integrated circuit product inventory obligations represent purchase commitments for raw materials, semiconductor die, finished goods and manufacturing services, such as wafer bump, probe, assembly and final test. Under our manufacturing relationships with our foundry suppliers and assembly and test service providers, cancelation of outstanding purchase commitments is generally allowed but requires payment of costs incurred through the date of cancelation, and in some cases, incremental fees related to capacity underutilization.

(2) Amounts represent future minimum lease payments including interest payments. Capital lease obligations were included in other current liabilities and other noncurrent liabilities in the consolidated balance sheet at September 30, 2018. The future lease payments related to our RF360 Holdings joint venture manufacturing facility under construction (Note 7) have not been presented in the table above as the lease term will commence upon completion of the construction project.

(3) Certain of these commitments do not have fixed funding dates and are subject to certain conditions and have, therefore, been presented as having no expiration date. Commitments represent the maximum amounts to be funded under these arrangements; actual funding may be in lesser amounts or not at all.

(4) The amounts noted herein represent contractual payments of principal only.

(5) Certain long-term liabilities reflected on our balance sheet, such as unearned revenues, are not presented in this table because they do not require cash settlement in the future. Other long-term liabilities as presented in this table include the related current portions, as applicable.

(6) Our consolidated balance sheet at September 30, 2018 included $123 million in other noncurrent liabilities for uncertain tax positions, some of which may result in cash payment. The future payments related to uncertain tax positions recorded as other noncurrent liabilities have not been presented in the table above due to the uncertainty of the amounts and timing of cash settlement with the taxing authorities.

Additional information regarding our financial commitments at September 30, 2018 is provided in this Annual Report in “Notes to Consolidated Financial Statements, Note 3. Income Taxes,” “Note 6. Debt” and “Note 7. Commitments and Contingencies.”

Critical Accounting Estimates
The preparation of our consolidated financial statements in accordance with accounting principles generally accepted in the United States requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and disclosure of contingent assets and liabilities. We base our estimates on historical and anticipated results and trends and on various other assumptions that we believe are reasonable under the circumstances, including assumptions as to future events. By their nature, estimates are subject to an inherent degree of uncertainty. Although we believe that our estimates and the assumptions supporting our assessments are reasonable, actual results that differ from our estimates could be material to our consolidated financial statements. A summary of our significant accounting policies is included in this Annual Report in “Notes to Consolidated Financial Statements, Note 1. Significant Accounting Policies.” We consider the following accounting estimates to be critical in the preparation of our consolidated financial statements.
Impairment of Other Investments. We hold investments in non-marketable equity instruments in privately held companies that are accounted for using either the cost or the equity method. Many of these investments are in early-stage companies, which are inherently risky because the markets for the technologies or products of these companies are uncertain and may never develop. We monitor our investments for events or circumstances that could indicate the investments are impaired, such as a deterioration in the investee’s financial condition and business forecasts and lower valuations in recently completed or proposed financings, and we record impairment losses in earnings when we believe an investment has experienced a decline in value that is other than temporary.
Valuation of Inventories. Inventories are valued at the lower of cost and net realizable value using the first-in, first-out method. Recoverability of inventories is assessed based on review of future customer demand that considers multiple factors, including committed purchase orders from customers as well as purchase commitment projections provided by customers, among other things. This valuation also requires us to make judgments and assumptions based on information currently available about market conditions, including competition, product pricing, product life cycle and development plans. As we move to smaller geometry process technologies, the manufacturing lead-time increases, resulting in an increased reliance on our own forecasts of customer demand, rather than our customers’ forecasts. If we overestimate demand for our products, the amount of our loss will be impacted by our contractual ability to reduce inventory purchases from our suppliers. Our assumptions of future product demand are inherently uncertain, and changes in our estimates and assumptions may cause us to realize material write-downs in the future.
Valuation of Goodwill and Other Indefinite-Lived and Long-Lived Assets. Our business combinations typically result in the recording of goodwill, other intangible assets and/or property, plant and equipment, and the recorded values of those assets may become impaired in the future. We also acquire intangible assets and property, plant and equipment in other types of transactions. The determination of the recorded value of intangible assets acquired in a business combination requires management to make estimates and assumptions that affect our consolidated financial statements. For intangible assets acquired in a non-monetary exchange, the estimated fair values of the assets transferred (or the estimated fair values of the assets received, if more clearly evident) are used to establish their recorded values, unless the values of neither the assets received nor the assets transferred are determinable within reasonable limits, in which case the assets received are measured based on the carrying values of the assets transferred. Valuation techniques consistent with the market approach, income approach and/or cost approach are used to measure fair value. An estimate of fair value can be affected by many assumptions that require significant judgment. For example, the income approach generally requires us to use assumptions to estimate future cash flows including those related to total addressable market, pricing and share forecasts, competition, technology obsolescence, future tax rates and discount rates. Our estimate of the fair value of certain assets may differ materially from that determined by others who use different assumptions or utilize different business models and from the future cash flows actually realized.
Goodwill and other indefinite-lived intangible assets are tested annually for impairment and in interim periods if events or changes in circumstances indicate that the assets may be impaired. Long-lived assets, such as property, plant and equipment and intangible assets subject to amortization, are reviewed for impairment when events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. Our judgments regarding the existence of impairment indicators and future cash flows related to goodwill and other indefinite-lived intangible assets and long-lived assets may be based on operational performance of our businesses, market conditions,

expected selling price and/or other factors. Although there are inherent uncertainties in this assessment process, the estimates and assumptions we use, including estimates of future cash flows and discount rates, are consistent with our internal planning, when appropriate. If these estimates or their related assumptions change in the future, we may be required to record an impairment charge on a portion or all of our goodwill, other indefinite-lived intangible assets and/or long-lived assets. Furthermore, we cannot predict the occurrence of future impairment-triggering events nor the impact such events might have on our reported asset values. Future events could cause us to conclude that impairment indicators exist, and that goodwill or other intangible assets

associated with our acquired businesses are impaired. Any resulting impairment loss could have an adverse impact on our financial condition and results of operations. During fiscal 2018, 2017 and 2016, we recorded $273 million, $76 million and $107 million, respectively, in impairment charges for goodwill, other indefinite-lived intangible assets and long-lived assets. The estimated fair values of our QCT and QTL reporting units were substantially in excess of their respective carrying values at September 30, 2018.

Legal and Regulatory Proceedings. We are currently involved in certain legal and regulatory proceedings, and we intend to continue to vigorously defend ourselves. Litigation and investigations are inherently uncertain, and we face difficulties in evaluating or estimating likely outcomes or ranges of possible loss in antitrust and trade regulation investigations in particular. Investigations by antitrust and trade regulation agencies are not conducted in a consistent manner across jurisdictions. Further, each country and agency has different sets of laws, rules and regulations, both substantive and procedural, as well as different legal principles, theories and potential remedies, and some agencies may seek to use the investigation to advance domestic policy goals. Depending on the jurisdiction, these investigations can involve non-transparent procedures under which we may not receive access to evidence relied upon by the enforcement agency or that may be exculpatory and may not be informed of the specific legal theories or evidence considered or relied upon by the agency. Unlike in civil litigation in the United States, in foreign proceedings, we may not be entitled to discovery or depositions, allowed to cross-examine witnesses or confront our accusers. As a result, we may not be aware of, and may not be entitled to know, all allegations against us, or the information or documents provided to, or discovered or prepared by, the agency. Accordingly, we may have little or no idea what an agency’s intent is with respect to liability, penalties or the timing of a decision. In many cases the agencies are given significant discretion, and any available precedent may have limited, if any, predictive value in their jurisdictions, much less in other jurisdictions. Accordingly, we cannot predict the outcome of these matters. However, the unfavorable resolution of one or more of these proceedings could have a material adverse effect on our business, results of operations, financial condition and/or cash flows. A broad range of remedies with respect to our business practices that are deemed to violate applicable laws are potentially available. These remedies may include, among others, injunctions, monetary damages or fines or other orders to pay money and the issuance of orders to cease certain conduct and/or to modify our business practices. If there is at least a reasonable possibility that a material loss may have been incurred associated with a loss contingency, we disclose such fact, and if reasonably estimable, we provide an estimate of the possible loss or range of possible loss. We record our best estimate of a loss related to pending legal or regulatory proceedings when the loss is considered probable and the amount can be reasonably estimated. Where a range of loss can be reasonably estimated with no best estimate in the range, we record the minimum estimated liability. As additional information becomes available, we assess the potential liability, including the probability of loss related to pending legal or regulatory proceedings, and revise our estimates and update our disclosures accordingly. Significant judgment is required in both the determination of probability and the determination as to whether a loss is reasonably estimable. Revisions in our estimates of the potential liability could materially impact our results of operations.

Income Taxes. We are subject to income taxes in the United States and numerous foreign jurisdictions, and the assessment of our income tax positions involves dealing with uncertainties in the application of complex tax laws and regulations in various taxing jurisdictions. In addition, the application of tax laws and regulations is subject to legal and factual interpretation, judgment and uncertainty. Tax laws and regulations themselves are subject to change as a result of changes in fiscal policy, changes in legislation, the evolution of regulations and court rulings. Significant judgments and estimates are required in determining our provision for income taxes, including those related to tax incentives, intercompany research and development cost-sharing arrangements, transfer pricing and tax credits. While we believe we have appropriate support for the positions taken or plan to take on our tax returns, we regularly assess the potential outcomes of examinations by taxing authorities in determining the adequacy of our provision for income taxes. Therefore, the actual liability for U.S. or foreign taxes may be materially different from our estimates, which could result in the need to record additional tax liabilities or potentially reverse previously recorded tax liabilities. We are participating in the Internal Revenue Service (IRS) Compliance Assurance Process program whereby we endeavor to agree with the IRS on the treatment of all issues prior to filing our federal return. A benefit of participation in this program is that post-filing adjustments by the IRS are less likely to occur.

On December 22, 2017, tax reform legislation known as the Tax Cuts and Jobs Act (the Tax Legislation) was enacted in the U.S. The Tax Legislation significantly revises the U.S. corporate income tax by, among other things, lowering the corporate income tax rate to 21%, implementing a modified territorial tax system and imposing a one-time repatriation tax on deemed repatriated earnings and profits of U.S.-owned foreign subsidiaries (the Toll Charge). As a fiscal-year taxpayer, we were impacted by certain provisions of the Tax Legislation in fiscal 2018, including the change in the corporate income tax rate and the Toll Charge, while other provisions will be effective starting at the beginning of fiscal 2019, including the implementation of a modified territorial tax system. Accounting for the income tax effects of the Tax Legislation requires significant judgments and estimates in the interpretation and calculations of the provisions of the Tax Legislation.

Given the amount and complexity of the changes in tax law resulting from the Tax Legislation, we have not finalized the accounting for the income tax effects of the Tax Legislation related to the Toll Charge. We have made reasonable estimates of the effects and recorded provisional amounts in our consolidated financial statements. The impact of the Tax Legislation related to the Toll Charge may differ from this estimate during the remainder of the one-year measurement period due to, among other things, further refinement of our calculations, changes in interpretations and assumptions we have made, guidance that may be issued and actions we may take as a result of the Tax Legislation. We are in the process of analyzing the effects of new taxes due on certain foreign income, such as GILTI (global intangible low-taxed income), BEAT (base-erosion anti-abuse tax) and FDII (foreign-derived intangible income), and limitations on interest expense deductions (if certain conditions apply), all of which are effective starting in fiscal 2019, as well as other provisions of the Tax Legislation.

Our QCT segment's non-U.S. headquarters is located in Singapore. During the third quarter of fiscal 2018, we entered into a new tax incentive agreement in Singapore that results in a reduced tax rate from March 2017 through March 2022, provided that we meet specified employment and investment criteria in Singapore. Our Singapore tax rate will increase in March 2022 as a result of expiration of these incentives and again in March 2027 upon the expiration of tax incentives under a prior agreement. As a result of this new tax incentive, our income tax expense for fiscal 2018 was reduced by approximately $130 million. Our failure to meet these criteria could adversely impact our provision for income taxes.

Recent Accounting Pronouncements

Information regarding recent accounting pronouncements and the impact of those pronouncements, if any, on our consolidated financial statements is provided in this Annual Report in "Notes to Consolidated Financial Statements, Note 1. Significant Accounting Policies."

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Marketable Securities

We have made investments in marketable equity securities of companies of varying size, style, industry and geography and changes in investment allocations may affect the price volatility of our investments. On October 27, 2016, we announced a definitive agreement under which Qualcomm River Holdings proposed to acquire NXP (the Purchase Agreement). We intended to use a substantial portion of our cash, cash equivalents and marketable securities to fund the NXP transaction. As a result, during fiscal 2017, we divested a substantial portion of our marketable securities portfolio, including our equity securities and fund shares. On July 26, 2018, we terminated the Purchase Agreement and announced that we had been authorized to repurchase up to $30 billion of our common stock. In August 2018, we completed a "modified Dutch auction" tender offer and paid an aggregate of $5.1 billion, excluding fees and related expenses, to repurchase 76.2 million shares of our common stock. In September 2018, we entered into three accelerated share repurchase agreements to repurchase an aggregate of $16.0 billion of our common stock. The actions taken pursuant to our stock repurchase program have significantly reduced the amount of cash available to fund our investments in marketable securities.

Equity Price Risk. The recorded values of our marketable equity securities increased to $167 million at September 30, 2018 from $36 million at September 24, 2017. A 10% decrease in the market price of our marketable equity securities at September 30, 2018 would have caused a decrease in the carrying amounts of these securities of $17 million. A 10% decrease in the market price of our marketable equity securities at September 24, 2017 would have caused a negligible decrease in the carrying amounts of these securities. At September 30, 2018, there were no gross unrealized losses of our marketable equity securities.

Interest Rate Risk. We invest a portion of our cash in a number of diversified fixed- and floating-rate securities consisting of cash equivalents, marketable debt securities, debt funds and time deposits that are subject to interest rate risk. Changes in the general level of interest rates can affect the fair value of our investment portfolio. If interest rates in the general economy were to rise, our holdings could lose value. As a result of divesting a substantial portion of our marketable securities portfolio and changes in portfolio allocation, the fair value of our investment portfolio is subject to lower interest rate risk. At September 30, 2018, a hypothetical increase in interest rates of 100 basis points across the entire yield curve on our holdings would have resulted in a negligible decrease in the fair value of our holdings. At September 24, 2017, a hypothetical increase in interest rates of 100 basis points across the entire yield curve on our holdings would have resulted in a decrease of $26 million in the fair value of our holdings.

Other Investments

Equity Price Risk. We hold investments in non-marketable equity instruments in privately held companies that may be impacted by equity price risks. Volatility in the equity markets could negatively affect our investees' ability to raise additional capital as well as our ability to realize value from our investments through initial public offerings, mergers and private sales.

Consequently, we could incur other-than-temporary impairment losses or realized losses on all or a part of the values of our non-marketable equity investments. At September 30, 2018 and September 24, 2017, the aggregate carrying value of our non-marketable equity investments was included in other noncurrent assets and was $1.1 billion and $982 million, respectively.

Debt and Interest Rate Swap Agreements

Interest Rate Risk. At September 30, 2018, we have an aggregate principal amount of $15.5 billion of unsecured floating- and fixed-rate notes with varying maturity dates. We have also entered into interest rate swaps with an aggregate notional amount of $1.8 billion to effectively convert certain fixed-rate interest payments into floating-rate payments. The interest rates on our floating-rate notes and interest rate swaps are based on LIBOR. At September 30, 2018, a hypothetical increase in LIBOR-based interest rates of 100 basis points would cause our interest expense to increase by $22 million on an annualized basis as it relates to our floating-rate notes and interest rate swap agreements. At September 24, 2017, a hypothetical increase in LIBOR-based interest rates of 100 basis points would have caused our interest expense to increase by $46 million on an annualized basis as it relates to our floating-rate notes and interest rate swap agreements.

Additionally, we have a commercial paper program that provides for the issuance of up to $5.0 billion of commercial paper. At September 30, 2018, we had $1.0 billion of commercial paper outstanding, with original maturities of less than three months. Changes in interest rates could affect the amounts of interest that we pay if we refinance the current outstanding commercial paper with new debt.

Additional information regarding our notes and related interest rate swap agreements and commercial paper program is provided in this Annual Report in "Notes to Consolidated Financial Statements, Note 1. Significant Accounting Policies" and "Notes to Consolidated Financial Statements, Note 6. Debt."

Foreign Exchange Risk

We manage our exposure to foreign exchange market risks, when deemed appropriate, through the use of derivative financial instruments, including foreign currency forward and option contracts with financial counterparties. We utilize such derivative financial instruments for hedging or risk management purposes rather than for speculative purposes. Counterparties to our derivative contracts are all major banking institutions. In the event of the financial insolvency or distress of a counterparty to our derivative financial instruments, we may be unable to settle transactions if the counterparty does not provide us with sufficient collateral to secure its net settlement obligations to us, which could have a negative impact on our results. A description of our foreign currency accounting policies is provided in this Annual Report in "Notes to Consolidated Financial Statements, Note 1. Significant Accounting Policies."

At September 30, 2018, our net asset related to foreign currency options designated as hedges of foreign currency risk on royalties earned from certain licensees was negligible. If our forecasted royalty revenues for currencies in which we hedge were to decline by 20% and foreign exchange rates were to change unfavorably by 20% in our hedged foreign currency, we would not incur a loss as our hedge positions would continue to be fully effective.

At September 30, 2018, our net liability related to foreign currency option and forward contracts designated as hedges of foreign currency risk on certain operating expenditure transactions was $18 million. If our forecasted operating expenditures for currencies in which we hedge were to decline by 20% and foreign exchange rates were to change unfavorably by 20% in our hedged foreign currency, we would not incur a loss as our hedge positions would continue to be fully effective.

Financial assets and liabilities held by consolidated subsidiaries that are not denominated in the functional currency of those entities are subject to the effects of currency fluctuations and may affect reported earnings. As a global company, we face exposure to adverse movements in foreign currency exchange rates. We may hedge currency exposures associated with certain assets and liabilities denominated in nonfunctional currencies and certain anticipated nonfunctional currency transactions. As a result, we could experience unanticipated gains or losses on anticipated foreign currency cash flows, as well as economic loss with respect to the recoverability of investments. While we may hedge certain transactions with non-U.S. customers, declines in currency values in certain regions may, if not reversed, adversely affect future product sales because our products may become more expensive to purchase in the countries of the affected currencies.

At September 30, 2018, our net liability related to foreign currency option and forward contracts not designated as hedging instruments used to manage foreign currency risk on certain receivables and payables was negligible. If the

foreign exchange rates were to change unfavorably by 20% in our hedged foreign currency, we would not incur a loss as the change in the fair value of the foreign currency option and forward contracts would be offset by the change in fair value of the related receivables and/or payables being economically hedged.

Our analysis methods used to assess and mitigate the risks discussed above should not be considered projections of future risks.

Item 8. Financial Statements and Supplementary Data

Our consolidated financial statements at September 30, 2018 and September 24, 2017 and for each of the three years in the period ended September 30, 2018 and the Report of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm, are included in this Annual Report on pages F-1 through F-49.

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

None.

Item 9A. Controls and Procedures

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of our disclosure controls and procedures, as such terms are defined under Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the Exchange Act). Based on this evaluation, our principal executive officer and our principal financial officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this Annual Report.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our 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. Based on our evaluation under this framework, our management concluded that our internal control over financial reporting was effective as of September 30, 2018.

PricewaterhouseCoopers LLP, the independent registered public accounting firm that audited the consolidated financial statements included in this Annual Report, has also audited the effectiveness of our internal control over financial reporting as of September 30, 2018, as stated in its report which appears on pages F-1 through F-2 in this Annual Report.

Inherent Limitations over Internal Controls

Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with generally accepted accounting principles. Our 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 our assets;

ii. provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and

iii. provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the consolidated financial statements.

Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations, including the possibility of human error and circumvention by collusion or overriding of controls. Accordingly, even an effective internal control system may not prevent or detect material misstatements on a timely basis. 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.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the fourth quarter of fiscal 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

Part III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item regarding directors is incorporated by reference to our 2019 Proxy Statement under the headings “Nominees for Election” and “Section 16(a) Beneficial Ownership Reporting Compliance.” Certain information required by this item regarding executive officers is set forth in Item 1 of Part I of this Report under the caption “Executive Officers,” and certain information is incorporated by reference to the 2019 Proxy Statement under the heading “Section 16(a) Beneficial Ownership Reporting Compliance.” The information required by this item regarding corporate governance is incorporated by reference to the 2019 Proxy Statement under the headings “Code of Ethics and Corporate Governance Principles and Practices,” “Director Nominations” and “Board Meetings, Committees and Attendance.”

Item 11. Executive Compensation

The information required by this item is incorporated by reference to the 2019 Proxy Statement under the headings “Executive Compensation and Related Information,” “Compensation Tables and Narrative Disclosures,” “Director Compensation,” “Compensation Committee Interlocks and Insider Participation” and “Compensation Committee Report.”

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

The information required by this item is incorporated by reference to the 2019 Proxy Statement under the headings “Equity Compensation Plan Information” and “Stock Ownership of Certain Beneficial Owners and Management.”

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

The information required by this item is incorporated by reference to the 2019 Proxy Statement under the headings “Certain Relationships and Related-Person Transactions” and “Director Independence.”

Item 14. Principal Accounting Fees and Services

The information required by this item is incorporated by reference to the 2019 Proxy Statement under the heading “Fees for Professional Services” and “Policy on Audit Committee Pre-Approval of Audit and Non-Audit Services of Independent Public Accountants.”

PART IV

Item 15. Exhibits and Financial Statement Schedules

The following documents are filed as part of this report:

(a) Financial Statements:

	Page Number
(1) Report of Independent Registered Public Accounting Firm	F-1
Consolidated Balance Sheets at September 30, 2018 and September 24, 2017	F-3
Consolidated Statements of Operations for Fiscal 2018, 2017 and 2016	F-4
Consolidated Statements of Comprehensive (Loss) Income for Fiscal 2018, 2017 and 2016	F-5
Consolidated Statements of Cash Flows for Fiscal 2018, 2017 and 2016	F-6
Consolidated Statements of Stockholders’ Equity for Fiscal 2018, 2017 and 2016	F-7
Notes to Consolidated Financial Statements	F-8
(2) Schedule II - Valuation and Qualifying Accounts for Fiscal 2018, 2017 and 2016	S-1

Financial statement schedules other than those listed above have been omitted because they are either not required, not applicable or the information is otherwise included in the notes to the consolidated financial statements.

(b) Exhibits

Exhibit Number	Exhibit Description	Form	File No./ Film No.	Date of First Filing	Exhibit Number	Filed Herewith
2.1	Master Transaction Agreement, dated January 13, 2016, by and among Qualcomm Global Trading Pte. Ltd., each other Purchaser Group member, TDK Japan, each other Seller Group member, and, solely for purposes of Section 10.9 thereof, QUALCOMM Incorporated. (1)	8-K	000-19528/ 161339867	1/13/2016	2.1	
2.2	Amendment #1, dated December 20, 2016, to Master Transaction Agreement, dated January 13, 2016, by and among Qualcomm Global Trading Pte. Ltd., each other Purchaser Group member, TDK Japan, each other Seller Group member, and, solely for purposes of Section 10.9 thereof, QUALCOMM Incorporated. (1)	10-Q	000-19528/ 17546539	1/25/2017	2.3	
2.3	Amendment #2, dated January 19, 2017, to Master Transaction Agreement, dated January 13, 2016, by and among Qualcomm Global Trading Pte. Ltd., each other Purchaser Group member, TDK Japan, each other Seller Group member, and, solely for purposes of Section 10.9 thereof, QUALCOMM Incorporated. (1)	10-Q	000-19528/ 17546539	1/25/2017	2.4	
2.4	Amendment #3, dated February 3, 2017, to Master Transaction Agreement, dated January 13, 2016, by and among Qualcomm Global Trading Pte. Ltd., each other Purchaser Group member, TDK Japan, each other Seller Group member, and, solely for purposes of Section 10.9 thereof, QUALCOMM Incorporated. (1)	10-Q	000-19528/ 17770305	4/19/2017	2.6	
2.5	Purchase Agreement dated as of October 27, 2016 by and between Qualcomm River Holdings, B.V. and NXP Semiconductors N.V. (1)	8-K	000-19528/ 161956228	10/27/2016	2.1	
2.6	Amendment No. 1, dated February 20, 2018, to Purchase Agreement, dated as of October 27, 2016, by and between Qualcomm River Holdings B.V. and NXP Semiconductors N.V. (1)	8-K	000-19528/ 18623109	2/20/2018	2.1	
2.7	Amendment No. 2, dated April 19, 2018, to Purchase Agreement, dated as of October 27, 2016, by and between Qualcomm River Holdings B.V. and NXP Semiconductors N.V., as amended by Amendment No. 1 to the Purchase Agreement, dated as of February 20, 2018, by and between Qualcomm River Holdings B.V. and NXP Semiconductors N.V. (1)	8-K	000-19528/ 18762502	4/19/2018	2.1	
3.1	Amended and Restated Certificate of Incorporation	8-K	000-19528/ 18766678	4/20/2018	3.1	
3.2	Amended and Restated Bylaws	8-K	000-19528/ 18957073	7/17/2018	3.1	
4.1	Indenture, dated May 20, 2015, between the Company and U.S. Bank National Association, as trustee.	8-K	000-19528/ 15880967	5/21/2015	4.1	

4.2	Officers’ Certificate, dated May 20, 2015, for the Floating Rate Notes due 2018, the Floating Rate Notes due 2020, the 1.400% Notes due 2018, the 2.250% Notes due 2020, the 3.000% Notes due 2022, the 3.450% Notes due 2025, the 4.650% Notes due 2035 and the 4.800% Notes due 2045.	8-K	000-19528/ 15880967	5/21/2015	4.2
4.3	Form of Floating Rate Notes due 2020.	8-K	000-19528/ 15880967	5/21/2015	4.4
4.4	Form of 2.250% Notes due 2020.	8-K	000-19528/ 15880967	5/21/2015	4.6
4.5	Form of 3.000% Notes due 2022.	8-K	000-19528/ 15880967	5/21/2015	4.7
4.6	Form of 3.450% Notes due 2025.	8-K	000-19528/ 15880967	5/21/2015	4.8
4.7	Form of 4.650% Notes due 2035.	8-K	000-19528/ 15880967	5/21/2015	4.9

Exhibit Number	Exhibit Description	Form	File No./ Film No.	Date of First Filing	Exhibit Number	Filed Herewith
4.8	Form of 4.800% Notes due 2045.	8-K	000-19528/ 15880967	5/21/2015	4.10	
4.9	Officers' Certificate, dated May 26, 2017, for the Floating Rate Notes due 2019, the Floating Rate Notes due 2020, the Floating Rate Notes due 2023, the 1.850% Notes due 2019, the 2.100% Notes due 2020, the 2.600% Notes due 2023, the 2.900% Notes due 2024, the 3.250% Notes due 2027 and the 4.300% Notes due 2047.	8-K	000-19528/ 17882336	5/31/2017	4.2	
4.10	Form of Floating Rate Notes due 2023.	8-K	000-19528/ 17882336	5/31/2017	4.5	
4.11	Form of 2.600% Notes due 2023.	8-K	000-19528/ 17882336	5/31/2017	4.8	
4.12	Form of 2.900% Notes due 2024.	8-K	000-19528/ 17882336	5/31/2017	4.9	
4.13	Form of 3.250% Notes due 2027.	8-K	000-19528/ 17882336	5/31/2017	4.10	
4.14	Form of 4.300% Notes due 2047.	8-K	000-19528/ 17882336	5/31/2017	4.11	
10.1	Form of Indemnity Agreement between the Company and its directors and officers. (2)	10-K	000-19528/ 151197257	11/4/2015	10.1	
10.2	Form of Grant Notice and Stock Option Agreement under the 2006 Long-Term Incentive Plan. (2)	10-K	000-19528/ 091159213	11/5/2009	10.84	
10.3	Form of Grant Notices and Global Employee Restricted Stock Unit Agreement under the 2006 Long-Term Incentive Plan. (2)	10-K	000-19528/ 121186937	11/7/2012	10.105	
10.4	2006 Long-Term Incentive Plan, as amended and restated. (2)	10-Q	000-19528/ 13779468	4/24/2013	10.112	
10.5	Form of Grant Notices and Non-Employee Director Deferred Stock Unit Agreements under the 2006 Long-Term Incentive Plan for non-employee directors residing in the United States and Spain. (2)	10-K	000-19528/ 131196747	11/6/2013	10.119	
10.6	Form of Executive Restricted Stock Unit Grant Notice and Executive Restricted Stock Unit Agreements under the 2006 Long-Term Incentive Plan, which includes a September 29, 2014 to March 29, 2015 performance period. (2)	10-Q	000-19528/ 14988939	7/23/2014	10.123	
10.7	Non-Qualified Deferred Compensation Plan, as amended, effective January 1, 2016. (2)	8-K	000-19528/ 151134109	9/30/2015	10.1	
10.8	Amendment to 2006 Long-Term Incentive Plan, as amended and restated. (2)	10-Q	000-19528/ 15555092	1/28/2015	10.126	
10.9	Amended and Restated QUALCOMM Incorporated 2001 Employee Stock Purchase Plan, as amended. (2)	10-Q	000-19528/ 151000141	7/22/2015	10.128	
10.10	Revolving Credit Agreement among Qualcomm Incorporated, the lenders party thereto and Bank of America, N.A., as Administrative Agent, Swing Line Lender and Letter of Credit Issuer, dated as of	8-K	000-19528/ 15628813	2/18/2015	10.1	

	February 18, 2015.				
10.11	Form of Executive Performance Stock Unit Award Grant Notice and Executive Performance Stock Unit Award Grant Agreement under the 2006 Long-Term Incentive Plan, which includes a September 28, 2015 to September 28, 2018 performance period. (2)	10-K	000-19528/ 151197257	11/4/2015	10.28
10.12	2016 Long-Term Incentive Plan. (2)	DEF 14A	000-19528/ 161353677	1/21/2016	Appendix 5
10.13	Form of Executive Performance Stock Unit Award Grant Notice under the 2006 Long-Term Incentive Plan, which includes a March 28, 2016 to March 28, 2019 performance period. (2)	10-Q	000-19528/ 161581558	4/20/2016	10.31

Exhibit Number	Exhibit Description	Form	File No./ Film No.	Date of First Filing	Exhibit Number	Filed Herewith
10.14	Form of Non-Employee Director Deferred Stock Unit Grant Notices and Non-Employee Director Deferred Stock Unit Agreements under the 2016 Long-Term Incentive Plan for non-employee directors residing in the United States. (2)	10-Q	000-19528/ 161581558	4/20/2016	10.32	
10.15	Form of Non-Employee Director Deferred Stock Unit Grant Notices and Non-Employee Director Deferred Stock Unit Agreements under the 2016 Long-Term Incentive Plan for non-employee directors residing in Spain. (2)	10-Q	000-19528/ 161581558	4/20/2016	10.33	
10.16	Form of Non-Employee Director Deferred Stock Unit Grant Notices and Non-Employee Director Deferred Stock Unit Agreements under the 2016 Long-Term Incentive Plan for non-employee directors residing in Singapore. (2)	10-Q	000-19528/ 161581558	4/20/2016	10.34	
10.17	Form of Executive Restricted Stock Unit Grant Notice and Executive Restricted Stock Unit Agreement under the 2016 Long-Term Incentive Plan. (2)	10-K	000-19528/ 161967933	11/2/2016	10.36	
10.18	Form of Executive Performance Stock Unit Award Grant Notice and Executive Performance Stock Unit Award Agreement under the 2016 Long-Term Incentive Plan. (2)	10-K	000-19528/ 161967933	11/2/2016	10.37	
10.19	Credit Agreement among QUALCOMM Incorporated, the lenders party thereto and Goldman Sachs Bank USA, as Administrative Agent, dated as of November 8, 2016.	8-K	000-19528/ 161985209	11/9/2016	10.1	
10.20	Amended and Restated Credit Agreement among QUALCOMM Incorporated, the lenders party thereto and Bank of America, N.A., as Administrative Agent, dated as of November 8, 2016.	8-K	000-19528/ 161985209	11/9/2016	10.2	
10.21	Letter of Credit and Reimbursement Agreement between Qualcomm River Holdings B.V. and Mizuho Bank, Ltd., dated as of November 22, 2016.	8-K	000-19528/ 162023573	11/29/2016	10.1	
10.22	First Amendment to Letter of Credit and Reimbursement Agreement between Qualcomm River Holdings B.V. and Mizuho Bank, Ltd., dated as of November 23, 2016.	8-K	000-19528/ 162023573	11/29/2016	10.2	
10.23	Continuing Agreement for Standby Letters of Credit between Qualcomm River Holdings B.V. and The Bank of Tokyo-Mitsubishi UFJ, Ltd., dated as of November 22, 2016.	8-K	000-19528/ 162023573	11/29/2016	10.3	
10.24	Reimbursement and Security Agreement between Qualcomm River Holdings B.V. and Sumitomo Mitsui Banking Corporation, dated as of November 22, 2016.	8-K	000-19528/ 162023573	11/29/2016	10.4	

10.25	Letter of Credit Application by QUALCOMM Incorporated to Bank of America, N.A., dated as of November 23, 2016.	8-K	000-19528/ 162023573	11/29/2016	10.5
10.26	Form of 2017 Annual Cash Incentive Plan Performance Unit Agreement (2)	10-Q	000-19528/ 17546539	1/25/2017	10.47
10.27	Qualcomm Incorporated 2018 Director Compensation Plan. (2)	10-K	000-19528/ 171169046	11/1/2017	10.38
10.28	Form of Executive Restricted Stock Unit Grant Notice and Executive Restricted Stock Unit Agreement under the 2016 Long-Term Incentive Plan, which includes a September 25, 2017 to March 25, 2018 performance period. (2)	10-K	000-19528/ 171169046	11/1/2017	10.39
10.29	Form of Executive Performance Stock Unit Award Grant Notice and Executive Performance Stock Unit Award Agreement under the 2016 Long-Term Incentive Plan, which includes a September 25, 2017 to September 27, 2020 performance period. (2)	10-K	000-19528/ 171169046	11/1/2017	10.40

Exhibit Number	Exhibit Description	Form	File No./ Film No.	Date of First Filing	Exhibit Number	Filed Herewith
10.30	Amendment to the Qualcomm Incorporated 2006 and 2016 Long-Term Incentive Plans, as amended and restated. (2)	8-K	000-19528/ 0171271241	12/22/2017	10.2	
10.31	Qualcomm Incorporated Non-Executive Officer Change in Control Severance Plan.	10-Q	000-19528/ 18562799	1/31/2018	10.42	
10.32	Form of 2018 Annual Cash Incentive Plan Performance Unit Agreement. (2)	10-Q	000-19528/ 18562799	1/31/2018	10.43	
10.33	Form of Executive Restricted Stock Unit Grant Notice and Executive Restricted Stock Unit Agreement under the 2016 Long-Term Incentive Plan (FY2017/FY2018). (2)	10-Q	000-19528/ 18562799	1/31/2018	10.44	
10.34	Waiver and Consent No. 2, dated as of February 26, 2018, among QUALCOMM Incorporated, the lenders party thereto and Goldman Sachs Bank USA, as administrative agent.	8-K	000-19528/ 18662702	3/2/2018	1.1	
10.35	Credit Agreement among QUALCOMM Incorporated, the lenders party thereto and Goldman Sachs Bank USA, as administrative agent, dated as of March 6, 2018.	8-K	000-19528/ 18678483	3/9/2018	10.1	
10.36	Amendment No. 1, dated as of April 20, 2018, among QUALCOMM Incorporated, the lenders party thereto and Goldman Sachs Bank USA, as administrative agent, to the Credit Agreement dated as of November 8, 2016, among QUALCOMM Incorporated, the lenders party thereto and Goldman Sachs Bank USA, as administrative agent.	8-K	000-19528/ 18771694	4/24/2018	10.1	
10.37	Amendment No. 1, dated as April 20, 2018, among QUALCOMM Incorporated, the lenders party thereto and Goldman Sachs Bank USA, as administrative agent, to the Credit Agreement dated as of March 6, 2018, among QUALCOMM Incorporated, the lenders party thereto and Goldman Sachs Bank USA, as administrative agent.	8-K	000-19528/ 18771694	4/24/2018	10.2	
10.38	Tender and Support Agreement, dated as of February 20, 2018, by and among Qualcomm River Holdings B.V., Arrowgrass Master Fund Ltd. and Arrowgrass Customised Solutions I Limited.	8-K	000-19528/ 18623109	2/20/2018	10.1	
10.39	Tender and Support Agreement, dated as of February 20, 2018, by and among Qualcomm River Holdings B.V., D. E. Shaw Valence Portfolios, L.L.C., D. E. Shaw Kalon Portfolios, L.L.C., D. E. Shaw Orienteer Portfolios, L.L.C., D. E. Shaw Oculus Portfolios, L.L.C., D. E. Shaw Orienteer X Portfolios, L.L.C. and D. E. Shaw Asymptote Portfolios, L.L.C.	8-K	000-19528/ 18623109	2/20/2018	10.2	
10.40	Tender and Support Agreement, dated as of February 20, 2018, by and among Qualcomm River Holdings B.V., Davidson Kempner International	8-K	000-19528/ 18623109	2/20/2018	10.3	

	Ltd., Davidson Kempner Institutional Partners, L.P., Davidson Kempner Partners and M.H. Davidson & Co.				
10.41	Tender and Support Agreement, dated as of February 20, 2018, by and among Qualcomm River Holdings B.V., Elliott Associates, L.P., Elliott Associates International, L.P. and Elliott International Capital Advisors Inc.	8-K	000-19528/ 18623109	2/20/2018	10.4
10.42	Tender and Support Agreement, dated as of February 20, 2018, by and among Qualcomm River Holdings B.V., Farallon Capital Partners, L.P., Farallon Capital Institutional Partners, L.P., Farallon Capital Institutional Partners V, L.P., Farallon Capital Institutional Partners II, L.P., Farallon Capital Offshore Investors II, L.P., Farallon Capital F5 Master I, L.P., Farallon Capital (AM) Investors, L.P. and Farallon Capital Institutional Partners III, L.P.	8-K	000-19528/ 18623109	2/20/2018	10.5

Exhibit Number	Exhibit Description	Form	File No./ Film No.	Date of First Filing	Exhibit Number	Filed Herewith
10.43	Tender and Support Agreement, dated as of February 20, 2018, by and among Qualcomm River Holdings B.V., HBK Master Fund L.P. and HBK Merger Strategies Master Fund L.P.	8-K	000-19528/ 18623109	2/20/2018	10.6	
10.44	Tender and Support Agreement, dated as of February 20, 2018, by and among Qualcomm River Holdings B.V. and Pentwater Capital Management LP.	8-K	000-19528/ 18623109	2/20/2018	10.7	
10.45	Tender and Support Agreement, dated as of February 20, 2018, by and among Qualcomm River Holdings B.V., Soroban Master Fund LP and Soroban Opportunities Master Fund LP.	8-K	000-19528/ 18623109	2/20/2018	10.8	
10.46	Tender and Support Agreement, dated as of February 20, 2018, by and among Qualcomm River Holdings B.V. and TIG Advisors, LLC.	8-K	000-19528/ 18623109	2/20/2018	10.9	
10.47	Form of 2016 Long-Term Incentive Plan Non-Employee Director Deferred Stock Unit Grant Notice and Non-Employee Director Deferred Stock Unit Agreement for Non-Employee Directors in Singapore. (2)	10-Q	000-19528/ 18774411	4/25/2018	10.58	
10.48	Form of 2016 Long-Term Incentive Plan Non-Employee Director Deferred Stock Unit Grant Notice and Non-Employee Director Deferred Stock Unit Agreement for Non-Employee Directors in Spain. (2)	10-Q	000-19528/ 18774411	4/25/2018	10.59	
10.49	Form of 2016 Long-Term Incentive Plan Non-Employee Director Deferred Stock Unit Grant Notice and Non-Employee Director Deferred Stock Unit Agreement. (2)	10-Q	000-19528/ 18774411	4/25/2018	10.60	
10.50	Qualcomm Incorporated Amended and Restated 2018 Director Compensation Plan. (2)	10-Q	000-19528/ 18774411	4/25/2018	10.61	
10.51	Amended and Restated QUALCOMM Incorporated 2001 Employee Stock Purchase Plan, as amended. (2)	10-Q	000-19528/ 18774411	4/25/2018	10.62	
10.52	Qualcomm Incorporated Executive Officer Change in Control Severance Plan	8-K	000-19528/ 18859830	5/25/2018	10.1	
10.53	Amendment No. 2, dated as of June 11, 2018, among QUALCOMM Incorporated, the lenders party thereto and Goldman Sachs Bank USA, as administrative agent, to the Credit Agreement dated as of March 6, 2018, among QUALCOMM Incorporated, the lenders party thereto and Goldman Sachs Bank USA, as administrative agent.	8-K	000-19528/ 18896982	6/13/2018	10.1	
10.54	Master Confirmation — Accelerated Stock Buyback, dated as of September 12, 2018, between QUALCOMM Incorporated and Bank of America, N.A.	8-K	000-19528/ 181067919	9/13/2018	10.1	
10.55	Master Confirmation — Accelerated Stock Buyback, dated as of September 12, 2018, between	8-K	000-19528/ 181067919	9/13/2018	10.2	

10.56	QUALCOMM Incorporated and Citibank, N.A. Master Confirmation — Accelerated Stock Buyback, dated as of September 12, 2018, between QUALCOMM Incorporated and Morgan Stanley & Co. LLC	8-K	000-19528/ 181067919	9/13/2018	10.3	
10.57	Qualcomm Incorporated Executive Officer Severance Plan	8-K	000-19528/ 181082096	9/21/2018	10.1	
10.58	Qualcomm Incorporated 2019 Director Compensation Plan					X
10.59	Qualcomm Incorporated 2016 Long-Term Incentive Plan CEO Performance Stock Option Grant Notice and CEO Performance Stock Option Agreement					X

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Exhibit Number	Exhibit Description	Form	File No./ Film No.	Date of First Filing	Exhibit Number	Filed Herewith
10.60	Form of Qualcomm Incorporated 2016 Long-Term Incentive Plan Executive Performance Stock Unit Award Grant Notice and Executive Performance Stock Unit Award Agreement					X
10.61	Form of Qualcomm Incorporated 2016 Long-Term Incentive Plan Executive Restricted Stock Unit Grant Notice and Executive Restricted Stock Unit Agreement					X
21	Subsidiaries of the Registrant.					X
23.1	Consent of Independent Registered Public Accounting Firm.					X
31.1	Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 for Steve Mollenkopf.					X
31.2	Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 for George S. Davis.					X
32.1	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, for Steve Mollenkopf.					X
32.2	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, for George S. Davis.					X
101.INS	XBRL Instance Document.					X
101.SCH	XBRL Taxonomy Extension Schema.					X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase.					X
101.LAB	XBRL Taxonomy Extension Labels Linkbase.					X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase.					X
101.DEF	XBRL Taxonomy Extension Definition Linkbase.					X

(1) We shall furnish supplementally a copy of any omitted schedule to the Commission upon request.

(2) Indicates management contract or compensatory plan or arrangement required to be identified pursuant to Item 15(a).

(3) Confidential treatment has been requested with respect to certain portions of this exhibit.

Item 16. Form 10-K Summary

None.

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.

November 7, 2018

QUALCOMM Incorporated	
By	/s/ Steve Mollenkopf Steve Mollenkopf Chief Executive Officer

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

Signature	Title	Date
/s/ Steve Mollenkopf Steve Mollenkopf	Chief Executive Officer and Director (Principal Executive Officer)	November 7, 2018
/s/ George S. Davis George S. Davis	Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	November 7, 2018
/s/ Barbara T. Alexander Barbara T. Alexander	Director	November 7, 2018
/s/ Martin B. Anstice Martin B. Anstice	Director	November 7, 2018
/s/ Mark Fields Mark Fields	Director	November 7, 2018
/s/ Jeffrey W. Henderson Jeffrey W. Henderson	Chairman	November 7, 2018
/s/ Thomas W. Horton Thomas W. Horton	Director	November 7, 2018
/s/ Ann M. Livermore Ann M. Livermore	Director	November 7, 2018
/s/ Harish Manwani Harish Manwani	Director	November 7, 2018
/s/ Mark D. McLaughlin Mark D. McLaughlin	Director	November 7, 2018
/s/ Clark T. Randt, Jr. Clark T. Randt, Jr.	Director	November 7, 2018
/s/ Francisco Ros Francisco Ros	Director	November 7, 2018
/s/ Irene B. Rosenfeld Irene B. Rosenfeld	Director	November 7, 2018
/s/ Neil Smit Neil Smit	Director	November 7, 2018
/s/ Anthony J. Vinciquerra Anthony J. Vinciquerra	Director	November 7, 2018

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of QUALCOMM Incorporated:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of QUALCOMM Incorporated and its subsidiaries as of September 30, 2018 and September 24, 2017, and the related consolidated statements of operations, comprehensive (loss) income, cash flows and stockholders' equity for each of the three years in the period ended September 30, 2018, including the related notes and financial statement schedule listed in the index appearing under Item 15(a)(2) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of September 30, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of September 30, 2018 and September 24, 2017, and the results of their operations and their cash flows for each of the three years in the period ended September 30, 2018 in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of September 30, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

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

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

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

Definition and Limitations of Internal Control over Financial Reporting

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

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

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

/s/PricewaterhouseCoopers LLP

San Diego, California
November 7, 2018

We have served as the Company's auditor since 1985.

QUALCOMM Incorporated
CONSOLIDATED BALANCE SHEETS
(In millions, except per share data)

	September 30, 2018	September 24, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 11,777	$ 35,029
Marketable securities	311	2,279
Accounts receivable, net	2,904	3,632
Inventories	1,693	2,035
Other current assets	699	618
Total current assets	17,384	43,593
Marketable securities	35	1,270
Deferred tax assets	904	2,900
Property, plant and equipment, net	2,975	3,216
Goodwill	6,498	6,623
Other intangible assets, net	2,955	3,737
Other assets	1,935	4,147
Total assets	$ 32,686	$ 65,486
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Trade accounts payable	$ 1,825	$ 1,971
Payroll and other benefits related liabilities	1,081	1,183
Unearned revenues	500	502
Short-term debt	1,005	2,495
Other current liabilities	6,825	4,756
Total current liabilities	11,236	10,907
Unearned revenues	1,620	2,003
Income taxes payable	2,312	—
Long-term debt	15,365	19,398
Other liabilities	1,225	2,432
Total liabilities	31,758	34,740
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred stock, $0.0001 par value; 8 shares authorized; none outstanding	—	—
Common stock and paid-in capital, $0.0001 par value; 6,000 shares authorized; 1,219 and 1,474 shares issued and outstanding, respectively	—	274
Retained earnings	663	30,088
Accumulated other comprehensive income	265	384
Total stockholders' equity	928	30,746
Total liabilities and stockholders' equity	$ 32,686	$ 65,486

See accompanying notes.

QUALCOMM Incorporated
CONSOLIDATED STATEMENTS OF OPERATIONS
(In millions, except per share data)

	Year Ended		
	September 30, 2018	September 24, 2017	September 25, 2016
Revenues:			
Equipment and services	$17,400	$ 16,647	$ 15,467
Licensing	5,332	5,644	8,087
Total revenues	22,732	22,291	23,554
Costs and expenses:			
Cost of revenues	10,244	9,792	9,749
Research and development	5,625	5,485	5,151
Selling, general and administrative	2,986	2,658	2,385
Other (Note 2)	3,135	1,742	(226)
Total costs and expenses	21,990	19,677	17,059
Operating income	742	2,614	6,495
Interest expense	(768)	(494)	(297)
Investment and other income, net (Note 2)	539	900	635
Income before income taxes	513	3,020	6,833
Income tax expense (Note 3)	(5,377)	(555)	(1,131)
Net (loss) income	(4,864)	2,465	5,702
Net loss attributable to noncontrolling interests	—	1	3
Net (loss) income attributable to Qualcomm	$(4,864)	$ 2,466	$ 5,705
Basic (loss) earnings per share attributable to Qualcomm	$(3.32)	$ 1.67	$ 3.84
Diluted (loss) earnings per share attributable to Qualcomm	$(3.32)	$ 1.65	$ 3.81
Shares used in per share calculations:			
Basic	1,463	1,477	1,484
Diluted	1,463	1,490	1,498

See accompanying notes.

QUALCOMM Incorporated
CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME
(In millions)

	Year Ended		
	September 30, 2018	September 24, 2017	September 25, 2016
Net (loss) income	$(4,864)	$ 2,465	$ 5,702
Other comprehensive (loss) income, net of income taxes:			
Foreign currency translation (losses) gains	(136)	309	(22)
Reclassification of foreign currency translation (gains) losses included in net income	—	(1)	21
Noncredit other-than-temporary impairment losses related to certain available-for-sale debt securities and subsequent changes in fair value, net of tax (expense) benefit of $0, ($3) and $23, respectively	—	6	(43)
Reclassification of net other-than-temporary losses on available-for-sale securities included in net income, net of tax benefit of $2, $46 and $71, respectively	5	85	130
Net unrealized gains (losses) on other available-for-sale securities, net of tax (expense) benefit of ($8), $59 and ($166), respectively	29	(102)	306
Reclassification of net realized gains on available-for-sale securities included in net income, net of tax expense of $3, $156 and $85, respectively	(9)	(286)	(156)
Net unrealized losses on derivative instruments, net of tax benefit of $6, $0 and $2, respectively	(17)	(49)	(4)
Reclassification of net realized losses (gains) on derivative instruments included in net income, net of tax (benefit) expense of ($4), $4 and ($2), respectively	12	(10)	1
Other (losses) gains	(3)	4	—
Total other comprehensive (loss) income	(119)	(44)	233
Total comprehensive (loss) income	(4,983)	2,421	5,935
Comprehensive loss attributable to noncontrolling interests	—	1	3
Comprehensive (loss) income attributable to Qualcomm	$(4,983)	$ 2,422	$ 5,938

See accompanying notes.

QUALCOMM Incorporated
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Year Ended		
	September 30, 2018	September 24, 2017	September 25, 2016
Operating Activities:			
Net (loss) income	$(4,864)	$ 2,465	$ 5,702
Adjustments to reconcile net (loss) income to net cash provided by operating activities:			
Depreciation and amortization expense	1,561	1,461	1,428
Income tax provision in excess of (less than) income tax payments (Note 3)	4,502	(400)	(200)
Non-cash portion of share-based compensation expense	883	914	943
Net realized gains on marketable securities and other investments	(124)	(530)	(288)
Indefinite and long-lived asset impairment charges	273	76	107
Impairment losses on marketable securities and other investments	75	177	172
Gain on sale of wireless spectrum	—	—	(380)
Other items, net	129	146	77
Changes in assets and liabilities:			
Accounts receivable, net	734	(1,104)	(232)
Inventories	337	(200)	(49)
Other assets	30	169	246
Trade accounts payable	(94)	(45)	541
Payroll, benefits and other liabilities	687	2,103	(128)
Unearned revenues	(234)	(231)	(307)
Net cash provided by operating activities	3,895	5,001	7,632
Investing Activities:			
Capital expenditures	(784)	(690)	(539)
Purchases of available-for-sale marketable securities	(5,936)	(19,062)	(18,015)
Proceeds from sales and maturities of available-for-sale securities	9,188	41,715	14,386
Purchases of trading securities	—	—	(177)
Proceeds from sales and maturities of trading securities	—	—	779
Purchases of other marketable securities	(49)	(710)	—
Proceeds from sales and maturities of other marketable securities	50	706	450
Release (deposits) of investments designated as collateral	2,000	(2,000)	—
Acquisitions and other investments, net of cash acquired	(326)	(1,544)	(812)
Proceeds from other investments	222	23	59
Proceeds from sale of wireless spectrum	—	—	232
Other items, net	16	25	149
Net cash provided (used) by investing activities	4,381	18,463	(3,488)
Financing Activities:			
Proceeds from short-term debt	11,131	8,558	8,949
Repayment of short-term debt	(11,127)	(9,309)	(8,200)
Proceeds from long-term debt	—	10,953	—
Repayment of long-term debt	(5,500)	—	—
Proceeds from issuance of common stock	603	497	668
Repurchases and retirements of common stock	(22,580)	(1,342)	(3,923)
Dividends paid	(3,466)	(3,252)	(2,990)
Payments of tax withholdings related to vesting of share-based awards	(280)	(268)	(224)
Payment of purchase consideration related to RF360 joint venture	(157)	(115)	—
Other items, net	(111)	(151)	(34)

Net cash (used) provided by financing activities	(31,487)	5,571	(5,754)
Effect of exchange rate changes on cash and cash equivalents	(41)	48	(4)
Net (decrease) increase in cash and cash equivalents	(23,252)	29,083	(1,614)
Cash and cash equivalents at beginning of period	35,029	5,946	7,560
Cash and cash equivalents at end of period	$11,777	$ 35,029	$ 5,946

See accompanying notes.

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QUALCOMM Incorporated
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In millions)

	Common Stock Shares	Common Stock and Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income	Total Qualcomm Stockholders' Equity	Noncontrolling Interests	Total Stockholders' Equity
Balance at September 27, 2015	1,524	$ —	$ 31,226	$ 195	$ 31,421	$ (7)	$ 31,414
Total comprehensive income	—	—	5,705	233	5,938	(3)	5,935
Common stock issued under employee benefit plans and the related tax benefits	30	615	—	—	615	—	615
Repurchases and retirements of common stock	(73)	(974)	(2,949)	—	(3,923)	—	(3,923)
Share-based compensation	—	997	—	—	997	—	997
Tax withholdings related to vesting of share-based payments	(5)	(224)	—	—	(224)	—	(224)
Dividends	—	—	(3,046)	—	(3,046)	—	(3,046)
Balance at September 25, 2016	1,476	414	30,936	428	31,778	(10)	31,768
Total comprehensive income	—	—	2,466	(44)	2,422	(1)	2,421
Common stock issued under employee benefit plans and the related tax benefits	25	499	—	—	499	—	499
Repurchases and retirements of common stock	(23)	(1,342)	—	—	(1,342)	—	(1,342)
Share-based compensation	—	975	—	—	975	—	975
Tax withholdings related to vesting of share-based payments	(4)	(268)	—	—	(268)	—	(268)
Dividends	—	—	(3,314)	—	(3,314)	—	(3,314)
Other	—	(4)	—	—	(4)	11	7
Balance at September 24, 2017	1,474	274	30,088	384	30,746	—	30,746
Total comprehensive loss	—	—	(4,864)	(119)	(4,983)	—	(4,983)
Common stock issued under employee benefit plans and the related tax benefits	29	612	—	—	612	—	612
Repurchases and retirements of common stock	(279)	(1,536)	(21,044)	—	(22,580)	—	(22,580)
Share-based compensation	—	930	—	—	930	—	930
Tax withholdings related to vesting of share-based payments	(5)	(280)	—	—	(280)	—	(280)
Dividends	—	—	(3,517)	—	(3,517)	—	(3,517)
Balance at September 30, 2018	1,219	$ —	$ 663	$ 265	$ 928	$ —	$ 928

See accompanying notes.

QUALCOMM Incorporated
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1. Significant Accounting Policies
We develop, design, manufacture, have manufactured on our behalf and market digital communications products, which principally consist of integrated circuits and system software based on CDMA, OFDMA and other technologies for use in mobile devices, wireless networks, devices used in the Internet of Things (IoT), broadband gateway equipment, consumer electronic devices and automotive telematics and infotainment systems. We also grant licenses to use portions of our intellectual property portfolio, which includes certain patent rights essential to and/or useful in the manufacture and sale of certain wireless products and receive ongoing royalties based on sales by licensees of wireless products incorporating our patented technologies and may also receive fixed license fees (payable in one or more installments).
Principles of Consolidation. Our consolidated financial statements include the assets, liabilities and operating results of majority-owned subsidiaries, including our joint venture RF360 Holdings Singapore Pte. Ltd (RF360 Holdings) (Note 9). During the third quarter of fiscal 2018, we eliminated the one-month reporting lag previously used to consolidate our RF360 Holdings joint venture to provide contemporaneous reporting within our consolidated financial statements. The effect of this change was not material to the consolidated financial statements, and therefore, the impact of eliminating the one-month reporting lag has been included in our results of operations for fiscal 2018.
In addition, we consolidated our investment in an immaterial less than majority-owned variable interest entity as we were the primary beneficiary until the end of fiscal 2017. The ownership of the other interest holders of consolidated subsidiaries and the immaterial less than majority-owned variable interest entity is presented separately in the consolidated balance sheets and statements of operations. All significant intercompany accounts and transactions have been eliminated.
Financial Statement Preparation. The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (GAAP) requires management to make estimates and assumptions that affect the reported amounts and the disclosure of contingent amounts in our consolidated financial statements and the accompanying notes. Examples of our significant accounting estimates that may involve a higher degree of judgment and complexity than others include: the determination of other-than-temporary impairments of other investments; the valuation of inventories; the valuation and assessment of the recoverability of goodwill and other indefinite-lived and long-lived assets; the recognition, measurement and disclosure of loss contingencies related to legal and regulatory proceedings; and the calculation of tax liabilities, including the recognition and measurement of uncertain tax positions. Actual results could differ from those estimates. Certain prior year amounts have been reclassified to conform to the current year presentation.
Fiscal Year. We operate and report using a 52-53 week fiscal year ending on the last Sunday in September. The fiscal year ended September 30, 2018, included 53 weeks. The fiscal years ended September 24, 2017 and September 25, 2016 included 52 weeks.
Cash Equivalents. We consider all highly liquid investments with original maturities of 90 days or less to be cash equivalents. Cash equivalents are comprised of money market funds, certificates of deposit, commercial paper, corporate bonds and notes, certain bank time and demand deposits and government agencies' securities. The carrying amounts approximate fair value due to the short maturities of these instruments.
Marketable Securities. Marketable securities include available-for-sale securities and certain time deposits for which classification is determined at the time of purchase and reevaluated at each balance sheet date. We classify marketable securities as current or noncurrent based on the nature of the securities and their availability for use in current operations. Marketable securities are stated at fair value. The net unrealized gains or losses on available-for-sale securities are recorded as a component of accumulated other comprehensive income, net of income taxes. The realized gains and losses on marketable securities are determined using the specific identification method.
At each balance sheet date, we assess available-for-sale securities in an unrealized loss position to determine whether the unrealized loss is other than temporary. We consider factors including: the significance of the decline in value as compared to the cost basis; underlying factors contributing to a decline in the prices of securities in a single asset

class; how long the market value of the security has been less than its cost basis; the security’s relative performance versus its peers, sector or asset class; expected market volatility; the market and economy in general; analyst recommendations and price targets; views of external investment managers; news or financial information that has been released specific to the investee; and the outlook for the overall industry in which the investee operates.

If a debt security’s market value is below amortized cost and we either intend to sell the security or it is more likely than not that we will be required to sell the security before its anticipated recovery, we record an other-than-temporary impairment charge to investment and other income, net for the entire amount of the impairment. For the remaining debt securities, if an other-than-temporary impairment exists, we separate the other-than-temporary impairment into the portion of the loss related

QUALCOMM Incorporated
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

to credit factors, or the credit loss portion, which is recorded as a charge to investment and other income, net, and the portion of the loss that is not related to credit factors, or the noncredit loss portion, which is recorded as a component of other accumulated comprehensive income, net of income taxes.
For equity securities, we consider the loss relative to the expected volatility and the likelihood of recovery over a reasonable period of time. If events and circumstances indicate that a decline in the value of an equity security has occurred and is other than temporary, we record a charge to investment and other income, net for the difference between fair value and cost at the balance sheet date. Additionally, if we either have the intent to sell the equity security or do not have both the intent and the ability to hold the equity security until its anticipated recovery, we record a charge to investment and other income, net for the difference between fair value and cost at the balance sheet date.
Equity and Cost Method Investments. We generally account for non-marketable equity investments either under the equity or the cost method. Equity investments for which we have significant influence, but not control over the investee and are not the primary beneficiary of the investee’s activities are accounted for under the equity method. Other non-marketable equity investments are accounted for under the cost method. Our share of gains and losses in equity method investments are recorded in investment and other income, net. We monitor non-marketable equity investments for events or circumstances that could indicate the investments are impaired, such as a deterioration in the investee’s financial condition and business forecasts and lower valuations in recently completed or proposed financings, and record a charge to investment and other income, net for the difference between the estimated fair value and the carrying value.
The carrying values of our non-marketable equity investments are recorded in other noncurrent assets and were as follows (in millions):

	September 30, 2018	September 24, 2017
Equity method investments	$ 402	$ 379
Cost method investments	650	603
	$ 1,052	$ 982

Transactions with equity method investees are considered related party transactions. Revenues from certain licensing and services contracts were $100 million with one of our equity method investees in fiscal 2018, and $165 million and $196 million with two of our equity method investees in fiscal 2017 and 2016, respectively. We eliminate unrealized profit or loss related to such transactions in relation to our ownership interest in the investee, which is recorded as a component of equity in net losses in investees in investment and other income, net. No accounts receivable were due from these equity method investees at September 30, 2018. Aggregate accounts receivable from these equity method investees were $29 million at September 24, 2017.
Derivatives. Our primary objectives for holding derivative instruments are to manage interest rate risk on our long-term debt and to manage foreign exchange risk for certain foreign currency revenues, operating expenses, receivables and payables. Derivative instruments are recorded at fair value and included in other current or noncurrent assets or other current or noncurrent liabilities based on their maturity dates. Counterparties to our derivative instruments are all major banking institutions.
Interest Rate Swaps: We manage our exposure to certain interest rate risks related to our long-term debt through the use of interest rate swaps. Such swaps allow us to effectively convert fixed-rate payments into floating-rate payments based on LIBOR. These transactions are designated as fair value hedges, and the gains and losses related to changes in the fair value of the interest rate swaps substantially offset changes in the fair value of the hedged portion of the underlying debt that are attributable to changes in the market interest rates. The net gains and losses on the interest rate swaps, as well as the offsetting gains or losses on the related fixed-rate debt attributable to the hedged risks, are recognized in earnings as interest expense in the current period. The interest settlement payments associated with the interest rate swap agreements are classified as cash flows from operating activities in the consolidated statements of cash flows.

At September 30, 2018 and September 24, 2017, the aggregate fair value of our interest rate swaps related to our long-term debt issued in May 2015 was $50 million and negligible, respectively. The fair values of the swaps were recorded in other noncurrent liabilities at September 30, 2018 and in noncurrent assets, other current liabilities and other noncurrent liabilities at September 24, 2017. At September 30, 2018, the swaps had an aggregate notional amount of $1.8 billion, which effectively converted approximately 43% and 50% of the fixed-rate debt due in 2020 and 2022, respectively, into floating-rate debt, with maturities matching our fixed-rate debt due in 2020 and 2022. At September 24, 2017, the swaps had an aggregate notional amount of $3.0 billion, which effectively converted all of the fixed-rate debt due in 2018 and

QUALCOMM Incorporated
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

approximately 43% and 50% of the fixed-rate debt due in 2020 and 2022, respectively, into floating-rate debt, with maturities matching our fixed-rate debt due in 2018, 2020 and 2022.

Foreign Currency Hedges: We manage our exposure to foreign exchange market risks, when deemed appropriate, through the use of derivative instruments, including foreign currency forward and option contracts with financial counterparties, that may or may not be designated as hedging instruments. These derivative instruments have maturity dates of less than twelve months. Gains and losses arising from the effective portion of such contracts that are designated as cash flow hedging instruments are recorded as a component of accumulated other comprehensive income as gains and losses on derivative instruments, net of income taxes. The hedging gains and losses in accumulated other comprehensive income are subsequently reclassified to revenues or costs and expenses, as applicable, in the consolidated statements of operations in the same period in which the underlying transactions affect our earnings. Gains and losses arising from the ineffective portion of such contracts, if any, are recorded in investment and other income, net as gains and losses on derivative instruments. The cash flows associated with derivative instruments designated as cash flow hedging instruments are classified as cash flows from operating activities in the consolidated statements of cash flows, which is the same category as the hedged transaction. The cash flows associated with the ineffective portion of such derivative instruments, if any, are classified as cash flows from investing activities in the consolidated statements of cash flows. The fair values of our foreign currency forward and option contracts used to hedge foreign currency risk designated as cash flow hedges recorded in total assets and in total liabilities were negligible and $19 million, respectively, at September 30, 2018 and $10 million and $22 million, respectively at September 24, 2017.

For foreign currency forward and option contracts not designated as hedging instruments, the changes in fair value are recorded in investment and other income, net in the period of change. The cash flows associated with derivative instruments not designated as hedging instruments are classified as cash flows from operating activities in the consolidated statements of cash flows, which is the same category as the hedged transaction. The fair values of our foreign currency forward and option contracts not designated as hedging instruments were negligible at September 30, 2018 and September 24, 2017, respectively.

Gross Notional Amounts: The gross notional amounts of our interest rate and foreign currency derivatives by instrument type were as follows (in millions):

	September 30, 2018	September 24, 2017
Forwards	$ 682	$ 163
Options	1,375	2,333
Swaps	1,750	3,000
	$ 3,807	$ 5,496

The gross notional amounts by currency were as follows (in millions):

	September 30, 2018	September 24, 2017
Chinese renminbi	$ 650	$ 1,460
Euro	938	146
Indian rupee	336	772
Japanese yen	17	68
Korean won	—	50
United States dollar	1,866	3,000
	$ 3,807	$ 5,496

Fair Value Measurements. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants as of the measurement date. Applicable accounting guidance provides an established 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 that market participants would use in valuing the asset or liability and are developed based on market data obtained from sources independent of us. Unobservable inputs are inputs that reflect our assumptions about the factors that market participants would use in valuing the asset or liability. There are three levels of inputs that may be used to measure fair value:

QUALCOMM Incorporated
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

- Level 1 includes financial instruments for which quoted market prices for identical instruments are available in active markets.
- Level 2 includes financial instruments for which there are inputs other than quoted prices included within Level 1 that are observable for the instrument.
- Level 3 includes financial instruments for which fair value is derived from valuation techniques in which one or more significant inputs are unobservable, including our own assumptions.

Assets and liabilities are classified based on the lowest level of input that is significant to the fair value measurement. We review the fair value hierarchy classification on a quarterly basis. Changes in the observability of valuation inputs may result in a reclassification of levels for certain securities within the fair value hierarchy.

Cash Equivalents and Marketable Securities: With the exception of auction rate securities, we obtain pricing information from quoted market prices, pricing vendors or quotes from brokers/dealers. We conduct reviews of our primary pricing vendors to determine whether the inputs used in the vendor's pricing processes are deemed to be observable. The fair value for interest-bearing securities includes accrued interest.

The fair value of U.S. Treasury securities and government-related securities, corporate bonds and notes and common and preferred stock is generally determined using standard observable inputs, including reported trades, quoted market prices, matrix pricing, benchmark yields, broker/dealer quotes, issuer spreads, two-sided markets and/or benchmark securities.

The fair value of debt and equity funds is reported at published net asset values. We assess the daily frequency and size of transactions at published net asset values and/or the funds' underlying holdings to determine whether fair value is based on observable or unobservable inputs.

The fair value of auction rate securities is estimated using a discounted cash flow model that incorporates transaction details, such as contractual terms, maturity and timing and amount of future cash flows, as well as assumptions related to liquidity, default likelihood and recovery, the future state of the auction rate market and credit valuation adjustments of market participants. Though most of the securities we hold are pools of student loans guaranteed by the United States government, prepayment speeds and illiquidity discounts are considered significant unobservable inputs. These additional inputs are generally unobservable, and therefore, auction rate securities are included in Level 3.

Derivative Instruments: Derivative instruments that are traded on an exchange are valued using quoted market prices and are included in Level 1. Derivative instruments that are not traded on an exchange are valued using conventional calculations/models that are primarily based on observable inputs, such as foreign currency exchange rates, volatilities and interest rates, and therefore, such derivative instruments are included in Level 2.

Other Investments and Other Liabilities: Other investments and other liabilities included in Level 1 are comprised of our deferred compensation plan liability and related assets, which consist of mutual funds classified as trading securities, and are included in other assets. Other investments and other liabilities included in Level 3 are comprised of convertible debt instruments issued by private companies and contingent consideration related to business combinations, respectively. The fair value of convertible debt instruments is estimated based on the estimated timing and amount of future cash flows, as well as assumptions related to liquidity, default likelihood and recovery. The fair value of contingent consideration related to business combinations is estimated using either a real options approach or discounted cash flow model, both of which include inputs, such as projected financial information, market volatility, discount rates and timing of contractual payments. The inputs we use to estimate the fair values of the convertible debt instruments and contingent consideration are generally unobservable, and therefore, they are included in Level 3.

Allowances for Doubtful Accounts. We maintain allowances for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. We consider the following factors when determining if collection of required payments is reasonably assured: customer credit-worthiness; past transaction history with the customer; current economic industry and/or geographic trends; changes in customer payment terms; and bank credit-worthiness for letters of credit. If we have no previous experience with the customer, we may request financial information, including financial statements or other documents, to determine that the customer has the means of making payment. We may also obtain reports from various credit organizations to determine that the customer has a

history of paying its creditors. If these factors do not indicate collection is reasonably assured, revenue is deferred as a reduction to accounts receivable until collection becomes reasonably assured, which is generally upon receipt of cash. If the financial condition of our customers was to deteriorate, adversely affecting their ability to make payments, additional allowances would be required.

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Inventories. Inventories are valued at the lower of cost and net realizable value using the first-in, first-out method. Recoverability of inventories is assessed based on review of future customer demand that considers multiple factors, including committed purchase orders from customers as well as purchase commitment projections provided by customers and our own forecast of customer demand, among other things.

Property, Plant and Equipment. Property, plant and equipment are recorded at cost and depreciated or amortized using the straight-line method over their estimated useful lives. Upon the retirement or disposition of property, plant and equipment, the related cost and accumulated depreciation or amortization are removed, and a gain or loss is recorded, when appropriate. Buildings on owned land are depreciated over 30 years, and building improvements are depreciated over their useful lives ranging from 7 to 15 years. Leasehold improvements are amortized over the shorter of their estimated useful lives, not to exceed 15 years, or the remaining term of the related lease. Other property, plant and equipment have useful lives ranging from 2 to 25 years. Leased property meeting certain capital lease criteria is capitalized, and the net present value of the related lease payments is recorded as a liability. Amortization of assets under capital leases is recorded using the straight-line method over the shorter of the estimated useful lives or the lease terms. Maintenance, repairs and minor renewals or betterments are charged to expense as incurred.

Goodwill and Other Intangible Assets. Goodwill represents the excess of purchase price over the value assigned to the net tangible and identifiable intangible assets of businesses acquired. Acquired intangible assets other than goodwill are amortized over their useful lives unless the lives are determined to be indefinite. For intangible assets purchased in a business combination, the estimated fair values of the assets received are used to establish their recorded values. For intangible assets acquired in a non-monetary exchange, the estimated fair values of the assets transferred (or the estimated fair values of the assets received, if more clearly evident) are used to establish their recorded values, unless the values of neither the assets received nor the assets transferred are determinable within reasonable limits, in which case the assets received are measured based on the carrying values of the assets transferred. Valuation techniques consistent with the market approach, income approach and/or cost approach are used to measure fair value.

Impairment of Goodwill, Other Indefinite-Lived Assets and Long-Lived Assets. Goodwill and other indefinite-lived intangible assets are tested annually for impairment in the fourth fiscal quarter and in interim periods if events or changes in circumstances indicate that the assets may be impaired. If a qualitative assessment is used and we determine that the fair value of a reporting unit or indefinite-lived intangible asset is more likely than not (i.e., a likelihood of more than 50%) less than its carrying amount, a quantitative impairment test will be performed. Pursuant to the new guidance adopted in the fourth quarter of fiscal 2018, if goodwill is quantitatively assessed for impairment and a reporting unit's carrying value exceeds its fair value, the difference is recorded as an impairment. Other indefinite-lived intangible assets are quantitatively assessed for impairment, if necessary, by comparing their estimated fair values to their carrying values. If the carrying value exceeds the fair value, the difference is recorded as an impairment.

Long-lived assets, such as property, plant and equipment and intangible assets subject to amortization, are reviewed for impairment when there is evidence that events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. Recoverability of assets to be held and used is measured by comparing the carrying amount of an asset or asset group to estimated undiscounted future cash flows expected to be generated by the asset or asset group. If the carrying amount of an asset or asset group exceeds its estimated future cash flows, an impairment charge is recognized for the amount by which the carrying amount of the asset or asset group exceeds the estimated fair value of the asset or asset group. Long-lived assets to be disposed of by sale are reported at the lower of their carrying amounts or their estimated fair values less costs to sell and are not depreciated.

Revenue Recognition. We derive revenues principally from sales of integrated circuit products and licensing of our intellectual property and also generate revenues through sales of products that connect medical devices and by performing software hosting, software development and other services. The timing of revenue recognition and the amount of revenue actually recognized in each case depends upon a variety of factors, including the specific terms of each arrangement and the nature of our deliverables and obligations. Unearned revenues consist primarily of license fees for intellectual property with continuing performance obligations.

Revenues from sales of our products are recognized at the time of shipment, or when title and risk of loss pass to the customer and all other criteria for revenue recognition are met, if later. Revenues from providing services are recognized when earned. Revenues from providing services were less than 10% of total revenues for all periods presented.

We grant licenses or otherwise provide rights to use portions of our intellectual property portfolio, which, among other rights, includes certain patent rights essential to and/or useful in the manufacture and sale of certain wireless products. Licensees pay royalties based on their sales of products incorporating or using our licensed intellectual property and may also

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pay a fixed license fee in one or more installments. License fees are recognized over the estimated period of benefit of the license to the licensee, typically 5 to 15 years. Royalties are generally based upon a percentage of the wholesale (i.e., licensee's) selling price of complete licensed products, net of certain permissible deductions (including transportation, insurance, packing costs and other items). We broadly provide per unit royalty caps that apply to certain categories of complete wireless devices, namely smartphones, tablets and laptops, which in general, effectively provide for a maximum royalty amount per device. We earn royalties on such licensed products sold worldwide by our licensees at the time that the licensees' sales occur. Our licensees, however, do not report and pay royalties owed for sales in any given quarter until after the conclusion of that quarter, which is generally the following quarter. We recognize royalty revenues based on royalties reported by licensees during the quarter and when all other revenue recognition criteria are met.

We record reductions to revenues for customer incentive arrangements, including volume-related and other pricing rebates as well as cost reimbursements for marketing and other activities involving certain of our products and technologies. The charges for such arrangements are recorded as a reduction to accounts receivable or as other current liabilities based on whether we have the contractual right of offset. We recognize the liability based on the estimated amount of the incentive, or if not reasonably estimated, the maximum potential liability, at the later of the date at which we record the related revenues or the date at which we offer the incentive or, if payment is contingent, when the contingency is resolved. We reverse accruals for unclaimed incentive amounts to revenues when the unclaimed amounts are no longer subject to payment.

Concentrations. Revenues in fiscal 2018 and 2017 were negatively impacted by our continued dispute with Apple Inc. and Hon Hai Precision Industry Co., Ltd./Foxconn, its affiliates and other suppliers to Apple. We did not record any revenues in fiscal 2018 or the third or fourth quarter of fiscal 2017 for royalties due on sales of Apple's products.

A significant portion of our revenues are concentrated with a small number of customers/licensees of our QCT and QTL segments. Revenues from three customers/licensees comprised 16%, 11% and 11% of total consolidated revenues in fiscal 2018. Revenues from two customers/licensees comprised 17% and 18% in fiscal 2017 and 16% and 24% in fiscal 2016. Excluding the unpaid royalty receivables due from suppliers to Apple (Note 2), aggregate accounts receivable from three customers/licensees comprised 37% and 28% of accounts receivable at September 30, 2018 and September 24, 2017, respectively.

We rely on sole- or limited-source suppliers for some products, particularly products in the QCT segment, subjecting us to possible shortages of raw materials or manufacturing capacity. While we have established alternate suppliers for certain technologies that we consider critical, the loss of a supplier or the inability of a supplier to meet performance or quality specifications or delivery schedules could harm our ability to meet our delivery obligations and/or negatively impact our revenues, business operations and ability to compete for future business.

Shipping and Handling Costs. Costs incurred for shipping and handling are included in cost of revenues. Amounts billed to a customer for shipping and handling are reported as revenues.

Share-Based Compensation. Share-based compensation expense for equity-classified awards, principally related to restricted stock units (RSUs), is measured at the grant date, or at the acquisition date for awards assumed in business combinations, based on the estimated fair value of the award and is recognized over the employee's requisite service period. Share-based compensation expense is adjusted to exclude amounts related to share-based awards that are expected to be forfeited.

The fair values of RSUs are estimated based on the fair market values of the underlying stock on the dates of grant or dates the RSUs are assumed. If RSUs do not have the right to participate in dividends, the fair values are discounted by the dividend yield. The weighted-average estimated fair values of employee RSUs that contain only service requirements to vest granted during fiscal 2018, 2017 and 2016 were $62.61, $66.54 and $53.56 per share, respectively. Upon vesting, we issue new shares of common stock. For the majority of RSUs, shares are issued on the vesting dates net of the amount of shares needed to satisfy statutory tax withholding requirements to be paid by us on behalf of the employees. As a result, the actual number of shares issued will be fewer than the number of RSUs outstanding. The annual pre-vest forfeiture rate for RSUs was estimated to be approximately 6%, 5% and 4% in fiscal

2018, 2017 and 2016, respectively.

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Total share-based compensation expense, related to all of our share-based awards, was comprised as follows (in millions):

	2018	2017	2016
Cost of revenues	$38	$38	$40
Research and development	594	588	614
Selling, general and administrative	251	288	289
Share-based compensation expense before income taxes	883	914	943
Related income tax benefit	(140)	(161)	(190)
	$743	$753	$753

Legal and Regulatory Proceedings. We are currently involved in certain legal and regulatory proceedings. Litigation and investigations are inherently uncertain, and we face difficulties in evaluating or estimating likely outcomes or ranges of possible loss in antitrust and trade regulation investigations in particular. Investigations by antitrust and trade regulation agencies are not conducted in a consistent manner across jurisdictions. Further, each country and agency has different sets of laws, rules and regulations, both substantive and procedural, as well as different legal principles, theories and potential remedies, and some agencies may seek to use the investigation to advance domestic policy goals. Depending on the jurisdiction, these investigations can involve non-transparent procedures under which we may not receive access to evidence relied upon by the enforcement agency or that may be exculpatory and may not be informed of the specific legal theories or evidence considered or relied upon by the agency. Unlike in civil litigation in the United States, in foreign proceedings, we may not be entitled to discovery or depositions, allowed to cross-examine witnesses or confront our accusers. As a result, we may not be aware of, and may not be entitled to know, all allegations against us, or the information or documents provided to, or discovered or prepared by, the agency. Accordingly, we may have little or no idea what an agency's intent is with respect to liability, penalties or the timing of a decision. In many cases the agencies are given significant discretion, and any available precedent may have limited, if any, predictive value in their jurisdictions, much less in other jurisdictions. Accordingly, we cannot predict the outcome of these matters.

If there is at least a reasonable possibility that a material loss may have been incurred associated with pending legal and regulatory proceedings, we disclose such fact, and if reasonably estimable, we provide an estimate of the possible loss or range of possible loss. We record our best estimate of a loss related to pending legal and regulatory proceedings when the loss is considered probable and the amount can be reasonably estimated. Where a range of loss can be reasonably estimated with no best estimate in the range, we record the minimum estimated liability. As additional information becomes available, we assess the potential liability related to pending legal and regulatory proceedings and revise our estimates and update our disclosures accordingly. Our legal costs associated with defending ourself are recorded to expense as incurred.

Foreign Currency. Certain foreign subsidiaries use a local currency as the functional currency. Resulting translation gains or losses are recognized as a component of accumulated other comprehensive income. Transaction gains or losses related to balances denominated in a currency other than the functional currency are recognized in the consolidated statements of operations.

Income Taxes. The asset and liability approach is used to recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the carrying amounts and the tax bases of assets and liabilities. Tax law and rate changes are reflected in income in the period such changes are enacted. We record a valuation allowance to reduce deferred tax assets to the amount that is more likely than not to be realized. We include interest and penalties related to income taxes, including unrecognized tax benefits, within income tax expense. We classify all deferred tax assets and liabilities as noncurrent in the consolidated balance sheets.

Our income tax returns are based on calculations and assumptions that are subject to examination by the Internal Revenue Service and other tax authorities. In addition, the calculation of our tax liabilities involves dealing with uncertainties in the application of complex tax regulations. We recognize liabilities for uncertain tax positions based on a two-step process. The first step is to evaluate the tax position for recognition by determining if the weight of

available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount that is more than 50% likely of being realized upon settlement. While we believe we have appropriate support for the positions taken on our tax returns, we regularly assess the potential outcomes of examinations by tax authorities in determining the adequacy of our provision for income taxes. We continually assess the likelihood and amount of potential adjustments and adjust the income tax provision, income taxes payable and deferred taxes in the period in which the facts that give rise to a revision become known.

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Beginning in fiscal 2018, we recognize excess tax benefits and shortfall tax detriments associated with share-based awards in the consolidated statements of operations, as a component of income tax expense, when realized. Prior to fiscal 2018, we recognized such excess tax benefits and shortfall tax detriments directly to stockholders' equity when realized since, in the case of shortfall tax detriments, we had a sufficient APIC windfall pool. An excess tax benefit occurs when the actual tax benefit realized by us upon an employee's disposition of a share-based award exceeds the deferred tax asset, if any, associated with the award that we had recorded. A shortfall tax detriment occurs when the actual tax benefit realized by us upon an employee's disposition of a share-based award is less than the deferred tax asset, if any, associated with the award that we have recorded.
Earnings (Loss) Per Common Share. Basic earnings (loss) per common share are computed by dividing net income attributable to Qualcomm by the weighted-average number of common shares outstanding during the reporting period. Diluted earnings per common share are computed by dividing net income attributable to Qualcomm by the combination of dilutive common share equivalents, comprised of shares issuable under our share-based compensation plans and shares subject to accelerated share repurchase agreements, if any, and the weighted-average number of common shares outstanding during the reporting period. Due to the net loss in fiscal 2018, all of the common share equivalents issuable under share-based compensation plans and accelerated share repurchase agreements entered into in fiscal 2018 had an anti-dilutive effect and were therefore excluded from the computation of diluted loss per share.
The following table provides information about the diluted earnings per share calculation (in millions):

	2018	2017	2016
Dilutive common share equivalents included in diluted shares	—	13.0	13.9
Shares of common stock equivalents not included because the effect would be anti-dilutive or certain performance conditions were not satisfied at the end of the period	51.2	3.0	2.4

Recent Accounting Pronouncements.
Share-based Awards: In March 2016, the Financial Accounting Standards Board (FASB) issued new guidance that changed the accounting for share-based awards, including income taxes, classification of awards and classification in the statement of cash flows. We adopted the new guidance in the first quarter of fiscal 2018. In accordance with the new guidance, excess tax benefits or deficiencies associated with share-based awards are recognized through earnings when the awards vest or settle, rather than in stockholders' equity. In fiscal 2018, net excess tax benefits associated with share-based awards of $22 million were recognized in income tax expense. In addition, cash flows related to excess tax benefits are presented as an operating activity and cash payments made on an employee's behalf for withheld shares are presented as financing activities, with the prior periods adjusted accordingly. As a result of these changes, amounts for fiscal 2017 and fiscal 2016 have been adjusted as follows: net cash provided by operating activities increased by $308 million and $232 million, respectively, with a corresponding offset to net cash used in financing activities. The new guidance also impacts our earnings per share calculation as the estimate of dilutive common share equivalents under the treasury stock method no longer assumes that the estimated tax benefits realized when an award is settled are used to repurchase shares. There was no impact of this change on our calculation of earnings per share as a result of the net loss for fiscal 2018. We elected to continue our practice of estimating forfeitures expected to occur in determining the amount of compensation cost to be recognized each period.
Revenue Recognition: In May 2014, the FASB issued new guidance related to revenue recognition, which outlines a comprehensive revenue recognition model and supersedes most current revenue recognition guidance. The new guidance requires a company to recognize revenue as control of goods or services transfers to a customer at an amount that reflects the expected consideration to be received in exchange for those goods or services. It defines a five-step approach for recognizing revenue, which may require a company to use more judgment and make more estimates than under the current guidance. We will adopt the new guidance in the first quarter of fiscal 2019 using the modified retrospective approach, with the cumulative effect of applying the new guidance recognized as an adjustment to the opening retained earnings balance. We currently estimate such adjustment will result in an increase of approximately $800 million to $1.0 billion to the opening retained earnings balance for fiscal 2019, primarily related to the impacts described below, net of the associated tax effects. We have finalized our identification of changes to policy, processes

and systems, as well as our assessment of data availability, and we are in the process of finalizing changes to our controls and presentation necessary to meet the additional disclosure requirements of the guidance in the notes to the consolidated financial statements.

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We currently expect the adoption of this new guidance to most significantly impact our licensing business (Qualcomm Technology Licensing, or QTL). Specifically, we expect a change in the timing of revenues recognized from sales-based royalties, which are the vast majority of QTL's revenues. We currently recognize sales-based royalties as revenues in the period in which such royalties are reported by licensees, which is after the conclusion of the quarter in which the licensees' sales occur and when all other revenue recognition criteria are met. Under the new guidance, we will be required to estimate and recognize sales-based royalties in the period in which the associated sales occur, resulting in an acceleration of revenue recognition compared to the current method. As a result of recognizing royalty revenues based on estimates, adjustments to revenues will be required in subsequent periods based on the actual amounts reported by licensees. Upon adoption of the new guidance, licenses to use portions of our intellectual property portfolio will be considered one performance obligation, and license fees will be recognized as revenues on a straight-line basis over the estimated period of benefit of the license to the licensee, which is similar to the recognition of license revenues under the current guidance. We have historically accounted for customer incentive arrangements in our licensing and semiconductor businesses, including volume-related and other pricing rebates or cost reimbursements for marketing and other activities involving certain of our products and technologies, in part based on the maximum potential liability. Under the new guidance, we will estimate the amount of all customer incentives. We do not otherwise expect the adoption of the new guidance to have a material impact on our businesses.

Financial Assets: In January 2016, the FASB issued new guidance on classifying and measuring financial instruments, which requires that (i) all equity investments, other than equity-method investments, in unconsolidated entities generally be measured at fair value through earnings and (ii) when the fair value option has been elected for financial liabilities, changes in fair value due to instrument-specific credit risk be recognized separately in other comprehensive income. Additionally, it changes the disclosure requirements for financial instruments. For equity investments that do not have readily determinable fair values, we expect to use the measurement alternative, which is defined as cost, less impairments, adjusted by observable price changes in orderly transactions for identical or similar investments. We anticipate the adoption of the new guidance will increase the volatility of our investment and other income, net due to recording the changes in fair value of equity investments through earnings. We will adopt the new guidance in the first quarter of fiscal 2019 using the modified retrospective transition method for equity investments that have readily determinable fair values, with the cumulative effect of applying the new guidance recognized as an adjustment to opening retained earnings in the year of adoption, and the prospective transition method for equity investments that do not have readily determinable fair values. Upon adoption, the unrealized gains on our marketable securities of $63 million at September 30, 2018 will be recognized as an adjustment to opening retained earnings.

In June 2016, the FASB issued new guidance that changes the accounting for recognizing impairments of financial assets. Under the new guidance, credit losses for certain types of financial instruments will be estimated based on expected losses. The new guidance also modifies the impairment models for available-for-sale debt securities and for purchased financial assets with credit deterioration since their origination. The new guidance will be effective for us starting in the first quarter of fiscal 2021 and generally requires the modified retrospective transition method, with the cumulative effect of applying the new guidance recognized as an adjustment to opening retained earnings in the year of adoption, except for certain financial assets where the prospective transition method is required, such as available-for-sale debt securities for which an other-than-temporary impairment has been recorded. Early adoption is permitted starting in the first quarter of fiscal 2020. We are in the process of determining the effects the adoption will have on our consolidated financial statements and whether to adopt the new guidance early.

Leases: In February 2016, the FASB issued new guidance related to leases that outlines a comprehensive lease accounting model and supersedes the current lease guidance. The new guidance requires lessees to recognize lease liabilities and corresponding right-of-use assets for all leases with lease terms of greater than 12 months. It also changes the definition of a lease and expands the disclosure requirements of lease arrangements. We will adopt the new guidance in the first quarter of fiscal 2020 and expect to use the modified retrospective approach and to elect certain practical expedients, with the cumulative effect of applying the new guidance recognized as an adjustment to opening retained earnings in the year of adoption. We are in the process of determining the effects the adoption will

have on our consolidated financial statements.
Hedge Instruments: In August 2017, the FASB issued new guidance that expands and refines hedge accounting for both financial and non-financial risks, aligns the recognition and presentation of the effects of hedging instruments and hedged items in the financial statements, and includes targeted improvements related to the assessment of hedge effectiveness. The new guidance also modifies disclosure requirements for hedging activities. We will adopt the new guidance as of the beginning of the first quarter of fiscal 2019 using the modified retrospective transition method, with the cumulative effect of applying the new guidance recognized as an adjustment to opening retained earnings, which is expected to be negligible. We do not expect the effects of the adoption to have a material impact on our consolidated financial statements.

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Other: In August 2016, the FASB issued new guidance related to the classification of certain cash receipts and cash payments on the statement of cash flows. We will adopt the new guidance in the first quarter of fiscal 2019 using the retrospective transition method for each period presented and do not expect the effects of the adoption to have a material impact on our consolidated statements of cash flows.
In October 2016, the FASB issued new guidance that changes the accounting for income tax effects of intra-entity transfers of assets other than inventory. Under the new guidance, the selling (transferring) entity is required to recognize a current tax expense or benefit upon transfer of the asset. Similarly, the purchasing (receiving) entity is required to recognize a deferred tax asset or deferred tax liability, as well as the related deferred tax benefit or expense, upon receipt of the asset. We will adopt the new guidance in the first quarter of fiscal 2019 using the modified retrospective transition method, with the cumulative effect of applying the new guidance recognized as an adjustment to opening retained earnings in the year of adoption. We estimate the increase to the opening retained earnings to be approximately $2.5 billion, primarily as the result of establishing a deferred tax asset on the basis difference of certain intellectual property distributed from one of our foreign subsidiaries to a subsidiary in the United States in fiscal 2018 (Note 3).
In November 2016, the FASB issued new guidance related to the classification and presentation of changes in restricted cash and cash equivalents in the statement of cash flows. We will adopt the new guidance in the first quarter of fiscal 2019 using the retrospective transition method for each period presented, which will result in certain amounts in fiscal 2017 and 2018 to be adjusted to conform to the new guidance upon adoption in the first quarter of fiscal 2019. During fiscal 2017 and 2018, we had restricted cash and cash equivalents related to funds deposited as collateral for outstanding letters of credit in connection with the NXP Purchase Agreement (Note 9). Restricted cash and cash equivalents related to the outstanding letters of credit totaled $700 million at the end of each of the first, second and third quarters of fiscal 2017 and $2.0 billion at the end of each of the fourth quarter of fiscal 2017 and the first, second and third quarters of fiscal 2018. There was no restricted cash at the end of the fourth quarter of fiscal 2018. Additionally, at the end of the third quarter of fiscal 2018, we had restricted cash and cash equivalents of $2.8 billion related to irrevocably deposited cash to redeem notes in July 2018. Otherwise, we do not expect the effects of the retrospective adoption to have a material impact on our consolidated statements of cash flows.

Note 2. Composition of Certain Financial Statement Items

Accounts Receivable (in millions)

	September 30, 2018	September 24, 2017
Trade, net of allowances for doubtful accounts of $56 and $11, respectively	$ 2,848	$ 3,576
Long-term contracts	20	40
Other	36	16
	$ 2,904	$ 3,632

Accounts receivable at the end of both fiscal 2018 and fiscal 2017 included approximately $960 million related to the short payment in the second quarter of fiscal 2017 of royalties reported by and deemed collectible from Apple’s contract manufacturers. This same amount was recorded in customer-related liabilities (in other current liabilities) for Apple, since we do not have the contractual right to offset these amounts.

Inventories (in millions)

	September 30, 2018	September 24, 2017
Raw materials	$ 72	$ 103
Work-in-process	715	799
Finished goods	906	1,133
	$ 1,693	$ 2,035

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Property, Plant and Equipment (in millions)	September 30, 2018	September 24, 2017
Land	$ 186	$ 195
Buildings and improvements	1,575	1,595
Computer equipment and software	1,419	1,609
Machinery and equipment	3,792	3,528
Furniture and office equipment	85	109
Leasehold improvements	325	310
Construction in progress	79	73
	7,461	7,419
Less accumulated depreciation and amortization	(4,486)	(4,203)
	$ 2,975	$ 3,216

Depreciation and amortization expense related to property, plant and equipment for fiscal 2018, 2017 and 2016 was $776 million, $684 million and $624 million, respectively. The gross book values of property under capital leases included in buildings and improvements were negligible at September 30, 2018 and September 24, 2017.

Goodwill and Other Intangible Assets. We allocate goodwill to our reporting units for annual impairment testing purposes. The following table presents the goodwill allocated to our reportable and nonreportable segments, as described in Note 8, as well as the changes in the carrying amounts of goodwill during fiscal 2018 and 2017 (in millions):

	QCT	QTL	Nonreportable Segments	Total
Balance at September 25, 2016	$4,674	$718	$ 287	$5,679
Acquisitions	841	23	11	875
Other (1)	66	—	3	69
Balance at September 24, 2017 (2)	5,581	741	301	6,623
Acquisitions	—	—	—	—
Impairments	—	(22)	(107)	(129)
Other (1)	6	(1)	(1)	4
Balance at September 30, 2018 (2)	$5,587	$718	$ 193	$6,498

(1) Includes changes in goodwill amounts resulting from foreign currency translation, purchase accounting adjustments.

(2) Cumulative goodwill impairments were $666 million and $537 million at September 30, 2018 and September 24, 2017, respectively.

The components of other intangible assets, net were as follows (in millions):

	September 30, 2018			September 24, 2017		
	Gross Carrying Amount	Accumulated Amortization	Weighted-average amortization period (years)	Gross Carrying Amount	Accumulated Amortization	Weighted-average amortization period (years)
Wireless spectrum	$1	$ —	20	$1	$ —	20
Marketing-related	51	(39)	5	77	(52)	4
Technology-based	6,334	(3,461)	10	6,413	(2,818)	10
Customer-related	97	(28)	10	149	(33)	9
	$6,483	$ (3,528)	10	$6,640	$ (2,903)	10

All of these intangible assets are subject to amortization, other than acquired in-process research and development with carrying values of $74 million at September 24, 2017. At September 30, 2018, all acquired in-process research and

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development projects were completed and are being amortized over their useful lives. Amortization expense related to these intangible assets was $785 million, $777 million and $804 million for fiscal 2018, 2017 and 2016, respectively. Amortization expense related to these intangible assets is expected to be $733 million, $630 million, $517 million, $418 million and $285 million for each of the five years from fiscal 2019 through 2023, respectively, and $372 million thereafter.

Other Current Liabilities (in millions)

	September 30, 2018	September 24, 2017
Customer incentives and other customer-related liabilities	$ 3,347	$ 2,804
Accrual for EC fine (Note 7)	1,167	—
Income taxes payable	453	312
Accrual for TFTC fine (Note 7)	—	778
RF360 Holdings Put and Call Option (Note 9)	1,137	—
Other	721	862
	$ 6,825	$ 4,756

Customer incentives and other customer-related liabilities substantially consist of amounts payable to customers for incentive and other arrangements, including volume-related and other pricing rebates and cost reimbursements for marketing and other activities involving certain of our products and technologies. The corresponding charges for such arrangements were recorded as a reduction to revenues.

Accumulated Other Comprehensive Income. Changes in the components of accumulated other comprehensive income, net of income taxes, in Qualcomm stockholders' equity during fiscal 2018 were as follows (in millions):

	Foreign Currency Translation Adjustment	Noncredit Other-than-Temporary Impairment Losses and Subsequent Changes in Fair Value for Certain Available-for-Sale Debt Securities	Net Unrealized Gain (Loss) on Other Available-for-Sale Securities	Net Unrealized Gain (Loss) on Derivative Instruments	Other Gains	Total Accumulated Other Comprehensive Income
Balance at September 24, 2017	$ 147	$ 23	$ 218	$ (8)	$ 4	$ 384
Other comprehensive (loss) income before reclassifications	(136)	—	29	(17)	(3)	(127)
Reclassifications from accumulated other comprehensive income	—	—	(4)	12	—	8
Other comprehensive (loss) income	(136)	—	25	(5)	(3)	(119)
Balance at September 30, 2018	$ 11	$ 23	$ 243	$ (13)	$ 1	$ 265

Reclassifications from accumulated other comprehensive income related to net gains on available-for-sale securities were negligible, $201 million and $83 million during fiscal 2018, 2017 and 2016, respectively, and were recorded in investment and other income, net (Note 2). Reclassifications from accumulated other comprehensive income related to foreign currency translation losses of $21 million during fiscal 2016 were recorded in selling, general and administrative expenses and other operating expenses. Reclassifications from accumulated other comprehensive income related to foreign currency translation adjustments during fiscal 2018 and 2017 were negligible. Reclassifications from accumulated other comprehensive income related to derivative instruments of $12 million, $10 million and negligible for fiscal 2018, 2017 and 2016, respectively, were recorded in revenues, cost of revenues, research and development expenses and selling, general and administrative expenses.

Other Income, Costs and Expenses. Other expenses in fiscal 2018 consisted of a $2.0 billion charge related to the termination of our purchase agreement to acquire NXP (Note 9), a $1.2 billion charge related to the European Commission

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(EC) fine (Note 7), $629 million in restructuring and restructuring-related charges related to our Cost Plan (Note 10) and a $676 million benefit related to the settlement of the Taiwan Fair Trade Commission (TFTC) investigation (Note 7).

Other expenses for fiscal 2017 consisted of a $927 million charge related to the Korea Fair Trade Commission (KFTC) fine (Note 7), including related foreign currency losses, a $778 million charge related to the TFTC fine (Note 7) and $37 million in restructuring and restructuring-related charges related to our Strategic Realignment Plan (Note 10).

Other income for fiscal 2016 included a gain of $380 million on the sale of wireless spectrum in the United Kingdom that was held by the QSI (Qualcomm Strategic Initiatives) segment in the first quarter of fiscal 2016 for $232 million in cash and $275 million in deferred payments due in 2020 to 2023, which were recorded at their present values in other noncurrent assets. Other income for fiscal 2016 also included $202 million in restructuring and restructuring-related charges, which were partially offset by a $48 million gain on the sale of our business that provided augmented reality applications, all of which related to our Strategic Realignment Plan.

Investment and Other Income, Net (in millions)

	2018	2017	2016
Interest and dividend income	$625	$619	$611
Net realized gains on marketable securities	41	456	239
Net realized gains on other investments	83	74	49
Impairment losses on marketable securities	(6)	(131)	(112)
Impairment losses on other investments	(69)	(46)	(60)
Net (losses) gains on derivative instruments	(27)	32	(8)
Equity in net losses of investees	(145)	(74)	(84)
Net gains (losses) on foreign currency transactions	37	(30)	—
	$539	$900	$635

Note 3. Income Taxes

The components of the income tax provision were as follows (in millions):

	2018	2017	2016
Current provision (benefit):			
Federal	$2,559	$72	$4
State	(1)	3	4
Foreign	777	1,256	1,411
	3,335	1,331	1,419
Deferred provision (benefit):			
Federal	1,867	(586)	(184)
State	1	4	6
Foreign	174	(194)	(110)
	2,042	(776)	(288)
	$5,377	$555	$1,131

The foreign component of the income tax provision consisted primarily of foreign withholding taxes on royalty revenues included in U.S. earnings.

The components of income before income taxes by U.S. and foreign jurisdictions were as follows (in millions):

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	2018	2017	2016
United States	$(1,713)	$(762)	$3,032
Foreign	2,226	3,782	3,801
	$513	$3,020	$6,833

The foreign component of income before income taxes in foreign jurisdictions consisted primarily of income earned in Singapore.
The following is a reconciliation of the expected statutory federal income tax provision to our actual income tax provision (in millions):

	2018	2017	2016
Expected income tax provision at federal statutory tax rate	$127	$1,057	$2,392
State income tax provision, net of federal benefit	2	8	19
Toll Charge from U.S. tax reform	5,236	—	—
Benefits from foreign income taxed at other than U.S. rates	(834)	(963)	(1,068)
Valuation allowance on deferred tax assets related to NXP termination fee (Note 9)	494	—	—
Remeasurement of deferred taxes due to changes in statutory rate due to U.S. tax reform	438	—	—
Benefits related to research and development tax credits	(136)	(81)	(143)
Nondeductible charges and reversals related to the EC, KFTC and TFTC investigations	(119)	363	—
Taxes on undistributed foreign earnings	87	—	—
Impact of changes in tax reserves and audit settlements for prior year tax positions	—	111	—
Worthless stock deduction of domestic subsidiary	—	—	(101)
Other	82	60	32
	$5,377	$555	$1,131

On December 22, 2017, tax reform legislation known as the Tax Cuts and Jobs Act (the Tax Legislation) was enacted in the United States. The Tax Legislation significantly revises the United States corporate income tax by, among other things, lowering the corporate income tax rate to 21%, implementing a modified territorial tax system and imposing a one-time repatriation tax on deemed repatriated earnings and profits of U.S.-owned foreign subsidiaries (the Toll Charge). As a fiscal-year taxpayer, certain provisions of the Tax Legislation impacted us in fiscal 2018, including the change in the corporate income tax rate and the Toll Charge, while other provisions will be effective starting at the beginning of fiscal 2019, including the implementation of a modified territorial tax system. The United States federal income tax rate reduction was effective as of January 1, 2018. Accordingly, our federal statutory income tax rate for fiscal 2018 reflected a blended rate of approximately 25%.
Pursuant to the Securities and Exchange Commission Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act, we have not finalized the accounting for the income tax effects of the Tax Legislation related to the Toll Charge. Further, we are in the process of analyzing the effects of new taxes due on certain foreign income, such as GILTI (global intangible low-taxed income), BEAT (base-erosion anti-abuse tax) and FDII (foreign-derived intangible income), and limitations on interest expense deductions (if certain conditions apply), all of which are effective starting in fiscal 2019, as well as other provisions of the Tax Legislation. We have elected to account for GILTI as period costs, if and when incurred. As a result of recognizing the impact of the Tax Legislation in income tax expense, certain tax effects, which were nominal, were stranded in accumulated other comprehensive income, and we will not reclassify such amounts to retained earnings. The impact of the Tax Legislation related to the Toll Charge may differ from this estimate during the remainder of the one-year measurement period due to, among other things, further refinement of our calculations, changes in interpretations and assumptions we have made, guidance that may be issued and actions we may take as a result of the Tax Legislation.
As a result of the Tax Legislation, we recorded a charge of $5.7 billion to income tax expense in fiscal 2018, comprised of $5.2 billion related to the estimated Toll Charge and $438 million resulting from the remeasurement of U.S. deferred tax

assets and liabilities that existed at the end of fiscal 2017 at a lower enacted corporate income tax rate, which included a $135 million tax benefit recorded in fiscal 2018 related to the remeasurement of a U.S. deferred tax liability that was established as a result of a change in one of our tax positions due to Tax Legislation.

The Toll Charge is based on our post-1986 earnings and profits of U.S.-owned foreign subsidiaries through December 31, 2017 for which we had previously deferred U.S. income taxes. We have not yet finalized our calculation of the total post-1986 foreign earnings and profits for the respective foreign subsidiaries. Further, the Toll Charge is based in part on the amount of those earnings held in cash and other specific assets. In addition, we remeasured our deferred tax assets and liabilities that existed at the end of fiscal 2017 based on the income tax rate at which they are expected to reverse, which primarily assumes the reduced income tax rate of 21% applicable in fiscal 2019, resulting in a reduction to noncurrent net deferred tax assets of $438 million in fiscal 2018.

We have historically asserted our intention to indefinitely reinvest the operating earnings of certain non-U.S. subsidiaries outside the United States based on our plans for use and/or investment outside of the United States and our belief that our sources of cash and liquidity in the United States would be sufficient to meet future domestic cash needs. The Tax Legislation eliminated certain material tax effects on the repatriation of cash to the United States. Future repatriation of cash and other property held by our foreign subsidiaries will generally not be subject to U.S. federal income tax. As a result, we reevaluated our historic assertion, and as of September 30, 2018, we no longer consider substantially all of our foreign earnings to be indefinitely reinvested in our foreign subsidiaries. As a result of our change in assertion, during fiscal 2018, we recorded a charge of $87 million to income tax expense related to outside basis differences that are no longer permanently reinvested. We have not recorded a deferred tax liability of approximately $31 million related to foreign withholding taxes on approximately $137 million of undistributed earnings of certain subsidiaries that we continue to consider to be indefinitely reinvested outside the United States. Should we decide to no longer indefinitely reinvest such earnings outside the United States, we would have to adjust the income tax provision in the period management makes such determination.

As a result of the Toll Charge imposed by the Tax Legislation, we expect to fully utilize all of our unused federal tax credits that existed at the end of fiscal 2017 of $1.3 billion. We will elect to pay the Toll Charge, interest free, over a period of eight years, with payments beginning on January 15, 2019. We did not discount the amount of the Toll Charge. At September 30, 2018, we estimated that we will pay $2.5 billion for the Toll Charge, which was net of tax credit carryforwards and tax credits generated through fiscal 2018. This amount may be further reduced by excess tax credits generated in fiscal 2019. At September 30, 2018, $201 million, which represents the first installment that is due on January 15, 2019, was included in other current liabilities, with the remaining liability included in noncurrent income taxes payable.

As a result of the Tax Legislation, in fiscal 2019, several of our foreign subsidiaries will make tax elections to be treated as U.S. branches for federal income tax purposes (commonly referred to as “check-the-box” elections) effective beginning in fiscal 2018 and 2019. We believe that, by these foreign subsidiaries being treated as U.S. branches for federal income taxes, rather than controlled foreign corporations, we will significantly reduce the risk of being subject to GILTI and BEAT taxes, both of which are effective for us starting in fiscal 2019. As a result of making these check-the-box elections in the first quarter of fiscal 2019, we expect to record an estimated tax benefit of $525 million to $575 million due to establishing new U.S. net deferred tax assets resulting from the difference between the GAAP basis and the U.S. federal tax carryover basis of the existing assets and liabilities of those foreign subsidiaries, primarily related to customer incentive liabilities that have not been deducted for tax purposes. Additionally, during fiscal 2018, one of our foreign subsidiaries distributed certain intellectual property to a U.S. subsidiary resulting in a difference between the GAAP basis and the U.S. federal tax basis of the distributed intellectual property. Upon adoption of the new guidance in the first quarter fiscal 2019 that changes the accounting for income tax effects of such intra-entity transfers of assets (Note 1), we expect to record an estimated deferred tax asset of approximately $2.5 billion.

Income tax expense for fiscal 2018 was further negatively impacted by the charge recorded in the fourth quarter of fiscal 2018 related to the termination fee paid to NXP, which did not result in a tax benefit after the consideration of

realizability of such loss. Fiscal 2018 and 2017 income tax expense was also impacted by the EC, KFTC and TFTC fines, and settlement with the TFTC, which are not deductible for tax purposes and portions of which were attributable to foreign jurisdictions and to the United States. These impacts were partially offset in fiscal 2018 and 2017 by lower U.S. revenues primarily related to decreased royalty revenues from Apple's contract manufacturers and, for fiscal 2017, the BlackBerry arbitration.

Income tax expense for fiscal 2017 also reflected the increase in our Singapore tax rate as a result of the expiration of certain of our tax incentives in March 2017, which was substantially offset by tax benefits resulting from the increase in our Singapore tax rate that will be in effect when certain deferred tax assets are scheduled to reverse. During the third quarter of fiscal 2018, we entered into a new tax incentive agreement in Singapore that results in a reduced tax rate from March 2017

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through March 2022, provided that we meet specified employment and investment criteria in Singapore. Our Singapore tax rate will increase in March 2022 as a result of expiration of these incentives and again in March 2027 upon the expiration of tax incentives under a prior agreement. As a result of this new tax incentive, our income tax expense for fiscal 2018 was reduced by approximately $130 million. Without these tax incentives, our income tax expense would have been higher and impacted earnings (loss) per share attributable to Qualcomm as follows (in millions, except per share amounts):

	2018	2017	2016
Additional income tax expense	$652	$493	$487
Reduction to diluted earnings (loss) per share	0.45	0.33	0.32

We had deferred tax assets and deferred tax liabilities as follows (in millions):

	September 30, 2018	September 24, 2017
Unused tax credits	$ 1,044	$ 1,798
Unused net operating losses	696	208
Unearned revenues	446	886
Accrued liabilities and reserves	396	888
Unrealized losses on other investments and marketable securities	126	151
Share-based compensation	97	241
Other	26	21
Total gross deferred tax assets	2,831	4,193
Valuation allowance	(1,529)	(863)
Total net deferred tax assets	1,302	3,330
Intangible assets	(322)	(535)
Accrued revenues	(202)	—
Accrued withholding taxes	(90)	—
Unrealized gains on other investments and marketable securities	(26)	(33)
Other	(49)	(95)
Total deferred tax liabilities	(689)	(663)
Net deferred tax assets	$ 613	$ 2,667
Reported as:		
Non-current deferred tax assets	$ 904	$ 2,900
Non-current deferred tax liabilities (1)	(291)	(233)
	$ 613	$ 2,667

(1) Non-current deferred tax liabilities were included in other liabilities in the consolidated balance sheets.

At September 30, 2018, we had unused federal net operating loss carryforwards of $213 million expiring from 2021 through 2035, unused state net operating loss carryforwards of $949 million expiring from 2019 through 2038 and unused foreign net operating loss carryforwards of $2.3 billion, of which $2.0 billion expire in 2027. At September 30, 2018, we had unused state tax credits of $892 million, of which substantially all may be carried forward indefinitely, unused federal tax credits of $126 million expiring from 2026 through 2028 and unused tax credits of $26 million in foreign jurisdictions expiring from 2033 through 2038. We do not expect our federal net operating loss carryforwards to expire unused.

At September 30, 2018, we have provided a valuation allowance on certain state tax credits, foreign deferred tax assets and state net operating losses of $879 million, $604 million and $46 million, respectively. The valuation allowances reflect the uncertainties surrounding our ability to generate sufficient future taxable income in certain foreign and state tax jurisdictions to utilize our net operating losses and our ability to generate sufficient capital gains to utilize all capital losses.

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We believe, more likely than not, that we will have sufficient taxable income after deductions related to share-based awards to utilize our remaining deferred tax assets.
A summary of the changes in the amount of unrecognized tax benefits for fiscal 2018, 2017 and 2016 follows (in millions):

	2018	2017	2016
Beginning balance of unrecognized tax benefits	$372	$271	$40
Additions based on prior year tax positions	7	92	20
Reductions for prior year tax positions and lapse in statute of limitations	(11)	(11)	(6)
Additions for current year tax positions	18	23	218
Settlements with taxing authorities	(169)	(3)	(1)
Ending balance of unrecognized tax benefits	$217	$372	$271

We believe that it is reasonably possible that certain unrecognized tax benefits recorded at September 30, 2018 may result in a cash payment in fiscal 2019. Unrecognized tax benefits at September 30, 2018 included $92 million for tax positions that, if recognized, would impact the effective tax rate. The unrecognized tax benefits differ from the amount that would affect our effective tax rate primarily because the unrecognized tax benefits were included on a gross basis and did not reflect secondary impacts such as the federal deduction for state taxes, adjustments to deferred tax assets and the valuation allowance that might be required if our tax positions are sustained. The decrease in unrecognized tax benefits in fiscal 2018 was primarily due to an agreement reached with the IRS related to tax positions on the classification of income in our fiscal 2016 federal income tax return. The increase in unrecognized tax benefits in fiscal 2017 was primarily due to tax positions related to transfer pricing. We believe that it is reasonably possible that the total amount of unrecognized tax benefits at September 30, 2018 may increase or decrease in fiscal 2019.
We file income tax returns in the United States federal jurisdiction and various state and foreign jurisdictions. We are currently a participant in the IRS Compliance Assurance Process, whereby we and the IRS endeavor to agree on the treatment of all tax issues prior to the tax return being filed. We are no longer subject to U.S. federal income tax examinations for years prior to fiscal 2015. We are subject to examination by the California Franchise Tax Board for fiscal years after 2014. We are also subject to examination in other taxing jurisdictions in the United States and numerous foreign jurisdictions, most notably in countries where we earn a routine return and tax authorities believe substantial value-add activities are performed. These examinations are at various stages with respect to assessments, claims, deficiencies and refunds, many of which are open for periods after fiscal 2000. We continually assess the likelihood and amount of potential adjustments and adjust the income tax provision, income taxes payable and deferred taxes in the period in which the facts give rise to a revision become known. As of September 30, 2018, we believe that adequate amounts have been reserved for based on facts known. However, the final determination of tax audits and any related legal proceedings could materially differ from amounts reflected in our income tax provision and the related accruals.
Cash amounts paid for income taxes, net of refunds received, were $877 million, $1.0 billion and $1.3 billion for fiscal 2018, 2017 and 2016, respectively.
Note 4. Capital Stock
Stock Repurchase Program. On July 26, 2018, we announced a stock repurchase program authorizing us to repurchase up to $30 billion of our common stock. The stock repurchase program has no expiration date. The $30 billion stock repurchase program replaced a $10 billion stock repurchase program announced on May 9, 2018, of which $9.0 billion remained authorized for repurchase. In August 2018, we completed a “modified Dutch auction” tender offer and paid an aggregate of $5.1 billion, excluding fees and related expenses, to repurchase 76.2 million shares of our common stock, which were retired, at a price of $67.50 per share.
In September 2018, we entered into three accelerated share repurchase agreements (ASR Agreements) with three financial institutions under which we paid an aggregate of $16.0 billion upfront to the financial institutions and received from them an initial delivery of 178.4 million shares of our common stock, which were retired, and recorded as a $12.8 billion reduction to stockholders’ equity. The final number of shares to be repurchased will be based on the

volume-weighted average stock price of our common stock during the terms of the transactions, less a discount and subject to adjustments pursuant to the terms and conditions of the ASR Agreements, and will also be retired upon delivery to us and recorded as a reduction to stockholders' equity. This is evaluated as an unsettled forward contract indexed to our own stock, with $3.2

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billion classified within stockholders' equity. The transactions are scheduled to terminate in August 2019 but may terminate earlier in certain circumstances. At settlement, under certain circumstances, one or more of the financial institutions may be required to deliver additional shares of common stock to us, or under certain circumstances, we may be required to deliver shares of common stock or to make a cash payment to one or more of the financial institutions, with the method of settlement at our election.

During fiscal 2018, 2017 and 2016, we repurchased and retired an additional 24.2 million, 22.8 million and 73.8 million shares of common stock, respectively, for $1.4 billion, $1.3 billion and $3.9 billion, respectively, before commissions. To reflect share repurchases in the consolidated balance sheet, we (i) reduce common stock for the par value of the shares, (ii) reduce paid-in capital for the amount in excess of par to zero during the quarter in which the shares are repurchased and (iii) record the residual amount to retained earnings. At September 30, 2018, $8.9 billion remained authorized for repurchase under our stock repurchase program. Since September 30, 2018, we repurchased and retired 8.5 million shares of common stock for $542 million.

Dividends. On October 23, 2018, we announced a cash dividend of $0.62 per share on our common stock, payable on December 20, 2018 to stockholders of record as of the close of business on December 6, 2018. Dividends charged to retained earnings in fiscal 2018, 2017 and 2016 were as follows (in millions, except per share data):

	2018		2017		2016	
	Per Share	Total	Per Share	Total	Per Share	Total
First quarter	$0.57	$862	$0.53	$801	$0.48	$730
Second quarter	0.57	857	0.53	798	0.48	726
Third quarter	0.62	921	0.57	858	0.53	794
Fourth quarter	0.62	877	0.57	857	0.53	796
	$2.38	$3,517	$2.20	$3,314	$2.02	$3,046

Note 5. Employee Benefit Plans

Employee Savings and Retirement Plan. We have a 401(k) plan that allows eligible employees to contribute up to 85% of their eligible compensation, subject to annual limits. We match a portion of the employee contributions and may, at our discretion, make additional contributions based upon earnings. Our contribution expense was $78 million, $76 million and $74 million in fiscal 2018, 2017 and 2016, respectively.

Equity Compensation Plans. On March 8, 2016, our stockholders approved the Qualcomm Incorporated 2016 Long-Term Incentive Plan (the 2016 Plan), which replaced the Qualcomm Incorporated 2006 Long-Term Incentive Plan (the Prior Plan). Effective on and after that date, no new awards will be granted under the Prior Plan, although all outstanding awards under the Prior Plan will remain outstanding according to their terms and the terms of the Prior Plan. The 2016 Plan provides for the grant of incentive and nonstatutory stock options, stock appreciation rights, restricted stock, unrestricted stock, restricted stock units, performance units, performance shares, deferred compensation awards and other stock-based awards. The share reserve under the 2016 Plan is equal to 90.0 million shares, plus approximately 20.1 million shares that were available for future grant under the Prior Plan on March 8, 2016, for a total of approximately 110.1 million shares initially available for grant under the 2016 Plan. This share reserve is automatically increased as provided in the 2016 Plan by the number of shares subject to stock options that were granted under the Prior Plan and outstanding as of March 8, 2016, which after that date expire or for any reason are forfeited, canceled or terminated, and by two times the number of shares subject to any awards other than stock options that were granted under the Prior Plan and outstanding as of March 8, 2016, which after that date expire, are forfeited, canceled or terminated, fail to vest, are not earned due to any performance goal that is not met, are otherwise reacquired without having become vested, or are paid in cash, exchanged by a participant or withheld by us to satisfy any tax withholding or tax payment obligations related to such award. The Board of Directors may amend or terminate the 2016 Plan at any time. Certain amendments, including an increase in the share reserve, require stockholder approval. At September 30, 2018, approximately 79.3 million shares were available for future grant under the 2016 Plan.

RSUs are share awards that entitle the holder to receive shares of our common stock upon vesting. The RSUs generally include dividend-equivalent rights and vest over periods of three years from the date of grant. A summary of RSU transactions that contain only service requirements to vest for all equity compensation plans follows:

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	Number of Shares	Weighted-Average Grant Date Fair Value	Aggregate Intrinsic Value
	(In thousands)		(In billions)
RSUs outstanding at September 24, 2017	24,704	$ 62.46	
RSUs granted	16,297	62.61	
RSUs canceled/forfeited	(4,195)	61.74	
RSUs vested	(13,709)	63.43	
RSUs outstanding at September 30, 2018	23,097	$ 62.12	$ 1.7

At September 30, 2018, total unrecognized compensation expense related to such non-vested RSUs granted prior to that date was $889 million, which is expected to be recognized over a weighted-average period of 1.7 years. The total vest-date fair value of such RSUs that vested during fiscal 2018, 2017 and 2016 was $940 million, $820 million and $685 million, respectively. The total shares withheld to satisfy statutory tax withholding requirements related to all share-based awards were approximately 4.4 million, 4.2 million and 4.3 million in fiscal 2018, 2017 and 2016, respectively, and were based on the value of the awards on their vesting dates as determined by our closing stock price.

The Board of Directors may grant stock options to employees, directors and consultants to purchase shares of our common stock at an exercise price not less than the fair market value of the stock at the date of grant. Stock options vest over periods not exceeding five years and are exercisable for up to ten years from the grant date. A summary of stock option transactions that contain only service requirements to vest for all equity compensation plans follows:

	Number of Shares	Weighted-Average Exercise Price	Average Remaining Contractual Term	Aggregate Intrinsic Value
	(In thousands)		(Years)	(In millions)
Stock options outstanding at September 24, 2017	12,385	$ 40.99		
Stock options canceled/forfeited/expired	(59)	41.78		
Stock options exercised	(7,739)	41.03		
Stock options outstanding at September 30, 2018	4,587	40.92	0.8	$ 143
Exercisable at September 30, 2018	4,587	$ 40.92	0.8	$ 143

The total intrinsic value of stock options exercised during fiscal 2018, 2017 and 2016 was $156 million, $118 million and $147 million, respectively, and the amount of cash received from the exercise of stock options was $317 million, $236 million and $436 million, respectively. Upon option exercise, we issue new shares of stock.

The total tax benefits realized, including the excess tax benefits, related to share-based awards during fiscal 2018, 2017 and 2016 were $254 million, $301 million and $253 million, respectively.

Employee Stock Purchase Plan. We have an employee stock purchase plan for eligible employees to purchase shares of common stock at 85% of the lower of the fair market value on the first or the last day of each offering period, which is generally six months. Employees may authorize us to withhold up to 15% of their compensation during any offering period, subject to certain limitations. The employee stock purchase plan includes a non-423(b) plan. On March 23, 2018, our stockholders approved an amendment to the Amended and Restated QUALCOMM Incorporated 2001 Employee Stock Purchase Plan to increase the share reserve by 30.0 million shares. The shares authorized under the plan were approximately 101.7 million at September 30, 2018. The shares reserved for future issuance were approximately 38.9 million at September 30, 2018. During fiscal 2018, 2017 and 2016, approximately 5.8 million, 5.7 million and 6.0 million shares, respectively, were issued under the plan at an average price of $49.41, $45.29 and $38.89 per share, respectively. At September 30, 2018, total unrecognized compensation expense related to

non-vested purchase rights granted prior to that date was $24 million. We recorded cash received from the exercise of purchase rights of $286 million, $260 million and $232 million during fiscal 2018, 2017 and 2016, respectively.

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Note 6. Debt
Revolving Credit Facility. We have an Amended and Restated Revolving Credit Facility (2016 Amended and Restated Revolving Credit Facility) that provides for unsecured revolving facility loans, swing line loans and letters of credit in an aggregate amount of up to $5.0 billion, of which $530 million and $4.47 billion will expire in February 2020 and November 2021, respectively. Proceeds from the Amended and Restated Revolving Credit Facility are expected to be used for general corporate purposes. Loans under the 2016 Amended and Restated Revolving Credit Facility will bear interest, at our option, at either the reserve-adjusted Eurocurrency Rate (determined in accordance with the 2016 Amended and Restated Revolving Credit Facility) or the Base Rate (determined in accordance with the 2016 Amended and Restated Revolving Credit Facility), in each case plus an applicable margin based on our long-term unsecured senior, non-credit enhanced debt ratings. The margins over the reserve-adjusted Eurocurrency Rate and the Base Rate will be 0.805% and 0.00% per annum, respectively. The 2016 Amended and Restated Revolving Credit Facility has a facility fee, which accrues at a rate of 0.07% per annum. At September 30, 2018 and September 24, 2017, we had not borrowed any funds under the 2016 Amended and Restated Revolving Credit Facility.
Commercial Paper Program. We have an unsecured commercial paper program, which provides for the issuance of up to $5.0 billion of commercial paper. Net proceeds from this program are used for general corporate purposes. Maturities of commercial paper can range from 1 day to up to 397 days. At September 30, 2018 and September 24, 2017, we had $1.0 billion and $999 million, respectively, of outstanding commercial paper recorded as short-term debt with a weighted-average interest rate of 2.35% and 1.19%, respectively, which included fees paid to the commercial paper dealers, and weighted-average remaining days to maturity of 16 days and 45 days, respectively. The carrying value of the outstanding commercial paper approximated its estimated fair value at September 30, 2018 and September 24, 2017.
NXP-Related Credit and Term Loan Facilities. In July 2018, we terminated our agreement to acquire NXP (Note 9). As a result, the credit agreements that were established primarily to finance the NXP acquisition were terminated in accordance with their terms in the fourth quarter of fiscal 2018. The credit agreements terminated had provided for (a) senior unsecured delayed-draw revolving facility loans in an aggregate amount of $3.0 billion (as amended, the 2018 Revolving Credit Facility), (b) senior unsecured delayed-draw term facility loans in an aggregate amount of $4.0 billion (as amended, the 2016 Term Loan Facility) and (c) senior unsecured delayed-draw term facility loans in an aggregate amount of $7.0 billion (as amended, the 2018 Term Loan Facility). We had not borrowed any funds under the 2018 Revolving Credit Facility, 2016 Term Loan Facility or 2018 Term Loan Facility.
Long-term Debt. In May 2015, we issued an aggregate principal amount of $10.0 billion of unsecured floating- and fixed-rate notes (May 2015 Notes) with varying maturities. The proceeds from the May 2015 Notes of $9.9 billion, net of underwriting discounts and offering expenses, were used to fund stock repurchases and also for other general corporate purposes. In May 2017, we issued an aggregate principal amount of $11.0 billion of unsecured floating- and fixed-rate notes (May 2017 Notes) with varying maturities. The proceeds from the May 2017 Notes of $10.95 billion, net of underwriting discounts and offering expenses, were intended to be used to finance, in part, our proposed acquisition of NXP and other related transactions and for general corporate purposes. Our floating-rate notes due 2019, floating-rate notes due 2020, fixed-rate 1.85% notes due 2019 and fixed-rate 2.10% notes due 2020 (collectively, the Old SMR Notes) issued in May 2017 for an aggregate principal amount of $4.0 billion were subject to special mandatory redemption provisions that required redemption on the first to occur of (i) the termination of the NXP purchase agreement or (ii) June 1, 2018 if the NXP transaction had not closed as of such date. In May 2018, we completed private offerings to exchange $122 million of the Old SMR Notes for new notes (the New SMR Notes) that had the same principal amount and terms, except for a new special mandatory redemption date of November 1, 2018 and maturity dates that were one day after the applicable maturity dates for the applicable series of Old SMR Notes. Also, in May 2018, we repurchased $71 million of Old SMR Notes that were not eligible for exchange in the May 2018 private offerings. In July 2018, we repurchased $3.8 billion of Old SMR Notes that were not exchanged in the May 2018 private offerings. In August 2018, subsequent to the termination of the NXP acquisition, we repurchased

the $122 million of New SMR Notes issued in May 2018.

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The following table provides a summary of our long-term debt (in millions except percentages):

	September 30, 2018		September 24, 2017	
	Amount	Effective Rate	Amount	Effective Rate
May 2015 Notes				
Floating-rate three-month LIBOR plus 0.27% notes due May 18, 2018	$—		$250	1.65%
Floating-rate three-month LIBOR plus 0.55% notes due May 20, 2020	250	2.93%	250	1.92%
Fixed-rate 1.40% notes due May 18, 2018	—		1,250	1.93%
Fixed-rate 2.25% notes due May 20, 2020	1,750	3.13%	1,750	2.20%
Fixed-rate 3.00% notes due May 20, 2022	2,000	3.73%	2,000	2.65%
Fixed-rate 3.45% notes due May 20, 2025	2,000	3.46%	2,000	3.46%
Fixed-rate 4.65% notes due May 20, 2035	1,000	4.73%	1,000	4.74%
Fixed-rate 4.80% notes due May 20, 2045	1,500	4.72%	1,500	4.71%
May 2017 Notes				
Floating-rate three-month LIBOR plus 0.36% notes due May 20, 2019	—		750	1.80%
Floating-rate three-month LIBOR plus 0.45% notes due May 20, 2020	—		500	1.86%
Floating-rate three-month LIBOR plus 0.73% notes due January 30, 2023	500	3.14%	500	2.11%
Fixed-rate 1.85% notes due May 20, 2019	—		1,250	2.00%
Fixed-rate 2.10% notes due May 20, 2020	—		1,500	2.19%
Fixed-rate 2.60% notes due January 30, 2023	1,500	2.70%	1,500	2.70%
Fixed-rate 2.90% notes due May 20, 2024	1,500	3.01%	1,500	3.01%
Fixed-rate 3.25% notes due May 20, 2027	2,000	3.46%	2,000	3.46%
Fixed-rate 4.30% notes due May 20, 2047	1,500	4.47%	1,500	4.47%
Total principal	15,500		21,000	
Unamortized discount, including debt issuance costs	(85)		(106)	
Hedge accounting fair value adjustments	(50)		—	
Total long-term debt	$15,365		$20,894	
Reported as:				
Short-term debt	$—		$1,496	
Long-term debt	15,365		19,398	
Total	$15,365		$20,894	

At September 30, 2018, future principal payments were $2.0 billion in fiscal 2020, $2.0 billion in fiscal 2022, $2.0 billion in fiscal 2023 and $9.5 billion after fiscal 2023; no principal payments are due in fiscal 2019 or 2021. At September 30, 2018 and September 24, 2017, the aggregate fair value of the notes, based on Level 2 inputs, was approximately $15.1 billion and $21.5 billion, respectively.

We may redeem the outstanding fixed-rate notes at any time in whole, or from time to time in part, at specified make-whole premiums as defined in the applicable form of note. We may not redeem the outstanding floating-rate notes prior to maturity. The obligations under the notes rank equally in right of payment with all of our other senior unsecured indebtedness and will effectively rank junior to all liabilities of our subsidiaries.

At September 30, 2018, we had outstanding interest rate swaps with an aggregate notional amount of $1.8 billion, related to the May 2015 Notes, which effectively converted approximately 43% and 50% of the fixed-rate notes due in 2020 and 2022, respectively, into floating-rate notes. The net gains and losses on the interest rate swaps, as well as the

offsetting gains or losses on the related fixed-rate notes attributable to the hedged risks, are recorded in earnings in interest expense in the current period. We did not enter into similar interest rate swaps in connection with issuance of the May 2017 Notes.

The effective interest rates for the notes include the interest on the notes, amortization of the discount, which includes debt issuance costs, and if applicable, adjustments related to hedging. Interest is payable in arrears quarterly for the floating-rate notes and semi-annually for the fixed-rate notes. Cash interest paid related to our commercial paper program and long-

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term debt, net of cash received from the related interest rate swaps, was $662 million, $313 million and $282 million during fiscal 2018, 2017 and 2016, respectively.

Debt Covenants. The 2016 Amended and Restated Revolving Credit Facility requires, and the 2016 Term Loan Facility, the 2018 Revolving Credit Facility and the 2018 Term Loan Facility required, that we comply with certain covenants, including one financial covenant to maintain a ratio of consolidated earnings before interest, taxes, depreciation and amortization to consolidated interest expense, as defined in each of the respective agreements, of not less than three to one at the end of each fiscal quarter. We are not subject to any financial covenants under the notes nor any covenants that would prohibit us from incurring additional indebtedness ranking equal to the notes, paying dividends, issuing securities or repurchasing securities issued by us or our subsidiaries. At September 30, 2018 and September 24, 2017, we were in compliance with the applicable covenants under each facility outstanding at such time.

Note 7. Commitments and Contingencies

Legal and Regulatory Proceedings.

ParkerVision, Inc. v. QUALCOMM Incorporated: On May 1, 2014, ParkerVision filed a complaint against us in the United States District Court for the Middle District of Florida alleging that certain of our products infringe certain ParkerVision patents. On August 21, 2014, ParkerVision amended the complaint, captioned ParkerVision, Inc. v. QUALCOMM Incorporated, Qualcomm Atheros, Inc., HTC Corporation, HTC America, Inc., Samsung Electronics Co., LTD., Samsung Electronics America, Inc. and Samsung Telecommunications America, LLC, broadening the allegations. ParkerVision alleged that we infringe 11 ParkerVision patents and seeks damages and injunctive and other relief. On December 3, 2015, ParkerVision dismissed six patents from the lawsuit and granted us and all other defendants a covenant not to assert those patents against any existing products. On February 2, 2016, after agreement among the parties, the District Court stayed the remainder of the case pending the resolution of the complaint filed by ParkerVision against us and other parties with the United States International Trade Commission (ITC) described below. Subsequently, ParkerVision announced that it had reached a settlement with Samsung which dismissed the Samsung entities from the District Court case. We had previously filed Inter Partes Review petitions with the United States Patent and Trademark Office (USPTO) to invalidate all asserted claims of several of the remaining patents. On March 7, 2017, the USPTO decided in our favor with respect to all asserted claims of one such patent. After the ITC action described below was closed, and upon agreement among the parties, on May 24, 2017, the District Court further stayed the District Court case pending ParkerVision's appeal of the USPTO's invalidation decisions. A hearing on ParkerVision's appeal before the United States Court of Appeals for the Federal Circuit was held on August 7, 2018. On September 13, 2018, the Court of Appeals reaffirmed the USPTO's decisions. The case has been further stayed by motion of the parties while ParkerVision decides whether to bring a further appeal.

On December 14, 2015, ParkerVision filed another complaint against us in the United States District Court for the Middle District of Florida alleging patent infringement. Apple Inc., Samsung Electronics Co., LTD., Samsung Electronics America, Inc., Samsung Telecommunications America, LLC, Samsung Semiconductor, Inc., LG Electronics, Inc., LG Electronics U.S.A., Inc. and LG Electronics MobileComm U.S.A., Inc. were also named defendants. The complaint asserts that certain of our products infringe four additional ParkerVision patents and seeks damages and other relief. On December 15, 2015, ParkerVision filed a complaint with the ITC pursuant to Section 337 of the Tariff Act of 1930 against the same parties asserting the same four patents. The complaint seeks an exclusion order barring the importation of products that use either of two of our transceivers or one Samsung transceiver and a cease and desist order preventing us and the other defendants from carrying out commercial activities within the United States related to such products. On January 13, 2016, we served our answer to the District Court complaint. On January 15, 2016, the ITC instituted an investigation. On February 12, 2016, the District Court case was stayed pending completion of the ITC investigation. Subsequently, ParkerVision announced that it had reached a settlement with Samsung which dismissed the Samsung entities from the ITC investigation and related District Court case. On February 2, 2017, the ITC granted ParkerVision's motion to drop all but one patent and one accused product from the ITC investigation. On March 12, 2017, one day before the ITC hearing was scheduled to

begin, ParkerVision moved to withdraw its ITC complaint in its entirety. We and the other defendants did not oppose the withdrawal of the complaint. On April 28, 2017, the ITC formally closed the investigation. On May 4, 2017, ParkerVision filed a motion to reopen the related District Court Case, and on May 26, 2017, the District Court granted the motion. On March 16, 2018, the parties agreed to dismiss three of ParkerVision's patents from the case without prejudice, leaving only one patent at issue. A claim construction hearing was held on August 31, 2018. The District Court has not issued on order on that hearing. No trial date has been set.

Apple Inc. (Apple) v. QUALCOMM Incorporated: On January 20, 2017, Apple filed a complaint against us in the United States District Court for the Southern District of California seeking declarations with respect to several of our patents and

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alleging that we breached certain agreements and violated federal antitrust and California state unfair competition laws. In its initial complaint, Apple sought declaratory judgments of non-infringement by Apple of nine of our patents, or in the alternative, a declaration of royalties Apple must pay for the patents. Apple further sought a declaration that our sale of baseband processor chipsets exhausts our patent rights for patents embodied in those chipsets. Separately, Apple sought to enjoin us from seeking excessive royalties from Apple and to disgorge royalties paid by Apple's contract manufacturers that the court finds were not fair, reasonable and non-discriminatory (FRAND). Apple also claimed that our refusal to make certain payments to Apple under a Business Cooperation and Patent Agreement (Cooperation Agreement) constituted a breach of contract in violation of California law and sought damages in the amount of the unpaid payments, alleged to be approximately $1 billion. In addition, Apple claimed that we have refused to deal with competitors in contravention of our agreements with applicable standard setting organizations, have used our market position to impose contractual obligations on Apple that prevented Apple from challenging our licensing practices, have tied the purchase of our CDMA-enabled and "premium" LTE-enabled chipsets to licensing certain of our patents and have required Apple to purchase baseband processor chipsets exclusively from us as a condition of our payment to Apple of certain rebates, in violation of Section 2 of the Sherman Act and the California Unfair Competition Law. Apple sought injunctive relief with respect to these claims and a judgment awarding its expenses, costs and attorneys' fees.

On April 10, 2017, we filed our Answer and Counterclaims (amended on May 24, 2017) in response to Apple's complaint denying Apple's claims and asserting claims against Apple. The counterclaims against Apple include tortious interference with our long-standing Subscriber Unit License Agreements (SULAs) with third-party contract manufacturers of Apple devices, causing those contract manufacturers to withhold certain royalty payments owed to us and violate their audit obligations; breach of contract and the implied covenant of good faith and fair dealing relating to the Cooperation Agreement; unjust enrichment and declaratory relief relating to the Cooperation Agreement; breach of contract based on Apple's failure to pay amounts owed to us under a Statement of Work relating to a high-speed feature of our baseband processor chipsets; breach of the parties' software agreement; and violation of California Unfair Competition Law based on Apple's threatening us to prevent us from promoting the superior performance of our own baseband processor chipsets. We also seek declaratory judgments that we have satisfied our FRAND commitments with respect to Apple, and that our SULAs with the contract manufacturers do not violate either competition law or our FRAND commitments. On June 19, 2017, Apple filed a Partial Motion to Dismiss our counterclaim for violation of the California Unfair Competition Law. The court granted that motion on November 8, 2017. On June 20, 2017, Apple filed an Answer and Affirmative Defenses to the rest of our counterclaims, and also filed an Amended Complaint reiterating all of the original claims and adding claims for declaratory judgments of invalidity of the nine patents that are subject to declaratory judgment claims in the original complaint, adding new declaratory judgment claims for non-infringement, invalidity and a declaration of royalties for nine more patents. Apple also added claims for declaratory judgments that certain of our agreements are unenforceable. On July 21, 2017, we filed an Answer to Apple's Amended Complaint as well as a motion to dismiss the new declaratory judgment claims for non-infringement, invalidity and a declaration of royalties for the nine additional patents. The court granted our motion on November 8, 2017.

On May 17, 2017, we filed a complaint (captioned QUALCOMM Incorporated v. Compal Electronics, Inc. et al.) in the United States District Court for the Southern District of California against certain of Apple's contract manufacturers, Compal Electronics, Inc. (Compal), FIH Mobile, Ltd., Hon Hai Precision Industry Co., Ltd. (together with FIH Mobile, Ltd., Foxconn), Pegatron Corporation (Pegatron) and Wistron Corporation (Wistron), asserting claims for injunctive relief, specific performance, declaratory relief and damages stemming from the defendants' breach of contracts by ceasing the payment of royalties for iPhones and other devices which they manufacture for Apple. On July 17, 2017, Compal, Foxconn, Pegatron and Wistron each filed third-party complaints for contractual indemnity against Apple seeking to join Apple as a party to the action. On July 18, 2017, Apple filed an answer to these third-party complaints acknowledging its indemnity agreements and consenting to be joined. On July 18, 2017, the defendants filed an Answer and Counterclaims to the complaint, asserting defenses and counterclaims similar to

allegations previously made by Apple in the Apple Inc. v. QUALCOMM Incorporated case discussed above. In addition, the defendants asserted certain new claims, including claims under Section 1 of the Sherman Act and California's Cartwright Act. The defendants seek damages, declaratory relief, injunctive relief, restitution of certain royalties and other relief. On July 18, 2017, Apple filed a motion to consolidate this action with the Apple Inc. v. QUALCOMM Incorporated case. On September 13, 2017, the court granted Apple's consolidation motion. Fact discovery is closed in these cases.

On August 31, 2018, Apple filed a motion for judgment on the pleadings that the court lacks subject matter jurisdiction over our counterclaim that our license offers to Apple have not violated our obligation to license standard-essential patents on FRAND terms. The same day, Apple also filed motions for partial summary judgment on the following issues: that part of our claim for Apple's alleged tortious interference with its contract manufacturers' agreements is barred by the statute of

limitations; that our claim for damages under the Cooperation Agreement is unfounded; and that certain of our patent rights are exhausted by the sale of our baseband processor chipsets. The foregoing motions are scheduled for hearing on November 9, 2018.

On September 14, 2018, we filed a motion to dismiss Apple's declaratory judgment claims relating to the nine specific patents identified in its original complaint on the basis that we granted Apple and its contract manufacturers a covenant-not-to-sue on those patents. If granted, this motion would dispose of a total of 56 claims pled by Apple and its contract manufacturers, including non-infringement, validity, damages and patent exhaustion for each of the nine patents (which would render Apple's motion for partial summary judgment on the issue as moot). The hearing on our motion to dismiss was held on October 26, 2018. A final pretrial conference is scheduled for November 30, 2018. The trials have not been scheduled.

On January 23, 2017, an Apple subsidiary in China filed two complaints against us in the Beijing Intellectual Property Court. On March 31, 2017, the court granted an application by Apple Inc. to join the actions as a plaintiff, and Apple amended the complaints. One of the complaints alleges a violation of China's Anti-Monopoly Law (AML complaint); the other complaint requests a determination of the terms of a patent license between us and Apple (FRAND complaint). The AML complaint alleges that (i) we have abused our dominant position in communication standard-essential patents licensing markets and certain global baseband processor chipset markets by charging and offering royalty terms that were excessively high; (ii) we refused to license certain implementers of standardized technologies, including Apple and baseband processor chipset manufacturers; (iii) we forced Apple to use only our products and services; and (iv) we bundled licenses to standard-essential patents with licenses to non-standard-essential patents and imposed other unreasonable or discriminatory trading terms on Apple in violation of the AML. The AML complaint seeks a decree that we cease the alleged abuse of dominance, as well as damages in the amount of 1 billion Chinese renminbi (approximately $145 million based on the exchange rate on September 30, 2018). The FRAND complaint makes allegations similar to the AML complaint and further alleges that we refused to offer licensing terms for our cellular standard-essential patents consistent with our FRAND licensing commitments and failed to provide to Apple certain information about our patents. The FRAND complaint seeks (i) a declaration that the license terms offered to Apple by us for our mobile communication standard-essential patents are not compliant with FRAND; (ii) an order that we cease our actions that allegedly violate our FRAND obligations, including pricing on unfair, unreasonable and excessive terms, refusing to deal, imposing unreasonable trade conditions and failing to provide information on our patents; and (iii) a determination of FRAND-compliant license terms for our Chinese standard-essential patents. Apple also seeks its expenses in each of the cases.

On August 3, 2017, we received three additional complaints filed by an Apple subsidiary and Apple Inc. against us in the Beijing Intellectual Property Court. The complaints seek declaratory judgments of non-infringement of three of our patents. We filed jurisdictional and other objections to the complaints, which the court denied on May 31, 2018. On July 5, 2018, we appealed the denial of our objections to the Beijing High People's Court.

On November 30, 2017, Apple and certain of its Chinese subsidiaries filed three patent infringement complaints against us in the Beijing Intellectual Property Court. Apple seeks damages and costs. We have filed jurisdictional objections to the complaints.

On February 16, 2017, Apple and one of its Japanese subsidiaries filed four complaints against us in the Tokyo District Court. In three of the complaints, Apple seeks declaratory judgment of non-infringement by Apple of three of our patents. Apple further seeks a declaration that our patent rights with respect to those three patents are exhausted by our SULAs with the contract manufacturers of Apple's devices as well as our sale of baseband processor chipsets. Apple also seeks an award of fees. On January 30, 2018, April 27, 2018 and July 13, 2018, the court dismissed each of Apple's three declaratory judgment complaints, finding that Apple lacked standing based on the facts it alleged in those complaints. The court has yet to rule on whether Apple has standing in the remaining complaint. On May 15, 2017, we learned of the fourth complaint. In that complaint, Apple and one of its Japanese subsidiaries seek damages of 100 million Japanese yen (approximately $1 million based on the exchange rate on September 30, 2018) from us, based on allegations that we violated the Japanese Antimonopoly Act and the Japanese Civil Code. In particular, the

fourth complaint alleges that (i) we hold a monopoly position in the market for baseband processor chipsets that implement certain cellular standards; (ii) we collect double royalties through our license agreements and the sale of baseband processor chipsets; (iii) we refused to grant Apple a license on FRAND terms and forced Apple to execute a rebate agreement under unreasonable conditions; (iv) we refused to grant Apple a direct license; and (v) we demanded a license fee based on the market value of the total device. We have filed jurisdictional and other objections to this complaint.

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On March 2, 2017, we learned that Apple and certain of its European subsidiaries issued a Claim Form against us in the UK High Court of Justice, Chancery Division, Patents Court on January 23, 2017. Apple subsequently filed an Amended Claim Form and Particulars of Claim. Both the Amended Claim Form and the Particulars of Claim allege several European competition law claims, including our refusal to license competing chipmakers, failure to offer Apple a direct license to our standard-essential patents on FRAND terms, demanding excessive royalties for our standard-essential patents, and demanding excessive license fees for the use of our standard-essential patents in connection with baseband processor chipsets purchased from us. Apple also seeks declarations that we are obliged to offer a direct patent license to Apple in respect of standard-essential patents actually practiced on FRAND terms and that using our baseband processor chipsets does not infringe any of our patents because we exhausted our patent rights. Finally, Apple seeks declarations that five of our European (UK) patents are invalid and not essential, and an order that each of those patents be revoked.

On April 18, 2017, Apple and one of its Taiwanese subsidiaries filed a complaint against us in the Taiwan Intellectual Property Court alleging that we have abused a dominant market position in licensing wireless standard-essential patents and selling baseband processor chipsets, including improper pricing, refusal to deal, exclusive dealing, tying, imposing unreasonable trade terms and discriminatory treatment. The complaint seeks rulings that we not use the sales price of the terminal device as the royalty base for standard-essential patents; not leverage our cellular standard-essential patents to obtain licenses of our non-standard-essential patents or demand cross-licenses without proper compensation; not refuse, reduce, delay or take any other action to limit the supply of our baseband processor chipsets to non-licensees; that we must license our standard-essential patents on FRAND terms; and that we shall not, based on standard-essential patents, seek injunctions. The complaint also seeks damages of 10 million Taiwan dollars (less than $1 million based on the exchange rate on September 30, 2018), among other relief.

We believe Apple’s and its contract manufacturers’ claims in the above matters are without merit.

QUALCOMM Incorporated v. Apple Inc.: On July 6, 2017, we filed a complaint against Apple in the United States District Court for the Southern District of California asserting claims for damages and injunctive relief for infringement of six of our patents directed to a variety of features found in iPhone models. On July 7, 2017, we filed a complaint against Apple in the United States International Trade Commission (ITC) requesting that the ITC institute an investigation pursuant to Section 337 of the Tariff Act of 1930 based on Apple’s infringement of the same six patents. We are seeking a limited exclusion order and cease and desist order against importation of iPhone models that do not contain a Qualcomm brand baseband processor chipset. The patents have not been declared as essential to any standards organization and are not subject to commitments to license on FRAND terms. Apple filed an Answer and Counterclaims in the District Court case on September 26, 2017. On November 29, 2017, Apple filed a First Amended Answer and Counterclaims asserting that our Snapdragon processors infringe eight Apple patents. On August 8, 2017, the ITC issued a notice of institution of an investigation. On August 25, 2017, we withdrew allegations as to one patent in both the ITC investigation and the district court case. On April 25, 2018, we withdrew allegations as to two additional patents in the ITC investigation, but not the District Court case, in order to satisfy certain briefing limitations and to narrow the issues for hearing. The ITC investigation evidentiary hearing by the Administrative Law Judge (ALJ) was held June 18-26, 2018. The ALJ’s Initial Determination on the merits was issued on September 28, 2018. The ALJ found that we had established a violation of Section 337 by Apple due to the infringement of one of the three asserted patents. However, the ALJ recommended against an exclusion order on the grounds of public interest. On October 15, 2018, the parties each filed petitions for review of portions of the ALJ’s decision by the full ITC. The ITC is expected to announce the scope of its review by November 29, 2018. The target date for final determination by the ITC is set for January 28, 2019. On March 2, 2018, the District Court granted our motion to sever, for separate trial, Apple’s counterclaims for patent infringement against us. Trial is scheduled to begin on March 4, 2019. With respect to Apple’s patent claims against us, fact discovery is scheduled to close on December 3, 2018, and trial is scheduled to begin on July 15, 2019. All of the asserted patents have been challenged in Inter Partes Review (IPR) petitions filed by Apple, and/or in some cases by Intel, in the USPTO. No decisions have yet been issued by the USPTO.

On November 1, 2017, we filed a complaint against Apple in San Diego Superior Court for breach of the Master Software Agreement between the companies. The complaint recounts instances when Apple failed to protect our software as required by the agreement and failed to provide sufficient information to which we are entitled under the agreement in order to understand whether other breaches have occurred. The complaint seeks specific performance of Apple's obligations to cooperate with an audit of its handling of our software, damages and injunctive relief. Apple filed its answer to the complaint on December 29, 2017. On September 24, 2018, we filed a motion seeking to amend our complaint to add causes of action for additional contract breaches and misappropriation of trade secrets. On October 26, 2018, the court granted our motion. We filed an amended complaint on October 31, 2018. No trial date is currently set.

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On November 29, 2017, we filed three additional complaints against Apple in the United States District Court for the Southern District of California alleging infringement of a total of 16 of our patents. The patents have not been declared as essential to any standards organization and are not subject to commitments to license on FRAND terms. The complaints seek damages and injunctive relief. On January 22, 2018, Apple filed answers and counterclaims in each of these cases seeking declaratory judgments that the asserted patents are invalid and/or not infringed. Case management conferences were held on February 7, 2018 and March 1, 2018. For the case relating to the November 30, 2017 ITC investigation described below, fact discovery is scheduled to close on March 13, 2019, and trial is scheduled to begin on October 21, 2019. On June 18, 2018, Apple filed a petition with the USPTO Patent Trial and Appeal Board (PTAB) challenging the validity of one patent asserted in the November 30, 2017 ITC investigation and the corresponding District Court case. On June 29, 2018, Apple filed petitions with the USPTO PTAB challenging the validity of another patent asserted in the November 30, 2017 ITC investigation and the corresponding District Court case. For the cases not related to the ITC investigation, all of the asserted patents have been challenged in IPR proceedings filed by Apple in the USPTO. No decisions have yet been issued by the USPTO. As a result of the IPR proceedings, on August 29, 2018, the court stayed those two cases pending the outcome of the IPR proceedings.
On November 30, 2017, we filed a complaint in the ITC accusing certain Apple products of infringing five of our patents. The patents have not been declared as essential to any standards organization and are not subject to commitments to license on FRAND terms. We seek a limited exclusion order and cease and desist order against importation of iPhone models that do not contain a Qualcomm brand baseband processor chipset. On January 2, 2018, the ITC instituted an investigation. The evidentiary hearing by the Administrative Law Judge (ALJ) took place from September 17-24, 2018 and included three of our patents. The ALJ’s Initial Determination on the merits is due on January 22, 2019, and the target date for final determination by the ITC is set for May 22, 2019.
On July 17, 2017, we filed complaints against Apple and certain of its subsidiaries in the Federal Republic of Germany, asserting infringement of one of our patents in the Mannheim District Court and infringement of another patent in the Munich District Court. On October 2, 2017, we filed claim extensions in these actions against Apple and certain of its subsidiaries, asserting infringement of two additional patents in the Mannheim District Court and infringement of five additional patents in the Munich District Court. On May 28, 2018, we filed additional claim extensions in these actions against Apple and certain of its subsidiaries, asserting infringement of three additional patents in the Mannheim District Court and infringement of one additional patent in the Munich District Court. The complaints seek remedies including, among other relief, declaratory relief confirming liability on the merits for damages and injunctive relief. The patents have not been declared as essential to any standards organization and are not subject to commitments to license on FRAND terms. On October 11, 2018, the Munich District Court issued a judgment declaring one of the patents asserted on October 2, 2017 as not infringed. All other patents remain pending. Hearings are scheduled for various dates through September 2019.
On September 29, 2017, we filed three complaints against Apple and certain of its subsidiaries in the Beijing (China) Intellectual Property Court, asserting infringement of three of our patents. The complaints seek remedies including injunctive relief and costs. The patents have not been declared as essential to any standards organization and are not subject to commitments to license on FRAND terms. On May 10, 2018 and June 21, 2018, Apple filed invalidation requests with the Chinese Patent Review Board (PRB) for the three asserted patents. The PRB has not ruled on the invalidation requests.
On November 13, 2017, we filed three complaints against certain of Apple’s subsidiaries in the Beijing (China) High People’s Court, asserting infringement of three of our patents. The complaints seek remedies including injunctive relief, damages and costs. The patents have not been declared as essential to any standards organization and are not subject to commitments to license on FRAND terms. On December 19, 2017, Apple’s subsidiaries filed invalidation requests with the PRB for the three asserted patents. PRB hearings regarding the validity of the patents were held in April and May 2018. The PRB issued rulings upholding the validity of all three patents. On May 22, 2018, Apple’s subsidiaries filed a second invalidation request with the PRB for one of the three asserted patents. The PRB held a hearing regarding this request on October 19, 2018.

On November 15, 2017, we filed three complaints against certain of Apple's subsidiaries in the Fuzhou (China) Intermediate People's Court, asserting infringement of three of our patents. The complaints seek remedies including injunctive relief and costs. The patents have not been declared as essential to any standards organization and are not subject to commitments to license on FRAND terms. Infringement hearings were held in August and September 2018. Subsequent hearings are scheduled for October 29-30, 2018. Apple's subsidiaries filed invalidation requests with the PRB on December 8, 2017 for one of the patents and December 11, 2017 for the other two patents. PRB hearings regarding the validity of the patents were held in April and May 2018. The PRB issued orders upholding the validity of two of the patents subject to Apple's invalidity challenges. The PRB has not ruled on the invalidation request with respect to the other patent.

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On January 12, 2018, we filed three additional complaints against Apple and certain of its subsidiaries in the Fuzhou (China) Intermediate People's Court, asserting infringement of three additional patents. The complaints seek remedies including injunctive relief and costs. The patents have not been declared as essential to any standards organization and are not subject to commitments to license on FRAND terms.

Also on January 12, 2018, we filed three complaints against certain of Apple's subsidiaries in the Jiangsu (China) High People's Court, asserting infringement of three of our patents. The complaints seek remedies including injunctive relief, damages and costs. The patents have not been declared as essential to any standards organization and are not subject to commitments to license on FRAND terms. On February 5, 2018, Apple's subsidiaries filed invalidation requests with the PRB. PRB hearings regarding the validity of the patents were held in June 2018. The PRB issued orders upholding the validity of one of the patents and partially upholding the validity of another patent. The PRB has not ruled on the invalidation request for the final patent.

On February 2, 2018, we filed three complaints against certain of Apple's subsidiaries in the Qingdao (China) Intermediate People's Court, asserting infringement of three of our patents. The complaints seek remedies including injunctive relief and costs. The patents have not been declared as essential to any standards organization and are not subject to commitments to license on FRAND terms. On February 26, 2018, Apple's subsidiaries filed invalidation requests with the PRB. PRB hearings regarding the validity of the patents were held in June 2018. The PRB issued orders upholding the validity of one of the patents and invalidating another patent. The PRB has not ruled on the invalidation request for the final patent.

Also on February 2, 2018, we filed three complaints against certain of Apple's subsidiaries in the Guangzhou (China) Intermediate People's Court, asserting infringement of three of our patents. The complaints seek remedies including injunctive relief and costs. The patents have not been declared as essential to any standards organization and are not subject to commitments to license on FRAND terms. On March 14, 2018, Apple's subsidiaries filed invalidation requests with the PRB. PRB hearings regarding the validity of the patents began in July 2018. The PRB issued orders upholding the validity of two of the patents. The PRB has not ruled on the invalidation request for the final patent. An infringement hearing for one of the patents was held on October 18, 2018.

On June 14, 2018, we filed three complaints against certain of Apple's subsidiaries in the Guangdong (China) High People's Court, asserting infringement of three of our patents. The complaints seek remedies including injunctive relief and costs. The patents have not been declared as essential to any standards organization and are not subject to commitments to license on FRAND terms. On August 13, 2018, Apple's subsidiaries filed invalidation requests with the PRB. The PRB has not yet set hearing dates.

We believe Apple's counterclaims and invalidation requests in the above matters are without merit.

3226701 Canada, Inc. v. QUALCOMM Incorporated et al: On November 30, 2015, a securities class action complaint was filed by purported stockholders of us in the United States District Court for the Southern District of California against us and certain of our current and former officers. On April 29, 2016, the plaintiffs filed an amended complaint. On January 27, 2017, the court dismissed the amended complaint in its entirety, granting leave to amend. On March 17, 2017, the plaintiffs filed a second amended complaint, alleging that we and certain of our current and former officers violated Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, as amended, by making false and misleading statements regarding our business outlook and product development between November 19, 2014 and July 22, 2015. The second amended complaint sought unspecified damages, interest, attorneys' fees and other costs. On May 8, 2017, we filed a motion to dismiss the second amended complaint. On October 20, 2017, the court entered an order granting in part our motion to dismiss, and on November 29, 2017, the court entered an order granting the remaining portions of our motion to dismiss. On December 28, 2017, the plaintiffs filed an appeal to the United States Court of Appeals for the Ninth Circuit. No hearing date has been set. We believe the plaintiffs' claims are without merit.

Consolidated Securities Class Action Lawsuit: On January 23, 2017 and January 26, 2017, securities class action complaints were filed by purported stockholders of us in the United States District Court for the Southern District of California against us and certain of our current and former officers and directors. The complaints alleged, among other

things, that we violated Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, and Rule 10b-5 thereunder, by making false and misleading statements and omissions of material fact in connection with certain allegations that we are or were engaged in anticompetitive conduct. The complaints sought unspecified damages, interest, fees and costs. On May 4, 2017, the court consolidated the two actions and appointed lead plaintiffs. On July 3, 2017, the lead plaintiffs filed a consolidated amended complaint asserting the same basic theories of liability and requesting the same basic relief. On September 1, 2017,

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we filed a motion to dismiss the consolidated amended complaint. The court has not yet ruled on our motion to dismiss. We believe the plaintiffs' claims are without merit.

Camp v. Qualcomm Incorporated et al: On June 8, 2018 and June 26, 2018, securities class action complaints were filed by purported stockholders of us in the United States District Court for the Southern District of California against us and two of our current officers. The complaints allege, among other things, that we violated Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, and Rule 10b-5 thereunder, by failing to disclose that we had submitted a notice to the Committee on Foreign Investment in the United States (CFIUS) in January 2018. The complaints seek unspecified damages, interest, fees and costs. Upon the appointment of lead plaintiff in the action and the filing of a First Amended Complaint, we anticipate filing a motion to dismiss the complaint, as we believe the plaintiffs' claims are without merit.

Consumer Class Action Lawsuit: Since January 18, 2017, a number of consumer class action complaints have been filed against us in the United States District Courts for the Southern and Northern Districts of California, each on behalf of a putative class of purchasers of cellular phones and other cellular devices. Twenty-two such cases remain outstanding. In April 2017, the Judicial Panel on Multidistrict Litigation transferred the cases that had been filed in the Southern District of California to the Northern District of California. On May 15, 2017, the court entered an order appointing the plaintiffs' co-lead counsel. On July 11, 2017, the plaintiffs filed a consolidated amended complaint alleging that we violated California and federal antitrust and unfair competition laws by, among other things, refusing to license standard-essential patents to our competitors, conditioning the supply of certain of our baseband chipsets on the purchaser first agreeing to license our entire patent portfolio, entering into exclusive deals with companies, including Apple Inc., and charging unreasonably high royalties that do not comply with our commitments to standard setting organizations. The complaint seeks unspecified damages and disgorgement and/or restitution, as well as an order that we be enjoined from further unlawful conduct. On August 11, 2017, we filed a motion to dismiss the consolidated amended complaint. On November 10, 2017, the court denied our motion, except to the extent that certain claims seek damages under the Sherman Antitrust Act. On July 5, 2018, the plaintiffs filed a motion for class certification, and the court granted that motion on September 27, 2018. The case is currently in the discovery stage, with discovery scheduled to close on December 28, 2018. Trial is scheduled to begin on June 24, 2019. We believe the plaintiffs' claims are without merit.

Canadian Consumer Class Action Lawsuits: Since November 9, 2017, six consumer class action complaints have been filed against us in Canada (in the Ontario Superior Court of Justice, the Supreme Court of British Columbia, and the Quebec Superior Court), each on behalf of a putative class of purchasers of cellular phones and other cellular devices, alleging various violations of Canadian competition and consumer protection laws. The claims are similar to those in the FTC and U.S. consumer class action complaints. The complaints seek unspecified damages. We have not yet answered the complaints.

Japan Fair Trade Commission (JFTC) Complaint: The JFTC received unspecified complaints alleging that our business practices are, in some way, a violation of Japanese law. On September 29, 2009, the JFTC issued a cease and desist order concluding that our Japanese licensees were forced to cross-license patents to us on a royalty-free basis and were forced to accept a provision under which they agreed not to assert their essential patents against our other licensees who made a similar commitment in their license agreements with us. The cease and desist order seeks to require us to modify our existing license agreements with Japanese companies to eliminate these provisions while preserving the license of our patents to those companies. We disagree with the conclusions that we forced our Japanese licensees to agree to any provision in the parties' agreements and that those provisions violate the Japanese Antimonopoly Act. We invoked our right under Japanese law to an administrative hearing before the JFTC. In February 2010, the Tokyo High Court granted our motion and issued a stay of the cease and desist order pending the administrative hearing before the JFTC. The JFTC has held hearings on 37 different dates. No further hearings are currently scheduled. Fines or other monetary remedies are not available in this matter.

Korea Fair Trade Commission (KFTC) Complaint: On January 4, 2010, the KFTC issued a written decision finding that we violated Korean law by offering certain discounts and rebates for purchases of our CDMA chipsets and for

including in certain agreements language requiring the continued payment of royalties after all licensed patents expired. The KFTC levied a fine, which we paid and recorded as an expense in fiscal 2010. We appealed to the Seoul High Court, and on June 19, 2013, the Seoul High Court affirmed the KFTC's decision. On July 4, 2013, we filed an appeal with the Korea Supreme Court. There have been no material developments since then with respect to this matter.

Korea Fair Trade Commission (KFTC) Investigation: On March 17, 2015, the KFTC notified us that it was conducting an investigation of us relating to the Korean Monopoly Regulation and Fair Trade Act (MRFTA). On December 27, 2016, the KFTC announced that it had reached a decision in the investigation, finding that we violated provisions of the MRFTA. On January 22, 2017, we received the KFTC's formal written decision, which found that the following conducts violate the MRFTA: (i) refusing to license, or imposing restrictions on licenses for, cellular communications standard-essential patents

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with competing modem chipset makers; (ii) conditioning the supply of modem chipsets to handset suppliers on their execution and performance of license agreements with us; and (iii) coercing agreement terms including portfolio license terms, royalty terms and free cross-grant terms in executing patent license agreements with handset makers. The KFTC's decision orders us to: (i) upon request by modem chipset companies, engage in good-faith negotiations for patent license agreements, without offering unjustifiable conditions, and if necessary submit to a determination of terms by an independent third party; (ii) not demand that handset companies execute and perform under patent license agreements as a precondition for purchasing modem chipsets; (iii) not demand unjustifiable conditions in our license agreements with handset companies, and upon request renegotiate existing patent license agreements; and (iv) notify modem chipset companies and handset companies of the decision and order imposed on us and report to the KFTC new or amended agreements. According to the KFTC's decision, the foregoing will apply to transactions between us and the following enterprises: (i) handset manufacturers headquartered in Korea and their affiliate companies; (ii) enterprises that sell handsets in or to Korea and their affiliate companies; (iii) enterprises that supply handsets to companies referred to in (ii) above and the affiliate companies of such enterprises; (iv) modem chipset manufacturers headquartered in Korea and their affiliate companies; and (v) enterprises that supply modem chipsets to companies referred to in (i), (ii) or (iii) above and the affiliate companies of such enterprises. The KFTC's decision also imposed a fine of 1.03 trillion Korean Won (approximately $927 million), which we paid on March 30, 2017. We believe that our business practices do not violate the MRFTA, and on February 21, 2017, we filed an action in the Seoul High Court to cancel the KFTC's decision. On the same day, we filed an application with the Seoul High Court to stay the decision's remedial order pending the Seoul High Court's final judgment on our action to cancel the KFTC's decision. On September 4, 2017, the Seoul High Court denied our application to stay the remedial order, and on November 27, 2017, the Korea Supreme Court dismissed our appeal of the Seoul High Court's decision on the application to stay. The Seoul High Court has not ruled on our action to cancel the KFTC's decision.

Icera Complaint to the European Commission (EC): On June 7, 2010, the EC notified and provided us with a redacted copy of a complaint filed with the EC by Icera, Inc. (subsequently acquired by Nvidia Corporation) alleging that we were engaged in anticompetitive activity. We were asked by the EC to submit a preliminary response to the portions of the complaint disclosed to us, and we submitted our response in July 2010. Subsequently, we provided additional documents and information as requested by the EC. On July 16, 2015, the EC announced that it had initiated formal proceedings in this matter. On December 8, 2015, the EC announced that it had issued a Statement of Objections expressing its preliminary view that between 2009 and 2011, we were engaged in predatory pricing by selling certain baseband chipsets to two customers at prices below cost, with the intention of hindering competition. A Statement of Objections informs the subject of the investigation of the allegations against it and provides an opportunity to respond to such allegations. It is not a determination of the final outcome of the investigation. On August 15, 2016, we submitted our response to the Statement of Objections. On July 19, 2018, the EC announced that it had issued a Supplementary Statement of Objections which focuses on certain elements of the "price-cost" test applied by the EC to assess the extent to which we sold certain baseband chipsets allegedly below cost. On October 22, 2018, we submitted our response to the Supplementary Statement of Objections. If a violation is found, a broad range of remedies is potentially available to the EC, including imposing a fine (of up to 10% of our revenues) and/or injunctive relief prohibiting or restricting certain business practices. It is difficult to predict the outcome of this matter or what remedies, if any, may be imposed by the EC. We believe that our business practices do not violate the European Union (EU) competition rules.

European Commission (EC) Investigation: On October 15, 2014, the EC notified us that it was conducting an investigation of us relating to Articles 101 and/or 102 of the Treaty on the Functioning of the European Union (TFEU). On July 16, 2015, the EC announced that it had initiated formal proceedings in this matter. On December 8, 2015, the EC announced that it had issued a Statement of Objections expressing its preliminary view that, pursuant to an agreement with Apple Inc., since 2011, we paid significant amounts to Apple on the condition that it exclusively use our baseband chipsets in its smartphones and tablets. This conduct allegedly reduced Apple's incentives to source baseband chipsets from our competitors and harmed competition and innovation for certain baseband chipsets. On

January 24, 2018, the EC issued a decision finding that certain terms of that agreement violate EU competition law and imposed a fine of 997 million Euros. On April 6, 2018, we filed an appeal of the EC's decision with the General Court of the European Union. The court has not ruled on our appeal. We believe that our business practices do not violate the EU competition rules.

We recorded a charge of $1.18 billion to other expenses related to the EC fine in the first quarter of fiscal 2018. We provided financial guarantees in the third quarter of fiscal 2018 to satisfy the obligation in lieu of cash payment while we appeal the EC's decision. The fine is accruing interest at a rate of 1.50% per annum while it is outstanding. At September 30, 2018, the liability, including related foreign currency gains and accrued interest (which were recorded in investment and other income, net), was $1.17 billion and included in other current liabilities.

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United States Federal Trade Commission (FTC) v. QUALCOMM Incorporated: On September 17, 2014, the FTC notified us that it was conducting an investigation of us relating to Section 5 of the Federal Trade Commission Act (FTCA). On January 17, 2017, the FTC filed a complaint against us in the United States District Court for the Northern District of California alleging that we were engaged in anticompetitive conduct and unfair methods of competition in violation of Section 5 of the FTCA by conditioning the supply of baseband processors on the purchaser first agreeing to a license to our standard-essential patents, paying incentives to purchasers of baseband processors to induce them to accept certain license terms, refusing to license our standard-essential patents to our competitors, and entering into alleged exclusive dealing arrangements with Apple Inc. The complaint seeks a permanent injunction against our alleged violations of the FTCA and other unspecified ancillary equitable relief. A fine is not an available remedy in this matter, and we do not believe that other monetary remedies are likely. On April 19, 2017, the court set a trial date for January 4, 2019. Fact and expert discovery are now closed. On August 30, 2018, the FTC moved for partial summary judgment that our commitments to license our cellular standard-essential patents to the Alliance for Telecommunications Industry Solutions (ATIS) and the Telecommunications Industry Association (TIA) require us to make licenses available to rival sellers of modem chipsets. On September 25, 2018, we filed our opposition to this motion, and on October 4, 2018, the FTC filed its reply. On October 15, 2018, we and the FTC submitted a Joint Administrative Motion asking the District Court to defer ruling on the FTC's partial summary judgment motion in order to facilitate the parties' ongoing discussions concerning settlement of this litigation, which the District Court denied on the same day. On November 6, 2018, the District Court granted the FTC's partial summary judgment motion. We believe the FTC's claims in this case are without merit.

Taiwan Fair Trade Commission (TFTC) Investigation: On December 4, 2015, the TFTC notified us that it was conducting an investigation into whether our patent licensing practices violate the Taiwan Fair Trade Act (TFTA). On October 11, 2017, the TFTC announced that it had reached a decision in the investigation, finding that we violated the TFTA. On October 23, 2017, we received TFTC's formal written decision, which found that the following conducts violate the TFTA: (i) refusing to license and demanding restrictive covenants from chipset competitors; (ii) refusing to supply baseband processors to companies that do not have an executed license; and (iii) providing a royalty discount to Apple in exchange for its exclusive use of our chipsets. The TFTC's decision was based on a four-three vote and included three written dissents. The TFTC's decision orders us to: (1) cease the following conduct within 60 days of the day after receipt of the decision: (a) applying the clauses in an agreement entered into with a competing chipset supplier requesting it to provide sensitive sales information such as chipset prices, customers, sales volumes, product types and serial numbers; (b) applying clauses in component supply agreements entered into with handset manufacturers relating to the refusal to sell chipsets to unlicensed manufacturers; and (c) applying discount clauses in the exclusive agreement entered into with a relevant enterprise; (2) notify competing chipset companies and handset manufacturers in writing within 30 days after receipt of the decision that those companies may request to amend or enter into patent license agreements and other relevant agreements within 60 days of the day following the day such notices are received, and upon receipt of such requests, we shall commence negotiation in good faith; (3) submit status reports to the TFTC on any such negotiations every six months beginning from the day after receipt of the decision, as well as to submit a report to the TFTC within 30 days after amendments to any license agreements or newly signed license agreements are executed (collectively, the TFTC Remedies). The TFTC's decision also imposed a fine of 23.4 billion Taiwan Dollars. On December 22, 2017, we filed an Administrative Litigation Complaint in the Taiwan Intellectual Property Court (IPC) to revoke the TFTC's decision.

On August 9, 2018, we announced that we had reached a settlement with the TFTC, which resolved the TFTC's investigation of us and our litigation challenging the TFTC's decision. By the terms of the Settlement Transcript executed under the supervision of the IPC, the entire TFTC decision is deemed revoked ab initio, including all TFTC Remedies and the fine, and the Settlement Transcript replaced the TFTC decision in its entirety. As part of the resolution, we agreed to certain process-related commitments confirming principles of mutual good-faith and fairness in the negotiation of agreements with handset licensees regarding our cellular standard-essential patents. The resolution does not require component-level licensing. In addition, we will undertake certain commercial initiatives

over the next 5 years for the benefit of the mobile and semiconductor ecosystem (including small- and medium-sized enterprises and consumers), including 5G collaborations, new market expansion, start-up and university collaborations, and the development of a center for operations and manufacturing engineering located in Taiwan. Under the terms of the Settlement Transcript, the resolution of the IPC litigation and the TFTC's decision shall not constitute or be construed as any evidence of wrongdoing or an admission of liability or wrongdoing. In addition, the terms of the Settlement Transcript fully and finally resolve all concerns expressed by the TFTC with respect to the investigation of our chipset and licensing businesses. Our litigation challenging the TFTC's decision filed in the IPC is now closed. On August 8, 2018, the IPC denied certain petitions by various companies to intervene into the IPC case. On August 24, 2018, MediaTek filed an Appeal of this decision with the IPC, claiming that its petition to intervene was wrongfully denied. On October 10, 2018, we filed our opposition to MediaTek's appeal. The TFTC has also filed an

opposition to MediaTek's appeal. The IPC has not set a hearing date for MediaTek's appeal. We believe that MediaTek's appeal is without merit.

In the fourth quarter of fiscal 2017, we recorded a charge of $778 million to other expenses related to the TFTC fine. The fine was to be paid in monthly installments through December 2022, and prior to the settlement, we paid seven installments totaling $93 million. As a result of the settlement, the parties agreed that the amounts we paid towards the fine through the date of the settlement will be retained by the TFTC, and no other amounts will be due. As a result, we reversed the remaining $676 million accrual to other expenses in the fourth quarter of fiscal 2018.

Contingent losses: We will continue to vigorously defend ourself in the foregoing matters. However, litigation and investigations are inherently uncertain, and we face difficulties in evaluating or estimating likely outcomes or ranges of possible loss in antitrust and trade regulation investigations in particular. Other than with respect to the EC fine, we have not recorded any accrual at September 30, 2018 for contingent losses associated with these matters based on our belief that losses, while possible, are not probable. Further, any possible range of loss cannot be reasonably estimated at this time. The unfavorable resolution of one or more of these matters could have a material adverse effect on our business, results of operations, financial condition or cash flows. We are engaged in numerous other legal actions not described above arising in the ordinary course of our business and, while there can be no assurance, believe that the ultimate outcome of these other legal actions will not have a material adverse effect on our business, results of operations, financial condition or cash flows.

Indemnifications. We generally do not indemnify our customers and licensees for losses sustained from infringement of third-party intellectual property rights. However, we are contingently liable under certain product sales, services, license and other agreements to indemnify certain customers, chipset foundries and semiconductor assembly and test service providers against certain types of liability and/or damages arising from qualifying claims of patent, copyright, trademark or trade secret infringement by products or services sold or provided by us, or by intellectual property provided by us to chipset foundries and semiconductor assembly and test service providers. Our obligations under these agreements may be limited in terms of time and/or amount, and in some instances, we may have recourse against third parties for certain payments made by us.

Through September 30, 2018, we have received a number of claims from our direct and indirect customers and other third parties for indemnification under such agreements with respect to alleged infringement of third-party intellectual property rights by our products. Reimbursements under indemnification arrangements have not been material to our consolidated financial statements. We have not recorded any accrual for contingent liabilities at September 30, 2018 associated with these indemnification arrangements based on our belief that additional liabilities, while possible, are not probable. Further, any possible range of loss cannot be reasonably estimated at this time.

Purchase Obligations and Operating Leases. We have agreements with suppliers and other parties to purchase inventory, other goods and services and long-lived assets. Integrated circuit product inventory obligations represent purchase commitments for raw materials, semiconductor die, finished goods and manufacturing services, such as wafer bump, probe, assembly and final test. Under our manufacturing relationships with our foundry suppliers and assembly and test service providers, cancelation of outstanding purchase commitments is generally allowed but requires payment of costs incurred through the date of cancelation, and in some cases, incremental fees related to capacity underutilization.

We lease certain of our land, facilities and equipment under noncancelable operating leases, with terms ranging from less than one year to 21 years and with provisions in certain leases for cost-of-living increases. Rental expense for fiscal 2018, 2017 and 2016 was $160 million, $129 million and $116 million, respectively.

Obligations under our purchase agreements and future minimum lease payments under our operating leases at September 30, 2018 were as follows (in millions):

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	Integrated Circuit Purchase Obligations	Other Purchase Obligations	Operating Leases
2019	$ 2,647	$ 1,026	$ 117
2020	322	308	95
2021	62	102	74
2022	24	16	53
2023	—	5	31
Thereafter	—	1	43
Total	$ 3,055	$ 1,458	$ 413

Other Commitments. At September 30, 2018, we have committed to fund certain strategic investments up to $316 million, of which $35 million, $5 million, $70 million, $4 million and $4 million is expected to be funded in each of the five years from fiscal 2019 through fiscal 2023, respectively. The remaining commitments do not have fixed funding dates and are subject to certain conditions. Commitments represent the maximum amounts to be funded under these arrangements; actual funding may be in lesser amounts or not at all.

In March 2018, our RF360 Holdings joint venture entered into an agreement for a build-to-suit construction project with a third-party lessor for the development of a manufacturing facility located in Singapore. The agreement includes a long-term lease commitment with a noncancelable 10-year term commencing upon completion of the construction project. At September 30, 2018, the minimum lease commitment under the agreement based on the noncancelable term was $87 million.

Note 8. Segment Information

We are organized on the basis of products and services and have three reportable segments. We conduct business primarily through our QCT (Qualcomm CDMA Technologies) semiconductor business and our QTL (Qualcomm Technology Licensing) licensing business. QCT develops and supplies integrated circuits and system software based on CDMA, OFDMA and other technologies for use in mobile devices, wireless networks, devices used in the Internet of Things (IoT), broadband gateway equipment, consumer electronic devices and automotive telematics and infotainment systems. QTL grants licenses to use portions of our intellectual property portfolio, which includes certain patent rights essential to and/or useful in the manufacture and sale of certain wireless products. Our QSI (Qualcomm Strategic Initiatives) reportable segment makes strategic investments and includes revenues and related costs associated with development contracts with an equity method investee. We also have nonreportable segments, including our cyber security solutions (formerly Qualcomm Government Technologies or QGOV), mobile health, small cells and other wireless technology and service initiatives.

We evaluate the performance of our segments based on earnings (loss) before income taxes (EBT). Segment EBT includes the allocation of certain corporate expenses to the segments, including depreciation and amortization expense related to unallocated corporate assets. Certain income and charges are not allocated to segments in our management reports because they are not considered in evaluating the segments' operating performance. Unallocated income and charges include certain interest expense; certain net investment income; certain share-based compensation; and certain research and development expenses, selling, general and administrative expenses and other expenses or income that were deemed to be not directly related to the businesses of the segments. Additionally, unallocated charges include recognition of the step-up of inventories to fair value, amortization of certain intangible assets and certain other acquisition-related charges, third-party acquisition and integration services costs and certain other items, which may include major restructuring and restructuring-related costs, goodwill and long-lived asset impairment charges and litigation settlements and/or damages. Additionally, starting with acquisitions in the second quarter of fiscal 2017, unallocated charges include recognition of the depreciation related to the step-up of property, plant and equipment to fair value. Such charges related to acquisitions that were completed prior to the second quarter of fiscal 2017 continue to be allocated to the respective segment, and such amounts are not material.

In fiscal 2018, all of the costs ($474 million) related to pre-commercial research and development of 5G (fifth generation) technologies were included in unallocated corporate research and development expenses, whereas similar costs related to the research and development of other technologies, including 3G (third generation) and 4G (fourth generation) technologies, were recorded in the QCT and QTL segments. Beginning in the first quarter of fiscal 2019, all research and development costs associated with 5G technologies will be included in QCT and QTL segment results. Additionally, beginning in the first quarter of fiscal 2019, certain research and development costs associated with early research and development that have historically been included in our QCT segment will be allocated to our QTL segment. The net effect of

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these changes is expected to negatively impact QTL's EBT in fiscal 2019 by approximately $500 million and to not have a significant impact on QCT EBT in fiscal 2019.
The table below presents revenues, EBT and total assets for reportable segments (in millions):

	2018	2017	2016
Revenues			
QCT	$17,282	$16,479	$15,409
QTL	5,163	6,445	7,664
QSI	100	113	47
Reconciling items	187	(746)	434
Total	$22,732	$22,291	$23,554
EBT			
QCT	$2,966	$2,747	$1,812
QTL	3,525	5,175	6,528
QSI	24	65	386
Reconciling items	(6,002)	(4,967)	(1,893)
Total	$513	$3,020	$6,833
Assets			
QCT	$3,041	$3,830	$2,995
QTL	1,472	1,735	644
QSI	1,279	1,037	910
Reconciling items	26,894	58,884	47,810
Total	$32,686	$65,486	$52,359

Segment assets are comprised of accounts receivable and inventories for all reportable segments other than QSI. QSI segment assets include certain non-marketable equity instruments and other investments and a receivable from the sale of wireless spectrum in fiscal 2016 (Note 2). QSI assets at September 30, 2018, September 24, 2017 and September 25, 2016 included $283 million, $254 million and $162 million, respectively, related to investments in equity method investees. The decrease in fiscal 2018 QCT segment assets resulted from a decrease in accounts receivable related to the timing of integrated circuit shipments and to a decrease in inventory due to a reduction in the overall quantity of units on hand. The decrease in fiscal 2018 QTL segment assets was due to a decrease in accounts receivable resulting from the collection of receivables from certain licensees. The increase in fiscal 2017 QCT segment assets resulted primarily from our RF360 Holdings joint venture in the second quarter of fiscal 2017 (Note 9). The increase in fiscal 2017 QTL segment assets was due to an increase in accounts receivable. Total segment assets differ from total assets on a consolidated basis as a result of unallocated corporate assets primarily comprised of certain cash, cash equivalents, marketable securities, property, plant and equipment, deferred tax assets, intangible assets and assets of nonreportable segments. The net book values of long-lived tangible assets located outside of the United States were $1.4 billion at September 30, 2018 and September 24, 2017, and $404 million at September 25, 2016. The increase in fiscal 2017 was primarily from our RF360 Holdings joint venture, which has substantially all of its operations outside the United States. The net book values of long-lived tangible assets located in the United States were $1.6 billion, $1.8 billion and $1.9 billion at September 30, 2018, September 24, 2017 and September 25, 2016, respectively.
We report revenues from external customers by country based on the location to which our products or services are delivered, which for QCT is generally the country in which our customers manufacture their products, and for licensing revenues, the invoiced addresses of our licensees. As a result, the revenues by country presented herein are not necessarily indicative of either the country in which the devices containing our products and/or intellectual property are ultimately sold to consumers or the country in which the companies that sell the devices are headquartered. For example, China revenues could include revenues related to shipments of integrated circuits for a company that is headquartered in South Korea but that manufactures devices in China, which devices are then sold to

consumers in Europe and/or the United States. Revenues by country were as follows (in millions):

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	2018	2017	2016
China (including Hong Kong)	$15,149	$14,579	$13,503
South Korea	3,175	3,538	3,918
United States	603	513	386
Other foreign	3,805	3,661	5,747
	$22,732	$22,291	$23,554

Reconciling items for revenues and EBT in a previous table were as follows (in millions):

	2018	2017	2016
Revenues			
Nonreportable segments	$287	$311	$438
Reduction to revenues related to BlackBerry arbitration decision	—	(962)	—
Other unallocated reductions to revenues	(100)	(95)	—
Intersegment eliminations	—	—	(4)
	$187	$(746)	$434
EBT			
Reduction to revenues related to BlackBerry arbitration decision	$—	$(962)	$—
Other unallocated reductions to revenues	(100)	(95)	—
Unallocated cost of revenues	(486)	(517)	(495)
Unallocated research and development expenses	(1,154)	(1,056)	(799)
Unallocated selling, general and administrative expenses	(576)	(647)	(478)
Unallocated other expenses (Note 2)	(3,135)	(1,742)	(154)
Unallocated interest expense	(761)	(488)	(292)
Unallocated investment and other income, net	566	913	667
Nonreportable segments	(356)	(373)	(342)
	$(6,002)	$(4,967)	$(1,893)

Other unallocated revenues in fiscal 2018 and 2017 were comprised of reductions to licensing revenues related to the portions of business arrangements that resolved legal disputes and were not allocated to a reportable segment in our management reports because they were not considered in evaluating segment results. In May 2017, in connection with the arbitration decision, we entered into a Joint Stipulation Regarding Final Award Agreement with BlackBerry Limited (BlackBerry) agreeing that we would pay BlackBerry $940 million to cover the award amount, pre-judgment interest and attorneys' fees. This amount, which was paid in the third quarter of fiscal 2017, also reflected $22 million that was owed to us by BlackBerry, which was recorded as revenues in the QTL segment. The remaining amount was recorded as an adjustment to revenues related to the arbitration decision and was not allocated to QTL. Unallocated other expenses in fiscal 2018 were comprised of charges related to the termination of our purchase agreement to acquire NXP (Note 9), the EC fine (Note 7), and our Cost Plan (Note 10), partially offset by a benefit related to the settlement of the TFTC investigation (Note 7). Unallocated other expenses in fiscal 2017 were comprised of charges related to the fines imposed by the KFTC and the TFTC, which was settled in fiscal 2018 (Note 7), as well as restructuring and restructuring-related charges related to our Strategic Realignment Plan, which was substantially implemented in fiscal 2016 (Note 10). Unallocated other expenses for fiscal 2016 were comprised of net restructuring and restructuring-related charges related to our Strategic Realignment Plan.

Unallocated acquisition-related expenses were comprised as follows (in millions):

	2018	2017	2016
Cost of revenues	$449	$437	$434
Research and development expenses	6	20	10
Selling, general and administrative expenses	327	272	99

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Note 9. Acquisitions
Terminated. On October 27, 2016, we announced a definitive agreement (as amended on February 20, 2018 and April 19, 2018, the Purchase Agreement) under which Qualcomm River Holdings, B.V. (Qualcomm River Holdings), an indirect, wholly owned subsidiary of QUALCOMM Incorporated, proposed to acquire NXP Semiconductors N.V. (NXP). Pursuant to the Purchase Agreement, Qualcomm River Holdings commenced a tender offer to acquire all of the issued and outstanding common shares of NXP. On July 26, 2018, we terminated the Purchase Agreement, and we paid NXP a termination fee of $2.0 billion in cash in accordance with the terms of the Purchase Agreement.
Completed. On February 3, 2017, we completed the formation of a joint venture with TDK Corporation (TDK), under the name RF360 Holdings, to enable delivery of radio frequency front-end (RFFE) modules and radio frequency (RF) filters into fully integrated products for mobile devices and Internet of Things (IoT) applications, among others. The joint venture is owned 51% by Qualcomm Global Trading Pte. Ltd. (Qualcomm Global Trading), a Singapore corporation and wholly-owned subsidiary of ours, and 49% by EPCOS AG (EPCOS), a German wholly-owned subsidiary of TDK. RF360 Holdings is a Singapore corporation with research and development and manufacturing and/or sales locations in the United States, Europe and Asia and its headquarters in Munich, Germany. Certain intellectual property, patents and filter and module design and manufacturing assets were carved out of existing TDK businesses and are owned by the joint venture, and certain assets were acquired directly by our affiliates. Qualcomm Global Trading has the option to acquire (and EPCOS has an option to sell) EPCOS's interest in the joint venture for $1.15 billion (Settlement Amount) in August 2019 (the Put and Call Option).
EPCOS is entitled to up to a total of $200 million in payments based on sales of RF filter functions over the three-year period after the Closing Date, which is a substitute for and in lieu of the right of EPCOS to receive any profit sharing, distributions, dividends or other payments of any kind or nature. Such contingent consideration was recorded as a liability at fair value at close based on significant inputs that were not observable, with future changes in fair value recorded in earnings. Such fair value adjustments resulted in a $23 million gain and a negligible gain in fiscal 2018 and fiscal 2017, respectively.
RF360 Holdings is a variable interest entity, and its results of operations and statement of financial position are included in our consolidated financial statements as the governance structure of RF360 Holdings provides us with the power to direct the activities of the joint venture that most significantly impact its economic performance, such as operating decisions related to research and development, manufacturing and sales and marketing of its products. Since the Put and Call Option is considered a financing of our purchase of EPCOS's interest in RF360 Holdings, noncontrolling interest is not recorded in our consolidated financial statements. Therefore, the Put and Call Option was recorded as a liability at fair value at close and was included in other current liabilities at September 30, 2018 and other noncurrent liabilities at September 24, 2017. The liability is being accreted to the Settlement Amount, with the offset recorded as interest expense. The carrying value of the Put and Call Option approximated its estimated fair value at September 30, 2018.
The total purchase price consisted of the following (in millions):

Cash paid to TDK at close	$1,463
Fair value of Put and Call Option	1,112
Fair value of contingent consideration and other deferred payments	496
Total purchase price	$3,071

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The allocation of the purchase price to the assets acquired and liabilities assumed based on their fair values was as follows (in millions):

Cash and cash equivalents	$	306
Accounts receivable	303	
Inventories	260	
Intangible assets subject to amortization:		
Technology-based intangible assets	738	
Customer-related intangible assets	87	
Marketing-related intangible assets	8	
In-process research and development (IPR&D)	75	
Property, plant and equipment	821	
Goodwill	843	
Other assets	31	
Total assets	3,472	
Liabilities	(401	)
	$	3,071

We recognized $843 million in goodwill related to this transaction, of which $366 million is expected to be deductible for tax purposes. The goodwill recognized was allocated to the QCT segment for annual impairment testing purposes. The goodwill is primarily attributable to the assembled workforce and synergies expected to arise after the acquisition. Each category of intangible assets acquired are being amortized on a straight-line basis over the weighted-average useful lives of seven years for technology-based intangible assets, nine years for customer-related intangible assets and one year for marketing-related intangible assets. At September 30, 2018, all IPR&D projects had been completed and are being amortized over their weighted-average useful lives of six years. The estimated fair values of the intangible assets and the property, plant and equipment acquired were determined using the income approach and cost approach, respectively, both of which were based on significant inputs that were not observable.

The following table presents the unaudited pro forma results for fiscal 2017 and fiscal 2016. The unaudited pro forma financial information combines the results of operations of Qualcomm and RF360 Holdings as though the companies had been combined as of the beginning of fiscal 2016. The pro forma information is presented for informational purposes only and is not indicative of the results of operations that would have been achieved if the acquisition had taken place at such time. The unaudited pro forma results presented below include adjustments for the step-up of inventories to fair value, amortization and depreciation of identified intangible assets and property, plant and equipment, adjustments for certain acquisition-related charges, interest expense related to the Put and Call Option and related tax effects (in millions):

	(Unaudited)	
	2017	2016
Pro forma revenues	$22,806	$24,731
Pro forma net income attributable to Qualcomm	2,614	5,791

During fiscal 2017, we acquired three other businesses for total cash consideration of $35 million, net of cash acquired, and up to a total of $94 million in certain contingent payments, which were recorded as a liability at fair value. We recognized $47 million in goodwill related to these transactions, of which $12 million is expected to be

deductible for tax purposes. Goodwill of $23 million, $12 million and $11 million was assigned to our QTL, QCT and nonreportable segments, respectively.

During fiscal 2016, we acquired four businesses for total cash consideration of $392 million, net of cash acquired. Technology-based intangible assets of $257 million were recognized with a weighted-average useful life of four years. We recognized $172 million in goodwill related to these transactions, all of which was assigned to our QCT segment and of which $24 million is expected to be deductible for tax purposes.

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Note 10. Restructuring Plans
Cost Plan. In the second quarter of fiscal 2018, we announced a Cost Plan designed to align our cost structure to our long-term margin targets. As part of this plan, we have initiated a series of targeted actions across our businesses to reduce annual costs by $1 billion, excluding incremental costs resulting from any future acquisition of a business. We expect these cost reductions to be fully captured in fiscal 2019.
During fiscal 2018, we recorded restructuring and restructuring-related charges of $629 million in other expenses and charges of $58 million in investment and other income, net (Note 2), which consisted of restructuring charges of $353 million, primarily related to severance costs, and restructuring-related charges of $334 million, primarily related to asset impairment charges (and which was net of a $41 million gain resulting from fair value adjustments of certain contingent consideration related to a business combination). In connection with this plan, we expect to incur additional restructuring and restructuring-related charges of up to $100 million, which primarily consist of severance and consulting costs, and the vast majority of which are expected to be settled in cash.
The restructuring accrual, a portion of which was included in payroll and other benefits related liabilities with the remainder included in other current liabilities, is expected to be substantially paid within the next 12 months. Changes in the restructuring accrual for fiscal 2018 were as follows (in millions):

	Severance Costs	Other Costs	Total
Beginning balance of restructuring accrual	$ —	$ —	$ —
Costs	317	43	360
Cash payments	(251)	(19)	(270)
Adjustments	(5)	(2)	(7)
Ending balance of restructuring accrual	$ 61	$ 22	$ 83

Strategic Realignment Plan. In the fourth quarter of fiscal 2015, we announced a Strategic Realignment Plan designed to improve execution, enhance financial performance and drive profitable growth as we worked to create sustainable long-term value for stockholders. As part of this, among other actions, we implemented a cost reduction plan, which included a series of targeted reductions across our businesses, particularly in QCT, and a reduction to our annual share-based compensation grants. Restructuring activities were initiated in the fourth quarter of fiscal 2015, and the cost reduction initiatives were achieved by the end of fiscal 2016 and other activities under the plan were completed by the end of fiscal 2017. During fiscal 2017 and 2016, we recorded restructuring and restructuring-related charges of $37 million and $202 million (which was partially offset by a $48 million gain on the sale of our business that provided augmented reality applications), respectively.
Note 11. Fair Value Measurements
The following table presents our fair value hierarchy for assets and liabilities measured at fair value on a recurring basis at September 30, 2018 (in millions):

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	Level 1	Level 2	Level 3	Total
Assets				
Cash equivalents	$7,147	$2,867	$ —	$10,014
Marketable securities:				
Corporate bonds and notes	—	144	—	144
Auction rate securities	—	—	35	35
Equity and preferred securities	167	—	—	167
Total marketable securities	167	144	35	346
Derivative instruments	—	3	—	3
Other investments	380	—	16	396
Total assets measured at fair value	$7,694	$3,014	$ 51	$10,759
Liabilities				
Derivative instruments	$—	$71	$ —	$71
Other liabilities	380	—	86	466
Total liabilities measured at fair value	$380	$71	$ 86	$537

Activity within Level 3 of the Fair Value Hierarchy. The following table includes the activity for marketable securities, other investments and other liabilities classified within Level 3 of the valuation hierarchy (in millions):

	2018			2017		
	Marketable Securities	Other Investments	Other Liabilities	Marketable Securities	Other Investments	Other Liabilities
Beginning balance of Level 3	$40	$ 125	$ 196	$43	$ 37	$ —
Total realized and unrealized gains or losses:						
Included in selling, general and administrative and other expenses	—	—	(64)	—	—	(7)
Included in investment and other income, net	—	6	—	—	3	—
Included in other comprehensive (loss) income	—	7	—	—	8	—
Issuances	—	—	—	—	—	203
Purchases	—	7	—	—	111	—
Sales	—	—	—	—	—	—
Settlements	(5)	(129)	(46)	(3)	(34)	—
Transfers into Level 3	—	—	—	—	—	—
Transfers out of Level 3	—	—	—	—	—	—
Ending balance of Level 3	$35	$ 16	$ 86	$40	$ 125	$ 196

We recognize transfers into and out of levels within the fair value hierarchy at the end of the fiscal month in which the actual event or change in circumstances that caused the transfer occurs. Other investments and other liabilities included in Level 3 at September 30, 2018 and September 24, 2017 were comprised of convertible debt instruments issued by private companies and contingent consideration related to business combinations, respectively.
Nonrecurring Fair Value Measurements. We measure certain assets and liabilities at fair value on a nonrecurring basis. These assets and liabilities include cost and equity method investments when they are deemed to be other-than-temporarily impaired, assets acquired and liabilities assumed in an acquisition or in a nonmonetary exchange, and property, plant and equipment and intangible assets that are written down to fair value when they are held for sale or determined to be impaired. During fiscal 2018, we updated the business plans and related internal forecasts related to certain of our businesses, resulting in impairment charges to write down certain property, plant and equipment, intangible assets and goodwill (Note 10). We determined the fair values using cost, market and income approaches. The estimation of fair value and cash flows used in the fair value measurements required the use of significant unobservable inputs, and as a result, the fair value measurements were

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classified as Level 3. During fiscal 2018, 2017 and 2016, we did not have any other significant assets or liabilities that were measured at fair value on a nonrecurring basis in periods subsequent to initial recognition.

Note 12. Marketable Securities

Marketable securities were comprised as follows (in millions):

	Current		Noncurrent	
	September 30, 2018	September 24, 2017	September 30, 2018	September 24, 2017
Available-for-sale:				
U.S. Treasury securities and government-related securities	$ —	$ 23	$ —	$ 959
Corporate bonds and notes	144	2,014	—	271
Mortgage- and asset-backed and auction rate securities	—	93	35	40
Equity and preferred securities and equity funds	167	36	—	—
Debt funds	—	109	—	—
Total available-for-sale	311	2,275	35	1,270
Time deposits	—	4	—	—
Total marketable securities	$ 311	$ 2,279	$ 35	$ 1,270

At September 30, 2018, the contractual maturities of available-for-sale debt securities were as follows (in millions):

	September 30, 2018
Years to Maturity:	
Less than one year	$ 140
One to five years	4
No single maturity date	35
Total	$ 179

Debt securities with no single maturity date included auction rate securities.

We recorded realized gains and losses on sales of available-for-sale securities as follows (in millions):

	2018	2017	2016
Gross realized gains	$ 27	$ 553	$ 277
Gross realized losses	(6)	(127)	(37)
Net realized gains	$ 21	$ 426	$ 240

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Available-for-sale securities were comprised as follows (in millions):

	September 30, 2018	September 24, 2017
Equity securities		
Cost	$ 104	$ 8
Unrealized gains	63	28
Fair value	167	36
Debt securities (including debt funds)		
Cost	179	3,497
Unrealized gains	—	13
Unrealized losses	—	(1)
Fair value	179	3,509
	$ 346	$ 3,545

In connection with the proposed NXP transaction (Note 9), we divested a substantial portion of our marketable securities portfolio in order to finance, in part, that transaction. Given our intention to sell certain marketable securities, we recorded other-than-temporary impairment losses in fiscal 2017 for certain marketable securities, and no additional losses were recorded in fiscal 2018. Marketable securities that were expected to be used to finance the NXP transaction were fully liquidated, a portion of which were used to fund the stock repurchase program (Note 4) with the remaining classified as cash and cash equivalents at September 30, 2018.

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Note 13. Summarized Quarterly Data (Unaudited)

The following financial information reflects all normal recurring adjustments that are, in the opinion of management, necessary for a fair statement of the results of the interim periods.

The table below presents quarterly data for fiscal 2018 and 2017 (in millions, except per share data):

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2018 (1)				
Revenues	$6,068	$5,261	$5,599	$5,803
Operating income (loss) (2)	29	441	925	(654)
Net (loss) income (2)	(5,953)	363	1,219	(493)
Basic (loss) earnings per share (3):	$(4.03)	$0.25	$0.82	$(0.35)
Diluted (loss) earnings per share (3):	(4.03)	0.24	0.82	(0.35)
2017 (1)				
Revenues	$5,999	$5,016	$5,371	$5,905
Operating income	778	729	773	333
Net income	681	749	865	168
Net income attributable to Qualcomm	682	749	866	168
Basic earnings per share attributable to Qualcomm (3):	$0.46	$0.51	$0.59	$0.11
Diluted earnings per share attributable to Qualcomm (3):	0.46	0.50	0.58	0.11

(1) Amounts, other than per share amounts, are rounded to millions each quarter. Therefore, the sum of the quarterly amounts may not equal the annual amounts reported.

(2) Operating loss and net loss in the fourth quarter of fiscal 2018 were negatively impacted by a $2.0 billion charge related to the NXP termination fee. Net loss in the first quarter of fiscal 2018 was negatively impacted by a $5.9 billion provisional charge to income tax expense due to the effects of the Tax Legislation. Additionally, operating income and net loss in the first quarter of fiscal 2018 were negatively impacted by a $1.2 billion charge related to the EC fine.

(3) (Loss) earnings per share and earnings per share attributable to Qualcomm are computed independently for each quarter and the full year based upon respective average shares outstanding. Therefore, the sum of the quarterly (loss) earnings per share amounts may not equal the annual amounts reported.

SCHEDULE II
QUALCOMM INCORPORATED
VALUATION AND QUALIFYING ACCOUNTS
(In millions)

	Balance at Beginning of Period	Charged (Credited) to Costs and Expenses	Balance at End of Period
Year ended September 30, 2018			
Allowances:			
— trade receivables	$ 11	$ 45	$ 56
Valuation allowance on deferred tax assets	863	666	1,529
	$ 874	$ 711	$ 1,585
Year ended September 24, 2017			
Allowances:			
— trade receivables	$ 1	$ 10	$ 11
Valuation allowance on deferred tax assets	754	109	863
	$ 755	$ 119	$ 874
Year ended September 25, 2016			
Allowances:			
— trade receivables	$ 6	$ (5)	$ 1
Valuation allowance on deferred tax assets	635	119	754
	$ 641	$ 114	$ 755