
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 10-K

(Mark one)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended September 29, 2019

OR

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

95-3685934

(State or Other Jurisdiction of Incorporation
or Organization)

(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:

<u>Title of Each Class</u>	<u>Trading Symbol(s)</u>	<u>Name of Each Exchange on Which Registered</u>
Common stock, \$0.0001 par value	QCOM	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 No

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 No

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§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 No

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.

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

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

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant at March 29, 2019 (the last business day of the registrant’s most recently completed second fiscal quarter) was \$69,171,646,680, 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 1,141,844,863 at November 4, 2019.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant’s Definitive Proxy Statement in connection with the registrant’s 2020 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.

QUALCOMM Incorporated
Form 10-K
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TRADEMARKS

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Other products and brand names may be trademarks or registered trademarks of their respective owners.

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 or 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 years ended September 29, 2019 and September 24, 2017 included 52 weeks. The fiscal year ended September 30, 2018 included 53 weeks.

Overview

We are a global leader in the development and commercialization of foundational technologies for the wireless industry. Our technologies and products are used in mobile devices and other wireless products, including network equipment, broadband gateway equipment, consumer electronic devices and other connected devices. Our inventions have 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 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, computing, IoT (Internet of Things) and networking, allowing devices and objects 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 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, enabling wide ecosystem access to technologies at the core of mobile innovation, and through the sale of our wireless integrated circuit platforms (also known as chips or chipsets) 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 enable a global environment to drive continued progress and growth.

We have a long history of driving innovation. We have played and continue to play a leading role in developing system level inventions that serve as the foundation for 3G, 4G and 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 industry generally recognize that any company

seeking to develop, manufacture and/or sell devices 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 mobile and other wireless devices that help drive end-user demand, and we own substantial intellectual property related to these technologies. Some of these inventions are contributed to and commercialized as industry standards, such as certain video and audio codecs, Wi-Fi, GPS (global positioning system) and Bluetooth. Other technologies that we have developed and that are widely used by wireless devices are not related to any industry standards, such as operating systems, user interfaces, graphics and camera processing functionality, RF (radio frequency), RF front-end (RFFE) and antenna designs and application processor architectures. Our patents cover a wide range of technologies across the entire wireless system (including wireless devices and network infrastructure equipment), not just the portion of such patented technologies incorporated into 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 and system software based on CDMA, OFDMA and other technologies for use in mobile devices, wireless networks, broadband gateway equipment, consumer electronic devices, devices used in IoT 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 Qualcomm Government Technologies or QGOV (formerly Qualcomm Cyber Security Solutions), as well as other wireless technology and service initiatives.

Industry Trends

As the largest technology platform in the world, mobile has transformed the way we connect, compute and communicate. The scale and pace of innovation in the mobile industry, 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.

Advancing connectivity. 3G/4G multimode mobile broadband technology has been a key innovation of mobile, providing users with fast, reliable, always-on connectivity. As of September 30, 2019, there were approximately 6.0 billion 3G/4G connections globally (CDMA-based, OFDMA-based and CDMA/OFDMA multimode) representing 76% of total mobile connections (GSMA Intelligence, November 2019). By 2023, global 3G/4G connections are projected to reach 7.0 billion, with approximately 88% of these connections coming from emerging regions and China (GSMA Intelligence, November 2019).

3G/4G multimode mobile broadband continues to be an important platform for extending the reach and potential of the Internet. This is amplified in emerging regions and China, where, as of September 30, 2019, 3G/4G mobile broadband connections are estimated to be approximately seven times the number of fixed Internet household connections (GSMA Intelligence November 2019 and PT June 2019). In China, 3G/4G multimode services have experienced strong adoption since being launched in 2013, with more than 1.4 billion connections estimated as of September 30, 2019 (GSMA Intelligence, November 2019). In India, mobile operators continue to expand their 3G/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. The transition of wireless networks and devices to 3G/4G has not only been driven by the number of affordable handsets available in emerging regions and China, but also by the variety of flexible and affordable data plans being offered by mobile operators.

With the first 5G global specifications defined in 2018 by 3GPP (3rd Generation Partnership Project), an industry standards development organization, initial commercial 5G network deployments and device launches, which focus on enhanced mobile broadband services, began in 2019 and will continue into 2020 and beyond. 5G is designed to enhance mobile broadband services, including ultra-high definition (4K) video streaming, near-instant access to cloud services and augmented and virtual reality applications, with lower latency and multi-gigabit user data speeds, and bring more capacity and efficiency to networks, which may enable operators to offer new unlimited mobile data plans.

Looking ahead, we expect future releases of 5G to expand to new industries beyond traditional cellular communications and to create new business models and 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. We also expect 5G will enable 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 diverse (low) power and cost requirements, as well as to address both low and high complexity applications.

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 further development of 5G and become fundamental to many of the key 5G technologies (through multi-connectivity) in areas such as support for unlicensed spectrum, gigabit LTE user data speeds and LTE IoT that meets low power and cost requirements. The first phase of 5G networks supports mobile broadband services for the smartphone form factor both in lower spectrum bands below 6 GHz (sub-6), as well as higher bands above 6 GHz, including millimeter wave (mmWave). As with previous generations of mobile networks, it will take time to deploy new 5G networks.

Consumer demand in smartphones. From October 2018 through September 2019, approximately 1.4 billion smartphones are estimated to have shipped globally, representing a year-over-year decrease of approximately 4% (IDC, Mobile Phone Tracker, 2019Q3). Smartphone shipments in calendar 2020 are expected to be approximately flat year-over-year (IDC Quarterly Mobile Phone Tracker, 2019Q3). The slow-down in smartphone demand that began in the year ended September 2019, and that is expected to continue into calendar 2020, reflects further lengthening of replacement cycles, particularly in developed regions and China, where consumer demand is increasingly driven by new product launches and/or innovation cycles as the industry transitions to 5G.

Consumer demand for new types of experiences, 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 and video streaming, gaming, email and web browsing, among others. It is expected that 5G connectivity will drive further innovations within the smartphone and offer enhanced connectivity, which in turn will enable new applications. Given its advanced capabilities and utility, the smartphone has replaced many traditional consumer electronic devices, including digital cameras, video cameras, standalone GPS units, gaming devices and music players.

Transforming other industries. With their significant scale and highly integrated solutions, industries beyond mobile, including automotive, computing, IoT and networking, 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, and in the case of 5G accelerate the pace of, this transformation. For example, in the automotive industry, approximately 72% of new vehicles produced are projected to have cellular connectivity by 2025, compared to 40% in 2018 (Strategy Analytics, October 2019). In addition, the installed base of non-mobile devices with cellular connectivity, which includes IoT devices among others, is projected to grow more than 150% between 2019 and 2023 (ABI Research, February 2019).

Wireless Technologies Overview

The growth in the use of wireless devices worldwide and the demand for data services and applications requires continuous innovation to 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 and have developed foundational technologies that drive the continued evolution of the wireless industry, 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 and the emergence of 5G technologies continued around the world with estimated 3G/4G/5G connections up 11% year-over-year (GSMA Intelligence, November 2019). As of September 30, 2019, there were approximately 1.9 billion GSM connections worldwide, representing approximately 24% of total cellular connections, down from 30% as of September 30, 2018 (GSMA Intelligence, November 2019).

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 mobile broadband data services. As of September 30, 2019, there were approximately 2.1 billion CDMA-based connections worldwide, representing approximately 27% of total cellular connections, down from 28% as of September 29, 2018 as consumers migrate to OFDMA-based technologies (GSMA Intelligence, November 2019).

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 or expected to be deployed through the end of 2019 are classified as 4G technology. 5G heavily leverages OFDMA-based technologies. 3GPP developed 4G specifications through the standardization of the radio component (LTE) and the core network component (Enhanced Packet Core or EPC). Similarly, 3GPP has developed 5G specifications through the specification of the radio component (New Radio or NR) and the core network component (5G Core or 5GC). Unlike 4G that has fixed Orthogonal Frequency Division Multiplexing (OFDM) parameterization, 5G has multiple OFDM parameterizations to address a wide range of spectrum and use cases. 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 (Frequency Division Multiple Access) 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 technologies through multimode devices.

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, there are also new enhancements under the umbrella of LTE Advanced Pro, including LTE Direct for proximity-based device-to-device discovery, 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 are multiple options for deploying LTE Unlicensed for different deployment scenarios.

- LAA (Licensed Assisted Access), introduced as part of 3GPP Release 13, aggregates unlicensed and licensed spectrum in the 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.
- eLAA (enhanced LAA) introduced as part of 3GPP Release 14, is an evolution of LAA, enables aggregation of unlicensed and licensed spectrum in the uplink.

Beginning with Release 14, 3GPP specifications provide enhancements specifically for vehicular communications known as cellular vehicle-to-everything (C-V2X), which includes both direct communication (vehicle-to-vehicle, vehicle-to-infrastructure and vehicle-to-pedestrian) in dedicated spectrum that is independent of a cellular network and cellular communications with networks in traditional mobile broadband licensed spectrum. C-V2X is designed to serve as the foundation for Intelligent Transportation Systems (ITS), enabling vehicles to communicate with each other and everything around them providing non-line-of-sight awareness for enhanced road safety and traffic efficiency. In future 3GPP releases (starting in Release 16, which is expected to be completed in June 2020), C-V2X is expected to benefit from the incorporation of 5G features, such as high throughput, lower latency and ultra-reliable communication capabilities to enable a higher level of performance and predictability as needed for automated driving and other advanced use cases.

As of September 30, 2019, there were approximately 3.8 billion global LTE connections worldwide, representing approximately 49% of total cellular connections, up from 41% as of September 30, 2018 (GSMA Intelligence, November 2019).

As of October 2019, approximately 900 wireless operators have commercially deployed or started testing LTE networks and 777 operators have commercially launched LTE in 228 countries, including 308 operators in 135 countries having commercially launched LTE Advanced networks (GSA, November 2019).

The wireless industry is actively developing and commercializing 5G technologies. Initial commercial 5G network deployments and device launches began in calendar 2019, and we expect that 5G network deployments and device launches will increase over the next several years. Some of 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 already incorporates or soon will incorporate 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 advancements in 5G, including contributing to 3GPP standardization activities that are defining the continued evolution of 5G NR and 5GC standards.

The first global set of 5G standards is incorporated in 3GPP specifications starting from Release 15, which was initially completed in March 2018 and subsequently updated in September 2018 and June 2019. Release 15 enables different architecture deployment choices of 5G networks while sharing the same radio access technology. The main advantages of 5G 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 include the ability to address ultra-reliable, low-latency communication, new channel coding schemes to efficiently support large data blocks, multiple-input multiple-output (MIMO) to increase coverage and network capacity and mobile millimeter wave to increase the data rate offered to users. 5G uses OFDMA in the downlink and either OFDMA or single carrier FDMA in the uplink depending on the use case. Like 3G and 4G, 5G supports carrier aggregation across spectrum bands, across FDD and TDD and across licensed and unlicensed spectrum (starting with Release 16), and 5G also supports dual connectivity across 4G and 5G. A key benefit of 5G is its ability to take advantage of very wide channel bandwidth such as 800/400/100 MHz (compared to LTE's 20 MHz maximum bandwidth, which requires carrier aggregation to combine spectrum beyond 20 MHz). As with previous cellular generations, 5G is designed to support seamless compatibility with 2G/3G/4G technologies through multimode devices.

As of October 2019, 258 wireless operators in 94 countries have demonstrated, are testing, trialing or have been licensed to begin field trials of 5G-enabling and candidate technologies, and an additional 69 wireless operators in 50 countries have announced their intentions to make 5G available to their customers by 2022 (GSA, November 2019).

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 connectivity for mobile devices, tablets, laptops and other consumer electronic 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 continue to play a lead role in the evolution of 802.11 family of standards. We are actively involved in innovative programs developed in the context of the Wi-Fi Alliance, a non-profit organization that drives global Wi-Fi adoption and evolution.

Bluetooth. Bluetooth is a wireless personal area network that provides wireless connectivity between devices over short distances ranging from a few centimeters to approximately one hundred meters. Bluetooth technology provides wireless connectivity to a wide range of fixed or mobile consumer electronic devices. Bluetooth functionalities are standardized by the Bluetooth Special Interest Group in various versions of the specification (from 1.0 to 5.1), 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 continue to evolve 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 and continue to play a leading role in developing and/or have acquired many of the other technologies used across the wireless system, such as cellular handsets and certain other consumer electronic devices and networks, including:

- RFFE chips and modules (including power amplifier modules, envelope tracker, antenna tuners, diversity modules, RF switches and micro-acoustic RF filters) designed for improved signal performance and reduced power consumption, while simplifying the design for manufacturers to develop LTE/5G multimode, multiband devices, including sub-6 GHz and mmWave devices;
- 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;
- on-device artificial intelligence (AI) features, including 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 and ultrasonic fingerprint readers for single touch authentication;
- volatile (LP-DDR2, 3, 4) and non-volatile (eMMC) memory and related controllers; and
- power management systems for improved battery life and device charging.

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 2019, 2018 and 2017 for our reportable segments were as follows (in millions, except percentage data):

	2019	2018	2017
QCT	\$ 14,639	\$ 17,282	\$ 16,479
<i>As a percent of total</i>	60%	76%	74%
QTL	\$ 4,591	\$ 5,042	\$ 6,412
<i>As a percent of total</i>	19%	22%	29%
QSI	\$ 152	\$ 100	\$ 113
<i>As a percent of total</i>	1%	—%	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 a broad range of devices in support of CDMA- and OFDMA-based technologies, from low-tier, entry-level devices primarily for emerging regions to premium-tier devices, including mobile devices (primarily smartphones), tablets, laptops, data modules, handheld wireless computers and gaming devices, access points and routers, broadband gateway equipment, data cards and infrastructure equipment, IoT devices and applications, other consumer electronics and automotive telematics and infotainment systems. Our 3G/4G/5G modem roadmap delivers the latest network technologies across multiple product tiers and devices. This roadmap is the result of extensive collaboration with manufacturers, operators, developers, governments and industry standards organizations, as well as our years of research into emerging network standards and the development of integrated circuits that take advantage of these new standards, while maintaining backward compatibility with existing standards.

The Qualcomm® Snapdragon™ family of integrated circuit products include the Snapdragon mobile, compute and automotive platforms. Each platform consists of application processors and wireless connectivity capabilities, including our cellular modem that provides core baseband modem functionality for voice and data communications, non-cellular wireless connectivity (such as Wi-Fi and Bluetooth) and global positioning functions. Our Snapdragon application processor functions include security, graphics, display, audio, video, camera and AI. Our central processing units are designed based on ARM

architecture and are designed to deliver high levels of compute performance at low power. Our Qualcomm® Hexagon™ processors are designed to support a variety of signal processing applications, including AI, audio and sensor processing. Qualcomm® Adreno™ graphics processing units are designed to deliver high quality graphics performance for visually rich 3D gaming and user interfaces. In addition to the highly integrated core system on a chip (SoC), we also design and supply supporting components, including the RF, PM (Power Management), audio, codecs, speaker amps and additional wireless connectivity integrated circuits. These supporting components, in addition to our cellular modems and application processors comprising our core SoC, are also sold as individual components. The combination of the Snapdragon SoC, system software and supporting components provide an overall platform with optimized performance and efficiency, enabling manufacturers to design and deliver powerful, slim and power-efficient devices ready for integration with the complex cellular networks worldwide.

Our portfolio of RF products includes Qualcomm® RFFE components that are designed to simplify the RF design for 5G front-end, LTE multimode and multiband mobile devices, to reduce power consumption and to improve radio performance. QCT offers an advanced portfolio of RFFE products for mobile devices, infrastructure, automotive, industrial IoT and other IoT applications. Our technologies provide comprehensive RFFE product offerings with system level performance from the modem and transceiver to the antenna 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, automotive, infrastructure, industrial IoT and other IoT industries.

Our wireless connectivity products also consist of integrated circuits and system software for Wi-Fi, Bluetooth, 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 wireless connectivity products provide additional connectivity for mobile devices, tablets, laptops, IoT applications and automotive telematics and infotainment systems. QCT also offers standalone Wi-Fi, Bluetooth, fingerprint sensor, 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 and data services.

Other than for our RFFE modules and RF filter acoustic products, QCT 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. Therefore, 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. 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. The primary foundry suppliers for our various digital, analog/mixed-signal, RF and PM integrated circuits are Global Foundries, Samsung Electronics, Semiconductor Manufacturing International, Taiwan Semiconductor Manufacturing Company (TSMC) and United Microelectronics. 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 uses 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.

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, desire by certain customers to use multiple suppliers and customer support. QCT also competes in both single-mode and multimode environments against alternative communications technologies. Additional competitive factors exist for QCT product offerings that have expanded into adjacent industry segments outside traditional cellular industries, including automotive, computing, IoT and networking. 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 may result in increased costs.

QCT's current competitors include, but are not limited to, companies such as Broadcom, Cirrus Logic, Cypress Semiconductor, HiSilicon, Intel, Marvell, Maxim, MediaTek, Microchip Technology, Murata, Nordic Semiconductor, Nvidia, NXP Semiconductors, Qorvo, Realtek Semiconductor, Renesas, Samsung, Sequans Communications, Skyworks 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 wireless 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 use our competitors' integrated circuit products, to utilize their own internally-developed integrated circuit products or sell such products to others, including by selling them together with certain of their other products, or to choose alternative technologies; lower cost structures 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 or original equipment manufacturers (OEMs) that sell devices that do not contain our chipsets; better known brand names; ownership and control of manufacturing facilities and greater expertise in manufacturing processes; more extensive relationships with local distribution companies and OEMs in certain geographic regions (such as China); more experience in adjacent industry segments outside traditional cellular industries (such as automotive, computing, IoT and networking); and 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.

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, sale and/or use of certain wireless products, including, without limitation, products implementing CDMA2000, WCDMA, CDMA TDD, LTE and/or OFDMA-based 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 in the past, licensees typically have desired to obtain the commercial benefits of receiving such broad patent rights from us. However, since 2015, our standard practice in China is to offer licenses to our 3G and 4G (and now 5G) cellular standard-essential Chinese patents for devices sold for use in China separately from our other patents. In addition, we also offer licenses to only our cellular standard-essential patents (including 3G, 4G and 5G) for both single-mode and multimode devices on a worldwide basis, and since 2018, an increasing number of new and existing licensees have elected to enter into worldwide license agreements covering only our cellular standard essential patents. Going forward, we continue to anticipate that a significant portion of QTL's licensing revenues will be derived from licensees that have entered into license agreements covering only Qualcomm's cellular standard essential patents. Our licensees manufacture wireless products including mobile devices (including handsets), other consumer devices (e.g., tablets and laptops), plug-in end user data modem cards and embedded modules for incorporation into machine-to-machine devices and certain end user products (excluding handsets and tablets), as well as infrastructure equipment required to establish and operate a network and equipment to test networks and cellular devices.

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 foundational, system level technologies for the wireless industry. 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), not just the portion of such patented technologies incorporated into chipsets, and the network. 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 certain wireless products 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 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 and 3G/4G multimode evolve and grow and reduce device pricing, all at a faster pace than the 2G (second generation) technologies such as GSM that preceded it. 5G network deployments and commercial 3G/4G/5G multimode device sales began in 2019 and will continue into 2020 and beyond. By licensing or otherwise providing rights to use our patents to a wide range of equipment manufacturers, 5G will continue to encourage innovative applications through enhanced mobile broadband services with lower latency and multi-gigabit user data speeds and bring more capacity and efficiency to wireless networks.

Upon the initial deployment of OFDMA-based networks, the products implementing such technologies generally have been multimode and implement OFDMA-based and CDMA-based technologies. The licenses granted under our existing license agreements generally cover multimode CDMA/OFDMA (3G/4G/5G) devices, and our licensees are obligated to pay royalties under their license agreements for such devices.

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 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. Licensees pay royalties based on their sales of products incorporating or using our licensed intellectual property and may also pay a fixed license fee in one or more installments. Sales-based 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, laptops and smartwatches, and provide for a maximum royalty amount payable 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 3G/4G multimode devices), such as smartphones and feature phones. 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. Some of our inventions that serve as foundational technologies for 3G and 4G now also serve as foundational technologies for 5G. We have invested and continue to invest in the development of 5G and continue to play a significant role in driving advancements of 5G. 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. 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, sell and/or use certain components (e.g., Application-Specific Integrated Circuits) and related software, cellular devices 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 or 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 primarily through our Qualcomm Ventures arm that are focused on expanding or opening new opportunities for our technologies as well as supporting the design and introduction of new products and services (or enhancing existing products or services). Many of these strategic investments are in early-stage companies in a variety of industries and applications, including, but not limited to, artificial intelligence, automotive, digital healthcare, enterprise software and solutions, IoT, mobile and networking. Investments primarily include non-marketable equity securities and to a lesser extent, non-marketable convertible debt instruments. 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 Qualcomm Government Technologies or QGOV (formerly Qualcomm Cyber Security Solutions) business and other wireless technology and service initiatives. During fiscal 2019, we completed the sale of our mobile health nonreportable segment, and we combined our Small Cells nonreportable segment into our QCT segment. Prior period segment information has not been adjusted to conform to the new segment presentation as such adjustments are insignificant. QGOV provides development and other services and sells related products to U.S. government agencies and their contractors. 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."

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 initiated a series of targeted actions across our businesses with the objective to reduce annual costs by \$1 billion, excluding incremental costs resulting from any future acquisition of a business. Actions taken under this plan have been completed and resulted in us achieving substantially all of this target in fiscal 2019 based on our run rate exiting the second quarter of fiscal 2019, excluding litigation costs that were in excess of the baseline spend.

Additional information regarding our Cost Plan is provided in this Annual Report in "Notes to Consolidated Financial Statements, Note 10. Cost Plan."

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, operational 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

A small number of customers/licensees historically have accounted for a significant portion of our consolidated revenues. In fiscal 2019, 2018 and 2017, revenues from Apple Inc. and its contract manufacturers (Hon Hai Precision Industry Co., Ltd./Foxconn, its affiliates and other suppliers to Apple), Samsung Electronics and combined revenues from GuangDong

OPPO Mobile Telecommunications and vivo Communication Technology, and their respective affiliates (including BBK), each comprised 10% or more of consolidated revenues. Revenues from Xiaomi also comprised 10% or more of consolidated revenues in fiscal 2019 and 2018. Revenues in fiscal 2018 and 2017 were negatively impacted by our prior dispute with Apple Inc. and its contract manufacturers. Revenues in fiscal 2019 were positively impacted by our settlement of such dispute in the third quarter of fiscal 2019. We expect to begin recording revenues for new chipset models under our recently announced multi-year chipset agreement with Apple in the second half of fiscal 2020.

Research and Development

The wireless 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 utilize that research and development in adjacent industry segments outside of traditional cellular industries (such as automotive, computing, IoT and networking), including continuing the development of CDMA, OFDMA and other technologies (such as RF), 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 OFDMA-based 4G technologies (including LTE) and 5G 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 the formation of, and subsequent acquisition of the remaining minority ownership interest in, RF360 Holdings to enable delivery of RFFE modules and RF filters into fully integrated products for mobile devices and IoT applications, among others. See “Notes to Consolidated Financial Statements, Note 9. Acquisitions” in this Annual Report for additional information.

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, 4G and 5G technologies, our chipsets support other wireless and wired connectivity technologies, including Wi-Fi, Bluetooth, Ethernet, location positioning 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, computing, IoT (including the connected home, smart cities, wearables, voice and music and robotics) and networking, 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 and/or market 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 wireless 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 advantages over us that include, among others: motivation by our customers in certain circumstances to use our competitors' integrated circuit products, to utilize their own internally-developed integrated circuit products or sell such products to others, including by selling them together with certain of their other products, or to choose alternative technologies; lower cost structures 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 or original equipment manufacturers (OEMs) that sell devices that do not contain our chipsets; better known brand names; ownership and control of manufacturing facilities and greater expertise in manufacturing processes; more extensive relationships with local distribution companies and OEMs in certain geographic regions (such as China); more experience in adjacent industry segments outside traditional cellular industries (such as automotive, computing, IoT and networking); and 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 to strengthen and/or maintain our competitive position, 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 changes. Our success depends in part on our ability to adapt to such changes and compete effectively; and such changes and competition could result in decreased demand for our products or declining average selling prices for our products or those of our customers 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, innovation is encouraged, and opportunities for training, growth and advancement are available 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 Commitment to STEM Education.* We aim to promote and improve science, technology, engineering and math (STEM) education at all levels and expand opportunities for underrepresented students in STEM careers.
- *Our Environment.* We aim to expand our operations while minimizing our carbon footprint, conserving water and reducing waste.
- *Qualcomm® Wireless Reach™ Initiative.* 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 29, 2019, we employed approximately 37,000 full-time, part-time and temporary employees. During fiscal 2019, the number of employees increased by approximately 1,600, primarily due to increases in engineering resources, partially offset by 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, proxy statements 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.

Information about our Executive Officers

Our executive officers (and their ages at September 29, 2019) are as follows:

Steve Mollenkopf, age 50, 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, Qualcomm CDMA Technologies (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 49, has served as President, Qualcomm Incorporated since January 2018. He served as Executive Vice President, Qualcomm Technologies, Inc., a subsidiary of Qualcomm Incorporated (QTI) and President, 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 has 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.

Brian T. Modoff, age 60, 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., 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 previously worked in defense electronics, including at Rockwell International in manufacturing management, and for the U.S. Navy as a communications technician. 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.

Akash Palkhiwala, age 44, has served as Executive Vice President and Chief Financial Officer since November 2019. He served as Senior Vice President and Interim Chief Financial Officer from August 2019 to November 2019. He served as Senior Vice President, (QCT) Finance, QTI from December 2015 to August 2019, and Senior Vice President and Treasurer, Qualcomm Incorporated from October 2014 to December 2015. Mr. Palkhiwala served as Vice President, (QCT) Finance, QTI from October 2012 to October 2014 and Vice President, (QCT) Finance from October 2009 to October 2012. He served in various other finance roles since joining the Company in March 2001. Prior to joining Qualcomm, Mr. Palkhiwala was an Analyst at KeyBank. Mr. Palkhiwala has an undergraduate degree in Mechanical Engineering from L.D. College of Engineering in India and an M.B.A from the University of Maryland.

Alexander H. Rogers, age 62, has served as Executive Vice President and President, Qualcomm Technology Licensing (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. Prior to transitioning to QTL, Mr. Rogers led Qualcomm's litigation group. Mr. Rogers joined Qualcomm in January 2001 as an attorney. Prior to joining Qualcomm, Mr. Rogers was a partner at the law firm of Gray, Cary, Ware & Friedenrich (now DLA Piper), specializing in intellectual property and commercial litigation. 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 68, 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 November

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 52, 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 has served as a member of the board of directors of Digital Turbine, Inc. since June 2019. Ms. Sterling holds a B.S. degree in Business Management from the University of Redlands.

James H. Thompson, age 55, has served as Executive Vice President, Engineering, QTI and Chief Technology Officer since March 2017. He served as Executive Vice President, Engineering, QTI 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." References to "and" and "or" should be read to include the other as well as "and/or," as appropriate.

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 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 multimode devices, as well as 3G, 4G and 5G single-mode devices, and 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, computing, IoT (including the connected home, smart cities, wearables, voice and music and robotics) and networking, among others.

We have historically been successful during wireless technology transitions, including 3G and 4G. 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 further description of 5G). Initial commercial deployments of 5G networks and devices have begun and will continue into fiscal 2020 and beyond. We believe it is important that we remain a leader in 5G technology development, standardization, intellectual property creation and licensing, and that we 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 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, expansions or upgrades or delay moving customers to 3G/4G and 3G/4G/5G multimode devices, as well as 4G and 5G single-mode 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 4G and 5G wireless technologies, including unlicensed spectrum and shared spectrum technologies, thereby delaying or precluding the initial deployment or expanded deployment of these technologies;
- wireless operators delay or do not drive improvements in 4G or 5G, or 3G/4G or 3G/4G/5G multimode network performance and capacity;
- 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 meaningfully due to, for example, the maturity of smartphone penetration in developed regions;
- our intellectual property and technical leadership included in the continued 5G standardization effort is different than in 3G and 4G standards;
- the continued standardization or commercial 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; or
- consumers' rates of replacement of smartphones and other computing devices decline, do not grow or do not grow meaningfully.

Our industry is subject to competition in an environment of rapid technological changes. Our success depends in part on our ability to adapt to such changes and compete effectively; and such changes and competition could result in decreased demand for our products or declining average selling prices for our products or those of our customers 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 maintain existing business and customers or attract new business and 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 or support of national industries 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 and consumer demand for new 3G/4G and 3G/4G/5G multimode devices, as well as 3G, 4G and 5G single-mode 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, RFFE, graphics and other processors, camera and connectivity) and with smaller geometry process technologies that drive both performance and lower power consumption;
- 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, voice and music and other connected devices and infrastructure products;

- maintain or accelerate demand for our integrated circuit products at the premium device tier, while also driving the adoption of our 5G products into high, mid- and low-tier devices across all regions;
- continue to be a leader in 4G and 5G technology evolution and continue to innovate and introduce 4G and 5G turnkey, integrated products and services that differentiate us from our competition;
- remain 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;
- increase or accelerate demand for our semiconductor component products, including RFFE, and our wireless connectivity products, including networking products for consumers, carriers and enterprise equipment and connected devices;
- 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, multimode mobile devices;
- create standalone value and contribute to the success of our existing businesses through acquisitions, joint ventures and other transactions, and by developing customer, licensee, vendor, distributor and other channel relationships in new industry segments and with disruptive technologies, products and services, such as products for automotive, computing, IoT (including the connected home, smart cities, wearables, voice and music and robotics) and networking, among others;
- 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, products and technologies;
- be a leader serving original equipment manufacturers (OEMs), 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; and
- 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 and China.

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, computing, IoT and networking applications. Most of these competitors compete with us with respect to some, but not all, of our businesses. 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 Broadcom, Cirrus Logic, Cypress Semiconductor, HiSilicon, Intel, Marvell, Maxim, MediaTek, Microchip Technology, Murata, Nordic Semiconductor, Nvidia, NXP Semiconductors, Qorvo, Realtek Semiconductor, Renesas, Samsung, Sequans Communications, Skyworks 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 use our competitors' integrated circuit products, to utilize their own internally-developed integrated circuit products or sell such products to others, or to choose alternative technologies; lower cost structures or a willingness and ability to accept lower prices or lower or negative margins for their products, particularly in China; foreign government support of other technologies, competitors or OEMs that sell devices that do not contain our chipsets; better known brand names; ownership and control of manufacturing facilities and greater expertise in manufacturing processes; more extensive relationships with local distribution companies and OEMs in certain geographic regions (such as China); more experience in adjacent industry segments outside traditional cellular industries (such as automotive, computing, IoT and networking); and a more established presence in certain regions.

In particular, certain of our largest integrated circuit customers develop their own integrated circuit products, which they have in the past utilized, and currently 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 they may sell their integrated circuit products to third parties, discretely or together with certain of their other products, 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 and is solely utilizing one of our competitor's products in its most recent smartphone launch. Apple may continue to use our competitors' products in one or more of its future devices and may develop and utilize its own modem products, rather than our products, in one or more of its future devices.

Further, certain of our competitors develop and sell multiple components (including integrated circuit products) for use in devices and sell those components together to device manufacturers. Our competitors' sales of multiple components put us (and our discrete integrated circuit products) at a competitive disadvantage. Certain of our competitors also develop and sell infrastructure equipment for wireless networks and can optimize their integrated circuit products to perform on such networks to a degree that we are not able to, which again puts us at a competitive disadvantage.

Competition in any or all product tiers may result in the loss of 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 or the products of our customers and licensees. Certain of these dynamics are particularly pronounced in emerging regions and China where competitors may have lower cost structures or may have a willingness and ability to accept lower prices 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 derive a significant portion of our 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 utilized, and currently 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 they may sell their integrated circuit products to third parties, discretely or together with certain of their other products, in competition with us). Also, Apple, which has historically been one of our largest customers, utilizes products of one of our competitors in many of their devices rather than our products and is solely utilizing one of our competitor's products in its most recent smartphone launch. In April 2019, we entered into a new multi-year chipset supply agreement with Apple. We do not expect to begin recording revenues under this agreement until the second half of fiscal 2020. However, Apple may continue to use our competitors' products in one or more of its future devices and may develop and utilize its own modem products, rather than our products, in one or more of its future devices.

Similarly, certain of our Chinese OEM customers have developed and others may in the future develop their own integrated circuit products and use such integrated circuit products, or other integrated circuit products, in their devices rather than our integrated circuit products, whether due to pressure from the Chinese government as part of its broader economic policies, the OEMs' concerns over losing access to our integrated circuit products as a result of U.S./Chinese trade tensions, or otherwise.

Further, political actions, including trade and/or national security protection policies, or other actions by governments, have in the past, currently are and could in the future limit or prevent us from transacting business with certain of our customers, or limit or prevent certain of our customers from transacting business with us.

Finally, we spend a significant amount of engineering and development time, funds and resources in understanding our key customers' feedback and/or specifications and attempt to incorporate such input into our product launches and technologies. These efforts may not require or result in purchase commitments from such customers or we may have lower purchases from such customers than expected, and consequently, we may not achieve the anticipated revenues from these efforts, or these efforts may result in non-recoverable costs.

The loss of any one of our significant customers, a reduction in the purchases of our products by such customers or the cancellation of significant purchases by any of these customers, whether due to the use of their own integrated circuit products or our competitors' integrated circuit products, government restrictions 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 success of such introductions may cause our revenues and results of operations to fluctuate. Accordingly, if current industry dynamics 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, to the extent Apple purchases our modem products, it 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 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, 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 or intellectual property, and 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 payment obligations, or we are unable to renew or modify one or more of such 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 sales of our licensees' products, or 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 mitigated by the per unit royalty caps that apply to certain categories of complete wireless devices, namely smartphones, tablets, laptops and smartwatches.

We derive a significant portion of our revenues from the premium-tier device segment. If sales of premium-tier devices decrease, 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 and China where premium-tier smartphones are less common and replacement cycles are on average longer than in developed regions and are continuing to lengthen; and a maturing premium-tier smartphone industry in which demand is increasingly driven by new product launches and innovation cycles.

In addition, as discussed in the prior risk factor, our industry is experiencing concentration of device share at the premium tier among a few companies, which gives them significant leverage. Further, certain of those companies have in the past utilized, currently utilize and may in the future 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 reduced sales of or lower prices for our premium-tier integrated circuit products.

A reduction in sales of premium-tier devices, 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) or a shift in share away from OEMs that utilize our products to OEMs that do not utilize our products, would 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 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 negotiate, renegotiate, reduce 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 or unenforceability of our patents 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 (and/or the plain language) 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 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, seeking to impose some form of compulsory licensing or weakening a patent holder's ability to enforce its rights or obtain a fair return for such rights; and (vi) various attempts by licensees 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 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. Further, certain licensees and companies are currently engaged in such behavior and they or others may engage in such behavior in the future. The fact that one or more licensees dispute, underreport, underpay, do not report 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 companies increase their device share, the negative impact of their underreporting, underpayment, non-payment or non-reporting on our business, revenues, results of operations, financial condition and cash flows will be exacerbated.

We have been in the past and are currently subject to various litigation and governmental investigations and proceedings, including the lawsuit filed against us by the United States Federal Trade Commission (FTC). Certain of these matters are described more fully in this Annual Report in "Notes to Consolidated Financial Statements, Note 7. Commitments and Contingencies." We may become subject to other litigation or governmental investigations or proceedings in the future. Additionally, certain of our direct and indirect customers and licensees 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 had and could in the future have a material adverse effect on our business, revenues, results of operations, financial condition and cash flows. See the Risk Factors below entitled "*Our business, particularly our licensing business, may suffer as a result of adverse rulings in government investigations or proceedings*" and "*Changes in our patent licensing practices, whether due to governmental investigations or 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 standard-essential 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 should not be an available remedy for infringement of standard-essential patents and 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 rate 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 (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 standard-essential 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 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 have been in the past and are currently subject to various governmental investigations and proceedings, particularly with respect to our licensing business, including the lawsuit filed against us by the FTC. Certain of these matters are described more fully in this Annual Report in “Notes to Consolidated Financial Statements, Note 7. Commitments and Contingencies.” Key allegations or findings in those matters include, among others, that we violate FRAND licensing commitments by refusing to grant licenses to chipset makers, that our royalty rates are too high, 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), that we unlawfully require customers to execute a patent license before we sell them cellular modem chipsets, that we have entered into exclusive agreements with chipset customers that foreclose competition, and that we violate antitrust laws, engage in anticompetitive conduct and unfair methods of competition. We may become subject to other litigation or governmental investigations or proceedings 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, revenues, results of operations, financial condition and cash flows. Depending on the matter, various remedies that could result from an unfavorable resolution include, among others, the loss of our ability to enforce one or more of our patents; injunctions; monetary damages or fines or other orders to pay money; the issuance of orders to cease certain conduct 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, sell chipsets to unlicensed OEMs or modify or renegotiate some or all of our existing license agreements; and determinations that some or all of our license agreements are invalid or unenforceable. If some or all of our license agreements are declared invalid or unenforceable and/or we are required to renegotiate these license agreements, we may not receive, or may not be able to recognize, some or any licensing or royalty revenues under the impacted license agreements unless and until we enter into new license agreements; and even licensees whose license agreements are not impacted may demand to renegotiate their agreements or invoke the dispute resolution provision in their agreements, and we may not be able to recognize some or any licensing or royalty revenues under such agreements. The renegotiation of license agreements could lead to arbitration or litigation to resolve the licensing terms (which could be less favorable to us than existing terms), each of which could take months or possibly years. Licensees may underreport, underpay, not report or not pay royalties owed to us pending the conclusion of such negotiations, arbitration or litigation. In addition, we may be sued for alleged overpayments of past royalties paid to us, including private antitrust actions seeking treble damages under U.S. antitrust laws. Further, if our appeal in the FTC lawsuit is unsuccessful, it could have a material adverse effect on our business. Any such event could result in a materially negative impact on our financial condition, in which case we would have to significantly cut costs and other uses of cash, including in research and development, significantly impairing our ability to maintain product and technology leadership and invest in next generation technologies such as 5G. Further, depending on the breadth and severity of the circumstances above, we may have to reduce or eliminate our capital return programs, and our ability to timely pay our indebtedness may be impacted. If these events occur, our financial outlook and stock price could decline, possibly significantly. Further, a governmental body in a particular country or region may successfully assert and impose remedies with effects that extend beyond the borders of that country or region.

These challenges 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.

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

As described in the Risk Factor above entitled “*Our business, particularly our licensing business, may suffer as a result of adverse rulings in government investigations or proceedings,*” we have been in the past and are currently subject to various governmental investigations and proceedings and private legal proceedings challenging our patent licensing and chipset sales practices, including the lawsuit filed against us by the FTC. Certain of these matters are described more fully in this Annual Report in “Notes to Consolidated Financial Statements, Note 7. Commitments and Contingencies.” We believe that one 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 may become subject to other litigation or governmental investigations or proceedings in the future.

We historically licensed our cellular standard-essential patents together with our other patents that may be useful to licensed products because licensees desired to obtain the commercial benefits of receiving such broad patent rights from us. However, we also licensed only our cellular standard-essential patents to certain licensees who requested such licenses. Since 2015, our standard practice in China is to offer licenses to our 3G and 4G (and now 5G) cellular standard-essential Chinese patents for devices sold for use in China separately from our other patents. In addition, we also offer licenses to only our cellular standard-essential patents (including 3G, 4G and 5G) for both single-mode and multimode devices on a worldwide basis, and since 2018, an increasing number of new and existing licensees have elected to enter into worldwide license agreements covering only our cellular standard-essential patents. Going forward, we continue to anticipate that a significant portion of our licensing revenues will be derived from licensees that have entered into license agreements covering only our cellular standard-essential patents. 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 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 (which could lead to implementing a more complex, multi-level 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 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 cash flows would be negatively impacted unless there was a sufficient increase in the volume of sales of devices upon which royalties are paid 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).

If we were required to sell chipsets to OEMs that do not have a license to our patents, our licensing program could be negatively impacted by patent exhaustion claims raised by such unlicensed OEMs (i.e., claims that our sale of chipsets to such OEMs forecloses us from asserting any patents substantially embodied by the chipsets against such OEMs). Such sales would provide OEMs with a defense in the event we asserted our patents against them to obtain licensing revenue for those patents. This would have a material adverse effect on our licensing program and our results of operations, financial condition and cash flows.

To the extent that we were required to implement any of these new licensing and/or business practices, including by modifying or renegotiating our existing license agreements or pursuing other commercial arrangements, 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 or governmental agencies in other jurisdictions may attempt to obtain similar outcomes for themselves or for such other jurisdictions, as applicable.

Finally, if our appeal in the FTC lawsuit is unsuccessful, it could have a material adverse effect on our business.

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 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 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 (EU) 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, currently have, and may in the future have, difficulty in certain circumstances in protecting or enforcing our intellectual property rights and contracts, including collecting royalties for use of our patent portfolio due to, among others: refusal by certain licensees to report and 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; failure of foreign courts to recognize and enforce judgments of contract breach and damages issued by courts in the United States; and challenges before competition agencies to our licensing business and the pricing and integration of additional features and functionality into our chipset products. Certain licensees have disputed, underreported, underpaid, not reported 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. Further, certain licensees and companies are currently engaged in such behavior and they or others may engage in such behavior in the future. The fact that one or more licensees dispute, underreport, underpay, do not report 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 proprietary and confidential business information to our direct and indirect customers and licensees, who have in the past and may in the future wrongfully use such intellectual property and information or wrongfully disclose such intellectual property and information to third parties, including our competitors.

We have engaged in litigation and arbitration in the past and may need to further litigate or arbitrate in the future to enforce our contract and intellectual property rights, protect our trade secrets or determine the validity and scope of proprietary rights of others. As a result of any such litigation 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 or initiating litigation), license terms (including but not limited to royalty rates for the use of our intellectual property) could be imposed that are less favorable to us than existing terms, and 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 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.

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 applications outside of traditional cellular industries, such as automotive, computing, IoT and networking, among others. Our research, development and other investments in these new and expanded product areas, industry segments and applications, 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 invest in new and expanded product areas, and adjacent industry segments and applications, by leveraging our existing technical and business expertise and through acquisitions.

In particular, our future growth significantly depends on new and expanded product areas, such as RFFE, and adjacent industry segments and applications outside of traditional cellular industries, such as automotive, computing, IoT (including the connected home, smart cities, wearables, voice and music and robotics) and networking, among others; our ability to develop leading and cost-effective technologies, products and services for new and expanded product areas, adjacent industry segments and applications; and third parties incorporating our technologies, products and services into devices used in these product areas, industry segments and applications. Accordingly, we intend to continue to make substantial investments in these new and expanded product areas and adjacent industry segments and applications, and in developing new products, services and technologies for these product areas, industry segments and applications.

Our growth also depends significantly on our ability to develop and patent 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 and adjacent industry segments and 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: we may not be issued patents on the technologies we develop; the technologies we develop may not be incorporated into relevant standards; new and expanded product areas and adjacent industry segments, applications and consumer demand may not develop or grow as anticipated; our strategies 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; we may not be able to develop, or our competitors may have more established and/or stronger, customer, vendor, distributor or other channel relationships; 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 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 services are not successful, or are not successful in the time frame we anticipate, we may incur significant costs and asset impairments, our business may not grow meaningfully, our revenues and margins may be negatively impacted, and our reputation may be harmed.

There are numerous risks associated with the operation and control of our manufacturing facilities, 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 various manufacturing issues.

While our QCT segment has historically utilized 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), we own and operate various facilities that manufacture our RFFE modules and RF filter acoustic products. Manufacturing facilities are characterized by a higher portion of fixed costs relative to a fabless model. We may be faced with a decline in the utilization rates of our manufacturing facilities due to decreases in demand for our products, including in less favorable industry environments. 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. While we continue to take measures to comply, 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 and result in costly repairs, replacements or other costs. In addition, natural disasters or geopolitical conflicts may result in disruptions in transportation, distribution channels and supply chains, and 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. 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 and costs of raw materials may be negatively impacted by trade and/or national security protection policies, such as tariffs, or actions by governments that limit or prevent us from transacting business with certain companies or that limit or prevent certain companies from transacting business with us, 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 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 cash flows.

Finally, we typically begin manufacturing our products using our or our customers' forecasts of customer demand, which are based on a number of assumptions and estimates and are generally not covered by purchase commitments. As a result, we incur inventory and manufacturing costs in advance of anticipated sales, which sales ultimately may not materialize or may be lower than expected. If we or our customer overestimate customer demand that is not under a binding commitment from our customer, we may experience higher inventory carrying and operating costs and/or increased excess or obsolete inventory, which would negatively impact our results of operations.

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, computing, IoT and networking, as well as the need to renew or renegotiate license agreements that are expiring 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 automotive, computing, IoT and networking industry segments. 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, all of our patent license agreements in China that were entered into in 2015 or thereafter, as

well as our recent worldwide cellular standard-essential patent 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 the specified term, and to receive royalties after the expiration date of the specified term, 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. In particular, our license agreements with certain of our key Chinese licensees expire at the end of calendar year 2019. We might not be able to extend or modify those license agreements, or enter into new license agreements, in the future without negatively affecting the material terms and conditions of our license agreements with such licensees, and such modifications or new agreements may negatively impact our revenues. In some circumstances, we may extend, modify or enter into new license agreements as a result of arbitration or litigation, and terms imposed by arbitrators or courts may be less favorable to us than existing terms. If there is a delay in extending, modifying or entering into a new license agreement with a licensee, 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 facilities we own that manufacture our RFFE modules and RF filter acoustic products, 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 demand and negatively impact our revenues, business operations, profitability and 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 raw materials, 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 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
- natural disasters or geopolitical conflicts impacting our suppliers.

Additionally, supply and costs of raw materials may be negatively impacted by trade or national security protection policies, such as tariffs, or actions by governments that limit or prevent us from transacting business with certain companies or that limit or prevent certain companies from transacting business with us, 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 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. Any of the above could negatively impact our business, results of operations and 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 or make non-refundable payments for capacity commitments that are not used.

Our suppliers or potential alternate suppliers may manufacture CDMA- or OFDMA-based integrated circuits, for themselves or for other companies, that compete with our products. Such suppliers have in the past and could again elect to allocate raw materials and manufacturing capacity to their own products or products of our competitors 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. To the extent we are unable to obtain adequate supply, we may be obligated to make payment to our customers for such shortfalls.

Additionally, we place orders with our suppliers using our and 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 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 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. Similarly, our suppliers could be found to infringe another company's intellectual property rights, and such suppliers could then be enjoined from providing products or services to us.

In any potential dispute involving us and another company's 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 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 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 harm our relationships with them and could result in a decline in our chipset sales or a reduction in our licensees' sales, causing a corresponding decline in our chipset 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 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 (or on the sale of our customers' devices using such products) or the issuance of orders to cease certain conduct 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 or a reduction in our licensees' sales to wireless operators, causing corresponding declines in our chipset or licensing revenues.

Certain legal matters, which may include 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. From time to time, 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, including those that may be private and early-stage. Our strategic activities are generally focused on opening or expanding opportunities for our products and 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 our strategic activities entail a high degree of risk and require the use of significant amounts of 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 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 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 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.

Many of our acquisitions and other strategic investments require approval by the United States and/or foreign government agencies. Certain agencies in the past have, and may in the future, deny the transaction or fail to approve in a timely manner, resulting in us not realizing the anticipated benefits of the transaction. Future acquisitions or other strategic investments may 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 the State Administration for Market Regulation (SAMR) in China may be severely impacted.

We are subject to various laws, regulations, policies and standards. Our business may suffer as a result of existing, new or amended laws, regulations, policies or standards, 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 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, cybersecurity, 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 have impacted and may continue to impact the timing of our receipt of and/or ability to receive payments from our customers and licensees in such countries, which may negatively impact our cash flows.

Further, China has implemented, and other countries or regions may implement, cybersecurity laws that require that our overall information technology security environment meet certain standards and/or to be certified. Such laws may be complex, ambiguous and subject to interpretation, which may create uncertainty regarding compliance. As a result, our efforts to comply with such laws may be expensive and may fail, which could adversely affect our business, results of operations and 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, trade or national security protection policies, or political changes, could result in our incurring higher costs, could negatively impact our ability to timely consummate strategic transactions and could have other negative impacts on our business and the businesses of our customers and licensees.

Import/export regulations, such as the U.S. Export Administration Regulations administered by the U.S. Department of Commerce, are complex, change frequently, have generally become more stringent over time and have intensified under the current U.S. administration. If our customers or suppliers fail to comply with these regulations, we may be required to suspend activities with these customers or suppliers, which could negatively impact our results of operations. Additionally, we may be required to incur significant expense to comply with, or to remedy violations of, these regulations.

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 also have a negative impact on our revenues and results of operations. We are also subject to laws and regulations impacting our manufacturing operations. See the Risk Factor entitled “There are numerous risks associated with the operation and control of our manufacturing facilities, 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 various manufacturing issues.”

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 regions are imposing similar regulations, which may require us to undertake additional verification and reporting, including regarding countries in addition to the Covered Countries and minerals in addition to conflict minerals. 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 of operations and 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 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. Furthermore, in the course of product development, we may make contributions to third party open source projects that could obligate our intellectual property to adverse licensing conditions. For example, to encourage the growth of a software ecosystem that is interoperable with our products, we may need to contribute certain implementations under the open source licensing terms that govern such projects, which may adversely impact certain of our associated intellectual property. 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 contributions to and use of open source software presents risks that could have an adverse effect on these rights and on our business.

We operate in the highly cyclical semiconductor industry, which is subject to significant downturns that may adversely impact our business. Our stock price, earnings and the fair value of our investments are subject to substantial quarterly and annual fluctuations due to this dynamic and others, and to market downturns generally.

The semiconductor industry is highly cyclical and characterized by constant and rapid technological change, price erosion, evolving technical standards, frequent new product introductions, short product life cycles (for both semiconductors and for many of the products in which they are used) and fluctuations in product supply and demand. From time to time, these factors, together with changes in general economic conditions, cause significant upturns and downturns in the semiconductor industry. Periods of downturns have been characterized by diminished demand for end-user products, high inventory levels, periods of inventory adjustment, underutilization of manufacturing capacity, changes in revenue mix and erosion of average selling prices. We expect our business to continue to be subject to cyclical downturns, even when overall economic conditions are relatively stable. If we cannot offset semiconductor industry or market downturns, our revenues may decline, and our financial condition and results of operations may be adversely impacted.

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 earnings include those identified above and throughout this Risk Factors section; volatility of the stock market in general and technology-based and semiconductor 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 overall economic conditions may reduce the amounts that we realize in the future on our cash equivalents and marketable securities and may reduce our earnings as a result of any reductions in the fair values of marketable securities.

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 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 general corporate or other purposes;
- limiting our flexibility in planning for, or reacting to, changes in our business, our industry and the market; and
- 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 economic and political 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 our paying fines or modifying our business practices in connection with regulatory investigations or litigation, 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; reduce or eliminate our dividend payments; or sell selected assets. Such measures might not be sufficient to enable us to service our debt. In addition, any such refinancing, restructuring 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 or restructuring are higher than our current rates, interest expense related to such refinancing 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 the terms of such debt could be adversely affected.

Our current outstanding variable rate indebtedness uses LIBOR as a benchmark for establishing the interest rate. LIBOR is the subject of recent national, international and other regulatory guidance and proposals for reform. These reforms may cause LIBOR to disappear entirely after 2021 or to perform differently than in the past. We expect that reasonable alternatives to LIBOR will be created and implemented prior to the 2021 target date. Fallback provisions are being written into LIBOR-based contracts to attempt to reduce the risk of sudden and unpredictable increases in the cost of variable rate indebtedness. However, we cannot predict the consequences and timing of these developments.

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. In addition, third party suppliers that we may rely on to store and/or process our confidential information may also be subject to similar attacks. 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 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, licensees or other third parties our intellectual property or proprietary or confidential business information. This risk is exacerbated as competitors for talent, particularly engineering talent, increasingly attempt to hire our employees. See the Risk Factor entitled “We may not be able to attract and retain qualified employees.” Similarly, we provide access to certain of our intellectual property or proprietary or confidential business information to our direct and indirect customers and licensees and certain of our consultants, who may wrongfully use such intellectual property or information, or wrongfully disclose such intellectual property 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. 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 giving rise to a revision become known. Although we believe that our tax estimates are reasonable, 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 cash flows in the period or periods in which that determination is made could be negatively affected.

The United States Treasury Department has issued proposed regulations on several provisions of the Tax Legislation, including foreign tax credits, FDII, BEAT and interest expense deduction limitations, which are expected to be finalized in the next several months. When finalized, these proposed regulations may adversely affect our provision for income taxes, results of operations and/or cash flows.

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 cash flows. Partially to address BEPS, we moved certain IP from Singapore to the United States. As a result, if tax rates were to increase in the United States, our results of operations, cash flows and financial condition could be adversely affected.

Global, regional or local economic conditions, or political actions including trade and/or national security 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, a slow-down in economic growth, political actions including trade and/or national security protection policies, such as tariffs, or actions by governments that limit or prevent us from transacting business with certain companies or that limit or prevent certain companies from transacting business with us, 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 services 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 and technologies; a decrease in demand for the products of our customers or licensees; the insolvency of key suppliers, customers or licensees; delays in reporting or payments from our licensees 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, cancellation or delay of orders for our products and 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. 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, and competitors for talent, particularly engineering talent, increasingly attempt to hire, and to varying degrees have been successful in hiring, our employees, including by establishing local offices near our headquarters in San Diego, California. A number of such competitors for talent are significantly larger than us and are able to offer compensation in excess of what we are able to offer. 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 accounted for a significant portion of our total revenues in each of the last three fiscal years. Adverse movements in currency exchange rates may negatively affect our business, revenues, results of operations and cash flows due to a number of factors, including, among others:

- 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 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 and cash flows;
- Certain of our costs that are denominated in foreign currencies could increase, resulting in higher than expected costs and cash outflows; and
- Foreign exchange hedging exposes us to counterparty risk and may require the payment of structuring fees. If the foreign exchange hedges do not qualify for hedge accounting, the hedge results may cause earnings volatility. The foreign exchange hedging activities are designed to lessen earnings volatility; therefore, hedges may reduce the impact of currency fluctuations to certain revenues and costs.

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. Development of products and features in new domains of technology and the migration to integrated circuit technologies with smaller geometric feature sizes are complex, add risk to manufacturing yields and reliability and increase the likelihood of product defects or errors. Because our products and services are responsible for critical functions in our customers' products and networks, security failures, defects or errors in our products or services could have an adverse impact on us, on our customers and the end users of our customers' products. Such adverse impact could include shipment delays; write-offs of our inventories, property, plant and equipment and 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. In addition, security failures, defects or errors in the products of our customers or licensees could have an adverse impact on our results of operations and 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. Further, failures, defects or errors in our products or those of our customers or licensees entail the risk of product liability claims or recalls.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

At September 29, 2019, we occupied the following facilities (square footage in millions):

	United States	Other Countries	Total
Owned facilities	4.4	0.4	4.8
Leased facilities	0.9	5.3	6.2
Total	5.3	5.7	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 QCT segment also operates leased 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 2032, not including renewals that are at our option. Several other owned and leased facilities are under construction totaling approximately 1.3 million additional square feet, primarily related to the construction of new facilities in India and a new manufacturing facility in Singapore.

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 4, 2019, there were 6,683 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 2019, 2018 and 2017 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 2019 were:

	Total Number of Shares Purchased (In thousands)	Average Price Paid Per Share (1)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (In thousands)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (2) (In millions)
July 1, 2019 to July 28, 2019	2,368	\$ 76.01	2,368	\$ 7,589
July 29, 2019 to August 25, 2019	2,502	71.94	2,502	7,409
August 26, 2019 to September 29, 2019				
Other repurchases	4,489	77.07	4,489	7,063
Accelerated share repurchases (3)	68,682		68,682	7,063
Total	<u>78,041</u>		<u>78,041</u>	

(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. At September 29, 2019, \$7.1 billion remained authorized for repurchase. The stock repurchase program has no expiration date. Since September 29, 2019, we repurchased and retired 3.9 million shares of common stock for \$300 million. Shares withheld to satisfy statutory tax withholding requirements related to the vesting of share-based awards are not issued or considered stock repurchases under our stock repurchase program and, therefore, are excluded from the table above.
- (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. The ASR Agreements were completed during the fourth quarter of fiscal 2019, and an

additional 68.7 million shares were delivered to us and were retired, comprising the final delivery of shares under the ASR Agreements. In total, 247.1 million shares were delivered to us under the ASR Agreements at an average price per share of \$64.76.

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. We have revised our prior period financial statements for the years ended September 30, 2018 and September 24, 2017 to reflect the correction of an immaterial error as described in this Annual Report in Notes to Consolidated Financial Statements, "Note 1. Significant Accounting Policies" and "Note 12. Revision of Prior Period Financial Statements."

	Years Ended (1)				
	September 29, 2019	September 30, 2018	September 24, 2017	September 25, 2016	September 27, 2015
(In millions, except per share data)					
Statement of Operations Data:					
Revenues (2)	\$ 24,273	\$ 22,611	\$ 22,258	\$ 23,554	\$ 25,281
Operating income	7,667	621	2,581	6,495	5,776
Net income (loss) attributable to Qualcomm (2)	4,386	(4,964)	2,445	5,705	5,271
Per Share Data:					
Basic earnings (loss) per share attributable to Qualcomm:	3.63	(3.39)	1.66	3.84	3.26
Diluted earnings (loss) per share attributable to Qualcomm:	3.59	(3.39)	1.64	3.81	3.22
Dividends per share announced	2.48	2.38	2.20	2.02	1.80
Balance Sheet Data:					
Cash, cash equivalents and marketable securities (3)	\$ 12,296	\$ 12,123	\$ 38,578	\$ 32,350	\$ 30,947
Total assets (3)	32,957	32,718	65,498	52,359	50,796
Short-term debt (4)	2,496	1,005	2,495	1,749	1,000
Long-term debt (5)	13,437	15,365	19,398	10,008	9,969
Other long-term liabilities (6)	4,516	3,537	2,432	895	817
Total stockholders' equity (3)	4,909	807	30,725	31,768	31,414

(1) Our fiscal year ends on the last Sunday in September. The fiscal year ended September 29, 2019, September 24, 2017, September 25, 2016 and September 27, 2015 each included 52 weeks. The fiscal year ended September 30, 2018 included 53 weeks.

(2) Revenues in fiscal 2019 included \$4.7 billion resulting from the settlement with Apple and its contract manufacturers. Revenues in fiscal 2019 also reflected the impact of the adoption of the new revenue recognition guidance in the first quarter of fiscal 2019. Operating income in fiscal 2019 was impacted by a \$275 million charge attributed to a fine imposed by the European Commission (EC) and \$213 million in net charges related to our Cost Plan. Additionally, net income for fiscal 2019 was impacted by a \$2.5 billion charge to income tax expense resulting from the derecognition of a deferred tax asset related to the distributed intellectual property and a tax benefit of \$570 million due to establishing new U.S. net deferred tax assets from making certain check-the-box elections.

Revenues in fiscal 2018 were negatively impacted by our prior dispute with Apple and its contract manufacturers, partially offset by \$600 million paid under an interim agreement with Huawei. Operating income in fiscal 2018 was further impacted by a \$2.0 billion charge related to a fee in connection with the termination of a purchase agreement to acquire NXP Semiconductors N.V., a \$1.2 billion charge related to a fine imposed by the EC and \$629 million in charges related to our Cost Plan, partially offset by a \$676 million benefit resulting from a settlement with the Taiwan Fair Trade Commission (TFTC). Additionally, net loss for fiscal 2018 was 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 Huawei, 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 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

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 2019 and 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 includes non-current income taxes payable and excludes 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 2019 Overview

Revenues were \$24.3 billion, an increase of 7% from fiscal 2018, with net income of \$4.4 billion, compared to net loss of \$5.0 billion in fiscal 2018. Highlights and other events from fiscal 2019 included:

- From October 2018 through September 2019, approximately 1.4 billion smartphones are estimated to have shipped globally, representing a year-over-year decrease of approximately 4% (IDC, Mobile Phone Tracker, 2019Q3), primarily driven by further lengthening of replacement cycles, particularly in developed regions and China where consumer demand is increasingly driven by new product launches and/or innovation cycles as the industry transitions to 5G.
- QCT results in fiscal 2019 were negatively impacted by lower modem sales to Apple.
- In April 2019, we entered into settlement agreements with Apple and its contract manufacturers to dismiss all outstanding litigation between the parties. We also entered into a six-year global patent license agreement with Apple, effective as of April 1, 2019, which includes an option for Apple to extend for two additional years, and a multi-year chipset supply agreement with Apple. In the third quarter of fiscal 2019, we recognized licensing revenues of \$4.7 billion resulting from the settlement, consisting of a payment from Apple and the release of certain of our obligations to pay Apple and its contract manufacturers customer-related liabilities. In addition, our QTL results for the third and fourth quarters of fiscal 2019 included royalties from Apple and its contract manufacturers for sales made in such quarters.
- QTL results in fiscal 2019 reflected certain reductions made in the per unit royalty caps (which provide a maximum royalty amount payable per device) in fiscal 2019 and 2018. While we expect these changes to enhance stability for the long term, they negatively impacted QTL royalty revenues in fiscal 2019. In addition, an increasing number of new and existing licensees have elected to enter into worldwide license agreements covering only our cellular standard essential patents, resulting in lower QTL royalty revenues in fiscal 2019.
- QTL revenues in fiscal 2019 included \$450 million paid under a second interim agreement with Huawei that concluded in the third quarter of fiscal 2019, and although negotiations continue, we have not reached a final agreement with Huawei. This represents a minimum, non-refundable amount for royalties due and does not reflect the full amount of royalties due under the underlying license agreement. We did not record any revenues in the fourth quarter of fiscal 2019 for royalties due on the sales of Huawei's products.
- In May 2019, in *United States Federal Trade Commission (FTC) v. QUALCOMM Incorporated*, the court issued an Order ruling against us and imposing certain injunctive relief. We disagree with the court's conclusions, interpretation of the facts and application of the law. Accordingly, we filed a motion to stay certain of the remedies with, and have appealed the decision to, the Ninth Circuit Court of Appeals (Ninth Circuit). In August 2019, our partial motion to stay was granted in its entirety by the Ninth Circuit. The impact of the Order and the Ninth Circuit granting our motion for partial stay did not have a material impact to QTL licensing revenues recognized in fiscal 2019 based on facts and factors currently known by us.
- In July 2019, the European Commission (EC) issued a decision ruling that between 2009 and 2011 we engaged in predatory pricing with respect to two customers and imposed a fine (2019 EC fine) of approximately 242 million Euros, which resulted in a \$275 million charge to other expenses in the third quarter of fiscal 2019. In October 2019, we filed an appeal of the EC's decision, and we provided a financial guarantee to satisfy the obligation in lieu of a 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. As part of this plan, we initiated a series of targeted actions across our businesses with the objective to reduce annual costs by \$1 billion, excluding incremental costs resulting from any future acquisition of a business. Actions taken under this plan have been completed and resulted in us achieving substantially all of this target in fiscal

2019 based on our run rate exiting the second quarter of fiscal 2019, excluding litigation costs that were in excess of the baseline spend. We recorded net restructuring and restructuring-related charges of \$213 million in fiscal 2019 related to our Cost Plan.

- Beginning in fiscal 2019, certain provisions of the 2017 U.S. Tax Cuts and Jobs Act (the Tax Legislation) became effective, including new taxes on certain foreign income. Our estimated annual effective tax rate for fiscal 2019 reflected the effects of these provisions of the Tax Legislation, and it also included the effects of tax elections made by several of our foreign subsidiaries in the first quarter of fiscal 2019 to be treated as U.S. branches for federal income tax purposes effective beginning in fiscal 2018 and 2019, which resulted in an income tax benefit of \$570 million recorded discretely in the first quarter of fiscal 2019.
- During the third quarter of fiscal 2019, the United States Treasury Department issued new temporary regulations that resulted in a change to the deductibility of dividend income received by a U.S. stockholder from a foreign corporation. As a result of this change, pursuant to an agreement with the Internal Revenue Service, we relinquished the federal tax basis step-up of intellectual property that was distributed in fiscal 2018 by one of our foreign subsidiaries to a U.S. subsidiary. Therefore, the related deferred tax asset was derecognized, resulting in a \$2.5 billion charge to income tax expense in the third quarter of fiscal 2019.

Our Business and Operating Segments

We develop and commercialize foundational technologies and products used in mobile devices and other wireless products. We derive revenues principally from sales of integrated circuit products and licensing our intellectual property, including patents 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 (primarily smartphones), tablets, laptops, data modules, handheld wireless computers and gaming devices, access points and routers, broadband gateway equipment, data cards and infrastructure equipment, IoT devices and applications, other consumer electronics and automotive telematics and infotainment systems. 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, sale and/or use of certain wireless products. Our QSI (Qualcomm Strategic Initiatives) reportable segment makes strategic investments. We also have nonreportable segments, including Qualcomm Government Technologies or QGOV (formerly Qualcomm Cyber Security Solutions) 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. Our revenues have historically fluctuated based on consumer demand for devices, as well as on the timing of customer/licensee device launches and/or innovation cycles (such as the transition to the next generation of wireless technologies). This has resulted in fluctuations in QCT revenues in advance of and during device launches incorporating our products and in QTL revenues when the related royalties were recognized, which prior to fiscal 2019 was when licensees reported their sales and beginning in fiscal 2019 was when the licensees' sales occurred. Our historical trends were impacted by our prior dispute with Apple and its contract manufacturers, which was settled in April 2019. We expect to begin recording revenues for new chipset models under our recently announced multi-year chipset agreement with Apple in the second half of fiscal 2020. These trends may or may not continue in the future. Further, the trends for QTL have been, and/or may in the future be, impacted by disputes and/or resolutions with licensees and/or governmental investigations or proceedings, including the lawsuit filed against us by the FTC.

Results of Operations

Revenues (in millions)

	2019	2018	2017	2019 vs. 2018 Change	2018 vs. 2017 Change
Equipment and services	\$ 14,611	\$ 17,400	\$ 16,647	\$ (2,789)	\$ 753
Licensing	9,662	5,211	5,611	4,451	(400)
	\$ 24,273	\$ 22,611	\$ 22,258	\$ 1,662	\$ 353

2019 vs. 2018

The increase in revenues in fiscal 2019 was primarily due to:

- + \$4.7 billion in licensing revenues recorded in the third quarter of fiscal 2019 resulting from the settlement with Apple and its contract manufacturers (which were not allocated to our segment results)
- \$2.7 billion in lower equipment and services revenues from our QCT segment
- \$451 million in lower licensing revenues from our QTL segment

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 (which was not allocated to our segment results)
- + \$745 million in higher equipment and services revenues from our QCT segment
- \$1.4 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 (which was not allocated to our segment results)

Costs and Expenses (in millions, except percentages)

	2019	2018	2017	2019 vs. 2018 Change	2018 vs. 2017 Change
Cost of revenues	\$ 8,599	\$ 10,244	\$ 9,792	\$ (1,645)	\$ 452
Gross margin	65%	55%	56%		

2019 vs. 2018

The increase in margin percentage in fiscal 2019 was primarily due to:

- + higher licensing revenues resulting from the settlement with Apple and its contract manufacturers in fiscal 2019

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

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 and/or governmental investigations or proceedings, including the lawsuit filed against us by the FTC.

	2019	2018	2017	2019 vs. 2018 Change	2018 vs. 2017 Change
Research and development	\$ 5,398	\$ 5,625	\$ 5,485	\$ (227)	\$ 140
% of revenues	22%	25%	25%		

2019 vs. 2018

The dollar decrease in research and development expenses in fiscal 2019 was primarily due to:

- \$221 million decrease primarily driven by actions taken under our Cost Plan, partially offset by higher share-based compensation expense and higher employee cash incentive programs

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 taken under our Cost Plan, in higher costs related to the development of wireless and integrated circuit technologies, including 5G technologies and RFFE technologies from the formation of RF360 Holdings in the second quarter of fiscal 2017
- \$30 million impairment charge on certain intangible assets recorded in fiscal 2017

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 fiscal 2019, all research and development costs associated with 5G technologies were included in segment results. Additionally, beginning in fiscal 2019, certain research and development costs associated with early research and development that were historically included in our QCT segment were allocated to our QTL segment. The net effect of these changes negatively impacted QTL's EBT by \$489 million in fiscal 2019 and positively impacted QCT's EBT by \$160 million in fiscal 2019.

	2019	2018	2017	2019 vs. 2018 Change	2018 vs. 2017 Change
Selling, general and administrative	\$ 2,195	\$ 2,986	\$ 2,658	\$ (791)	\$ 328
% of revenues	9%	13%	12%		

2019 vs. 2018

The dollar decrease in selling, general and administrative expenses in fiscal 2019 was primarily due to:

- \$287 million in lower professional fees and costs, primarily driven by Broadcom's withdrawn takeover proposal in fiscal 2018 and our then proposed acquisition of NXP Semiconductors N.V. (NXP) in fiscal 2018
- \$235 million in lower litigation costs, primarily resulting from the settlement of our prior dispute with Apple and its contract manufacturers and the end of the District Court trial in the lawsuit filed against us by the FTC
- \$162 million in lower employee-related expenses, primarily driven by actions taken under our Cost Plan
- \$75 million in lower sales and marketing expenses, primarily driven by actions taken under our Cost Plan

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 expense, primarily from the formation of RF360 Holdings
- \$37 million in lower share-based compensation expense, primarily due to actions taken under our Cost Plan

	2019	2018	2017	2019 vs. 2018 Change	2018 vs. 2017 Change
Other	\$ 414	\$ 3,135	\$ 1,742	\$ (2,721)	\$ 1,393

2019

Other expenses in fiscal 2019 consisted of:

- + \$275 million charge related to the 2019 EC fine
- + \$213 million net charges related to our Cost Plan
- \$43 million gain due to the partial recovery of a fine imposed in fiscal 2009 resulting from our appeal of the Korea Fair Trade Commission (KFTC) decision
- \$31 million gain related to a favorable legal settlement

2018

Other expenses in fiscal 2018 consisted of:

- + \$2.0 billion charge related to a fee in connection with the termination of a purchase agreement to acquire NXP

- + \$1.2 billion charge related to a fine imposed by the EC
- + \$629 million in restructuring and restructuring-related charges related to our Cost Plan
- \$676 million benefit related to the settlement of the Taiwan Fair Trade Commission (TFTC) investigation

2017

Other expense in fiscal 2017 consisted of:

- + \$927 million charge related to the 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

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

	2019	2018	2017	2019 vs. 2018 Change	2018 vs. 2017 Change
Interest expense	\$ 627	\$ 768	\$ 494	\$ (141)	\$ 274
Investment and other income, net					
Interest and dividend income	\$ 316	\$ 625	\$ 619	\$ (309)	\$ 6
Net gains on marketable securities	288	41	456	247	(415)
Net gains on other investments	68	83	74	(15)	9
Impairment losses on marketable securities and other investments	(135)	(75)	(177)	(60)	102
Net (losses) gains on derivative instruments	(14)	(27)	32	13	(59)
Equity in net losses of investees	(93)	(145)	(74)	52	(71)
Net gains (losses) on foreign currency transactions	11	37	(30)	(26)	67
	\$ 441	\$ 539	\$ 900	\$ (98)	\$ (361)

In the fourth quarter of fiscal 2018, we implemented a stock repurchase program to repurchase up to \$30 billion of our outstanding common stock. Stock repurchases made under this program have significantly reduced the amount of our cash, cash equivalents and marketable securities, resulting in a decrease to interest and dividend income in fiscal 2019. The increase in net gains on marketable securities in fiscal 2019 was primarily driven by gains resulting from the initial public offering of certain non-marketable equity investments.

The increase in interest expense in fiscal 2018 was primarily due to the issuance of an aggregate principal amount of \$11.0 billion of unsecured floating- and fixed-rate notes in May 2017, of which \$4.0 billion were repaid between May and August 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.

Income Tax Expense (in millions, except percentages)

	2019	2018	2017	2019 vs. 2018 Change	2018 vs. 2017 Change
Income tax expense	\$ 3,095	\$ 5,356	\$ 543	\$ (2,261)	\$ 4,813
Effective tax rate	41%	N/M	18%		

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):

	2019	2018	2017
Expected income tax provision at federal statutory tax rate	\$ 1,571	\$ 97	\$ 1,045
State income tax provision, net of federal benefit	10	2	8
Derecognition of deferred tax asset on distributed intellectual property	2,472	—	—
Benefits from establishing new U.S. net deferred tax assets	(570)	—	—
Benefits from foreign-derived intangible income (FDII) deduction	(419)	—	—
Benefits related to the research and development tax credit	(110)	(136)	(81)
Benefits from foreign income taxed at other than U.S. rates	(54)	(834)	(963)
Nondeductible charges (reversals) related to the EC, KFTC and TFTC investigations	51	(119)	363
Impact of changes in tax reserves and audit settlements for prior year tax positions	20	—	111
Taxes on undistributed foreign earnings	8	87	—
Toll Charge from U.S. tax reform	—	5,236	—
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	—	443	—
Other	116	86	60
Income tax expense	\$ 3,095	\$ 5,356	\$ 543

The 2017 Tax Cuts and Jobs Act (the Tax Legislation), which was enacted during the first quarter of fiscal 2018, significantly revised the United States corporate income tax by, among other things, lowering the corporate income tax rate to 21% and imposing a one-time repatriation tax on deemed repatriated earnings and profits of U.S.-owned foreign subsidiaries (the Toll Charge). The Tax Legislation fundamentally changed the taxation of multinational entities, including a shift from a system of worldwide taxation with deferral to a hybrid territorial system, featuring a participation exemption regime with current taxation of certain foreign income, a minimum tax on low-taxed foreign earnings and new measures to deter base erosion and promote U.S. production. As a fiscal-year taxpayer, certain provisions of the Tax Legislation became effective starting at the beginning of fiscal 2019, including GILTI (global intangible low-taxed income), a new tax on income of foreign corporations, BEAT (base-erosion and anti-abuse tax) and FDII (foreign-derived intangible income). In response to the Tax Legislation and to better align our profits with our activities, we implemented certain tax restructuring in fiscal 2018 and 2019. As a result, beginning in fiscal 2019, substantially all of our income is in the U.S., of which a significant portion qualifies for preferential treatment as FDII at a 13% effective tax rate. The impact of GILTI and BEAT is negligible. Accordingly, our annual effective tax rate for fiscal 2019 reflected the effects of these provisions of the Tax Legislation. Our annual effective tax rate for fiscal 2018 reflected a blended federal statutory rate of approximately 25%.

As a result of the Tax Legislation, in fiscal 2019, several of our foreign subsidiaries made 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. As a result of making these check-the-box elections, we recorded a tax benefit of \$570 million in fiscal 2019. Additionally, in fiscal 2019, the United States Treasury Department issued new temporary regulations that resulted in a change to the deductibility of dividend income received by a U.S. stockholder from a foreign corporation. As a result of this change, pursuant to an agreement with the Internal Revenue Service, we relinquished the federal tax basis step-up of intellectual property that was distributed in fiscal 2018 by one of our foreign subsidiaries to a U.S. subsidiary. Therefore, the related deferred tax asset was derecognized, resulting in a \$2.5 billion charge to income tax expense in fiscal 2019.

Income tax expense for fiscal 2019 also reflected benefits from our FDII deduction (including the impact of the Apple settlement) and research and development credits, as well as the impact of the 2019 EC fine, which is not deductible for tax purposes.

In fiscal 2018, as a result of the Tax Legislation, we recorded a charge of \$5.7 billion to income tax expense, 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 the Tax Legislation.

Income tax expense for fiscal 2018 was also 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 impacted by the EC, KFTC and TFTC fines, and settlement with the TFTC, which were not deductible for tax purposes (or taxable in the case of the settlement) 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, a payment to BlackBerry in connection with an arbitration decision.

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 in effect when certain deferred tax assets reversed. 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. Without these tax incentives, our fiscal 2018 income tax expense would have been higher. During fiscal 2018, one of our Singapore subsidiaries distributed certain intellectual property to a U.S. subsidiary, substantially reducing the benefit of these tax incentives going forward.

Unrecognized tax benefits were \$1.7 billion and \$217 million at September 29, 2019 and September 30, 2018, respectively. The increase in unrecognized tax benefits in fiscal 2019 was primarily due to our plan to apply for a refund of Korean withholding tax (which had an insignificant impact to our income tax provision) as a result of recent court rulings in Korea, among other factors. If successful, the refund will result in a corresponding reduction in U.S. foreign tax credits. We are subject to income taxes in the United States and numerous foreign jurisdictions and are currently under examination by various tax authorities worldwide, primarily related to transfer pricing. 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 29, 2019, 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 2019, 2018 and 2017 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, except percentages)

	2019	2018	2017	2019 vs. 2018 Change	2018 vs. 2017 Change
Revenues					
Equipment and services	\$ 14,318	\$ 17,060	\$ 16,315	\$ (2,742)	\$ 745
Licensing	321	222	164	99	58
Total revenues	\$ 14,639	\$ 17,282	\$ 16,479	\$ (2,643)	\$ 803
EBT (1)	\$ 2,143	\$ 2,966	\$ 2,747	\$ (823)	\$ 219
EBT as a % of revenues	15%	17%	17%	(2%)	—%

(1) Earnings (loss) before taxes.

Beginning in fiscal 2019, we combined our Small Cells business, which sells products designed for the implementation of small cells to address the challenge of meeting the increased demand for mobile data, into our QCT segment. Revenues and operating results related to the Small Cells business were included in nonreportable segments through the end of fiscal 2018. Prior period segment information has not been adjusted to conform to the new segment presentation as such adjustments are insignificant.

Equipment and services revenues mostly relate to sales of Mobile Station Modem (MSM™), Radio Frequency (RF), Power Management (PM) and wireless connectivity integrated circuits. MSM integrated circuits include our stand-alone Mobile Data Modems and Snapdragon platforms, including processors and modems. Approximately 650 million, 855 million and 804 million MSM integrated circuits were sold during fiscal 2019, 2018 and 2017, respectively.

2019 vs. 2018

The decrease in QCT equipment and services revenues was primarily due to:

- \$2.7 billion in lower MSM and accompanying unit shipments, primarily driven by lower modem sales to Apple and a decline in demand from OEMs in China
- \$515 million in lower connectivity product revenues, primarily driven by a decline in demand for Wi-Fi and Bluetooth products from OEMs in China
- + \$552 million in higher revenues per MSM and accompanying unit shipment, primarily driven by a favorable shift in mix related to our premium-tier products

QCT EBT as a percentage of revenues decreased in fiscal 2019 primarily due to:

- lower QCT revenues
- + decrease in operating expenses, primarily driven by a decrease in the amount of research and development expense allocated to QCT in fiscal 2019 and actions under our Cost Plan

QCT accounts receivable decreased by 33% in fiscal 2019 from \$1.36 billion to \$908 million, primarily due to the decrease in revenues, as well as the impact of settling certain receivables in connection with the settlement agreements with Apple and its contract manufacturers. QCT inventories decreased by 17% in fiscal 2019 from \$1.68 billion to \$1.40 billion, primarily due to a decrease in the overall quantity of units on hand.

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 RF360 Holdings, 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 driven 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.

QTL Segment (in millions, except percentages)

	2019	2018	2017	2019 vs. 2018 Change	2018 vs. 2017 Change
Licensing revenues	\$ 4,591	\$ 5,042	\$ 6,412	\$ (451)	\$ (1,370)
EBT	\$ 2,954	\$ 3,404	\$ 5,142	\$ (450)	\$ (1,738)
EBT as a % of revenues	64%	68%	80%	(4%)	(12%)

QTL results in fiscal 2019 reflected the adoption of new revenue recognition guidance that requires us to estimate and recognize QTL royalties in the period in which the associated sales occur, resulting in an acceleration of royalty revenues by one quarter as compared to prior periods. Prior period results have not been adjusted for the adoption of the new accounting guidance.

As a result of the settlement with Apple and its contract manufacturers, QTL results for fiscal 2019 included royalties from Apple and its contract manufacturers for sales made in the June 2019 and September 2019 quarters. Revenues in the first six months of fiscal 2019 and all of fiscal 2018 did not include royalties due on sales of Apple or other products by Apple's contract manufacturers.

QTL revenues in fiscal 2019 included \$450 million of royalties due under a second interim agreement with Huawei that concluded in the third quarter of fiscal 2019, and although negotiations continue, we have not reached a final agreement with Huawei. We did not record any revenues in the fourth quarter of fiscal 2019 for royalties due on the sales of Huawei's products. QTL revenues in fiscal 2018 included \$600 million paid under an interim agreement with Huawei for royalties due after the second quarter of fiscal 2017. These payments represent minimum, non-refundable amounts for royalties due and do 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 Apple or other products by Apple's contract manufacturers and Huawei's products, and Huawei underpaid royalties due in the second quarter of fiscal 2017, which negatively impacted QTL revenues. Royalty revenues related to the products of Apple's contract manufacturers and Huawei were approximately \$1.7 billion in fiscal 2017.

2019 vs. 2018

QTL licensing revenues in fiscal 2019, which primarily related to royalties due on sales made by our licensees in the December 2018, March 2019, June 2019 and September 2019 quarters, decreased compared to licensing revenues in fiscal 2018, which primarily related to royalties due on sales made by our licensees in the September 2017, December 2017, March 2018 and June 2018 quarters, primarily due to:

- \$757 million in lower estimated revenues per unit compared to revenues per reported unit, in part reflecting licensees entering into new 5G multimode license agreements with rights to our cellular standard-essential patents only (compared to previous licenses which also included rights to certain other non-cellular essential patents), and decreases in our per unit royalty caps
- \$150 million in lower royalty revenues from Huawei under the interim agreements
- + \$484 million increase in estimated sales of 3G/4G/5G-based products (including multimode products) compared to reported sales of 3G/4G-based products, primarily due to the new license agreement with Apple, partially offset by a decline in unit demand and a shift in OEM share towards Huawei

QTL EBT as a percentage of revenues decreased in fiscal 2019 primarily due to:

- higher research and development costs due to an increase in the amount of research and development expense allocated to QTL in fiscal 2019
- lower QTL revenues
- + lower selling, general and administrative expenses, primarily from lower litigation costs and lower bad debt expense

QTL accounts receivable increased by 5% in fiscal 2019 from \$1.47 billion to \$1.54 billion, primarily due to the adoption of the new revenue recognition guidance, partially offset by the impact of settling approximately \$960 million of receivables that were related to the short payment in the second quarter of fiscal 2017 of royalties due from Apple's contract manufacturers in connection with the settlement agreements with Apple and its contract manufacturers.

2018 vs. 2017

Excluding the impact of the prior dispute with Apple and its contract manufacturers, as well as the dispute with Huawei, 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

QSI Segment (in millions)

	2019	2018	2017	2019 vs. 2018 Change	2018 vs. 2017 Change
Equipment and services revenues	\$ 152	\$ 100	\$ 113	\$ 52	\$ (13)
EBT	\$ 344	\$ 24	\$ 65	\$ 320	\$ (41)

2019 vs. 2018

The increase in QSI EBT in fiscal 2019 was primarily due to:

- + \$270 million increase in net gains on investments, primarily driven by gains resulting from the initial public offering of certain non-marketable equity investments
- + \$91 million increase resulting from higher revenues and lower costs associated with certain development contracts with an equity method investee
- \$41 million increase in impairment losses on investments, primarily related to an equity method investee

QSI segment assets, which primarily consist of marketable and non-marketable equity investments, increased by 34% in fiscal 2019 from \$1.28 billion to \$1.71 billion, primarily due to recording certain non-marketable equity investments at fair value upon becoming publicly traded and acquiring non-marketable equity investments.

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

Looking Forward

In the coming years, we expect consumer demand for 3G/4G multimode and 4G products and services to decline as new consumer demand for 3G/4G/5G multimode and 5G products and services ramp around the world. We expect growth in new

device categories and industries, resulting from the expanding adoption of certain technologies that are already commonly used in smartphones by industry segments outside traditional cellular industries, such as automotive, computing, 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 May 2019, in *United States Federal Trade Commission (FTC) v. QUALCOMM Incorporated*, the court issued an Order ruling against us and imposing certain injunctive relief. We disagree with the court's conclusions, interpretation of the facts and application of the law. Accordingly, we filed a motion to stay certain of the remedies with, and have appealed the decision to, the Ninth Circuit Court of Appeals (Ninth Circuit). In August 2019, our partial motion to stay was granted in its entirety by the Ninth Circuit. Regulatory authorities in certain jurisdictions have investigated our business practices and instituted proceedings against us, and they or other regulatory authorities may do so in the future. Additionally, certain of our direct and indirect customers and licensees 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 had and could in the future have a material adverse effect on our business, revenues, results of operations, financial condition and cash flows. Depending on the matter, various remedies that could result from an unfavorable resolution include, among others, the loss of our ability to enforce one or more of our patents; injunctions; monetary damages or fines or other orders to pay money; the issuance of orders to cease certain conduct 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, sell chipsets to unlicensed OEMs or modify or renegotiate some or all of our existing license agreements; and determinations that some or all of our license agreements are 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 "Part I, Item 1A. Risk Factors" included in this Annual Report, including the Risk Factors entitled "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 or actions by governments, courts, regulators or agencies, Standards Development Organizations (SDOs) or other industry organizations that harm our business," "Our business, particularly our licensing business, may suffer as a result of adverse rulings in government investigations or proceedings" and "Changes in our patent licensing practices, whether due to governmental investigations or private legal proceedings challenging those practices, or otherwise, could adversely impact our business and results of operations."
- In fiscal 2019, we entered into a second interim agreement with Huawei under which we recognized \$450 million of royalty revenues in fiscal 2019. These payments do not reflect the full amount of royalties due under the underlying license agreement. The second interim agreement concluded in the third quarter of fiscal 2019, and although negotiations continue, we have not reached a final agreement with Huawei. We did not record any revenues in the fourth quarter of fiscal 2019 for royalties due on the sales of Huawei's products. If no agreement is reached, Huawei may not make any other payments or may not make full payments due under the underlying license agreement, which may result in significant legal costs and will negatively impact our future revenues, as well as our financial condition, results of operations and cash flows, until the dispute is resolved.
- We expect our business, particularly QCT, to continue to be impacted by industry dynamics, including:
 - Increased concentration of device share among a few companies, particularly within the premium tier, resulting in significant supply chain leverage for those companies, and exacerbating the negative impact to our business and financial results to the extent those companies do not utilize our chipsets. For example, Huawei has taken, and we believe will continue to take, share in China from other Chinese OEMs, negatively impacting QCT as we sell a limited number of chipsets to Huawei as compared to many of those other OEMs, and the negative impact to our overall business of Huawei share gains at the expense of other Chinese OEMs may be further exacerbated if Huawei continues to not pay us royalties or does not make full payment due to us under its license agreement;
 - Decisions by companies to utilize their own internally-developed integrated circuit products and/or sell such products to others, including by selling them together with certain of their other products;
 - 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 of our competitors in a portion of such devices. Apple is solely using one of our competitors' modems, rather than our modems, in its 2019 iPhone release. For new chipset models, QCT does not expect to begin recording revenues under our recently announced multi-year chipset agreement with Apple until the second half of fiscal 2020;

- 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;
- Slow-down in handset demand as the industry transitions from 4G to 5G and continued reduction in demand in developed regions and China;
- Lengthened handset replacement cycles and consumer demand, which is increasingly driven by new product launches and/or innovation cycles; and
- Continued growth of device share by Chinese OEMs in China and in regions outside of China.
- Current U.S./China trade relations and/or national security protection policies may negatively impact our business, growth prospects and results of operations.
- Initial commercial 5G network deployments and device launches have begun and will continue into fiscal 2020 and beyond. 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 in order to sustain and grow our business long term.
- We continue to invest significant resources to develop our wireless baseband chipsets, 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, RF, connectivity, power management, graphics, audio and video codecs, multimedia, artificial intelligence 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, computing, IoT (including the connected home, smart cities, wearables, voice and music and robotics) and networking, among others.

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. Accordingly, such companies, and/or governments or regulators, may 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 and cash provided by our debt programs. The following table presents selected financial information related to our liquidity as of and for the years ended September 29, 2019 and September 30, 2018 (in millions, except percentages):

	2019	2018	\$ Change	% Change
Cash, cash equivalents and marketable securities	\$ 12,296	\$ 12,123	\$ 173	1%
Accounts receivable, net	2,471	2,904	(433)	(15%)
Inventories	1,400	1,693	(293)	(17%)
Short-term debt	2,496	1,005	1,491	148%
Long-term debt	13,437	15,365	(1,928)	(13%)
Net cash provided by operating activities	7,286	3,908	3,378	86%
Net cash (used) provided by investing activities	(806)	2,381	(3,187)	(134%)
Net cash used by financing activities	(6,386)	(31,500)	25,114	(80%)

The net increase in cash, cash equivalents and marketable securities was primarily due to net cash provided by operating activities and \$414 million in proceeds from issuance of common stock, partially offset by \$3.0 billion in cash dividends paid, \$1.8 billion in payments to repurchase shares of our common stock, a \$1.2 billion payment of purchase consideration related to RF360 Holdings, \$887 million in capital expenditures, \$503 million in net repayments under our commercial paper program and \$266 million in payments of tax withholdings related to the vesting of share-based awards. The net increase in total cash provided by operating activities reflected the settlement with Apple and its contract manufacturers, as well as lower segment revenues and the impact of timing of payments of customer-related liabilities.

Our days sales outstanding, on a consolidated basis, increased to 47 days at September 29, 2019 compared to 30 days at September 30, 2018. The increase in days sales outstanding was primarily due to the adoption of the new revenue recognition guidance in fiscal 2019. The decrease in accounts receivable was primarily due to the settlement with Apple and its contract manufacturers and a decrease in integrated circuit shipments, partially offset by the adoption of the new revenue recognition guidance in fiscal 2019. The decrease in inventories was primarily due to a decrease in the overall quantity of units on hand to align with near-term demand.

Debt. In May 2017, we issued an aggregate principal amount of \$11.0 billion in nine tranches of unsecured floating- and fixed-rate notes, of which \$7.0 billion remains outstanding with maturity dates in 2023 through 2047. Effective interest rates were between 2.70% and 4.47% at September 29, 2019. Interest is payable in arrears quarterly for the floating-rate notes and semi-annually for the fixed-rate notes.

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 2.64% and 4.73% at September 29, 2019. Interest is payable in arrears quarterly for the floating-rate notes and semi-annually for the fixed-rate notes.

Our Revolving Credit Facility provides for unsecured revolving facility loans, swing line loans and letters of credit in the 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. At September 29, 2019, 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 29, 2019, we had \$499 million of commercial paper outstanding with a weighted-average net interest rate of 2.17% and weighted-average remaining days to maturity of 41 days.

We may issue additional debt in the future. The amount and timing of such additional borrowings will be subject to a number of factors, including 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 29, 2019 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 a \$5.2 billion charge recognized in fiscal 2018 related to the Toll Charge. After application of certain tax credits (including excess tax credits generated in fiscal 2019), the total cash payment is expected to be \$2.5 billion. The first payment was made in

January 2019. At September 29, 2019, we estimated future cash payments of \$2.3 billion, payable in installments over the next seven years. At September 29, 2019, \$209 million was included in other current liabilities, reflecting our next installment due in January 2020.

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 2019, 2018 and 2017 (in millions, except per-share amounts):

	Stock Repurchase Program			Dividends		Total
	Shares	Average Price Paid Per Share (1)	Amount	Per Share	Amount	Amount
2019	95.8	\$ 66.18	\$ 1,793	\$ 2.48	\$ 2,968	\$ 4,761
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

(1) Average Price Paid Per Share in fiscal 2018 and 2019 excludes the impact of the three accelerated share repurchase agreements (the ASR Agreements) executed in September 2018 and completed in September 2019. The average price per share under the ASR Agreements was \$64.76.

In fiscal 2018, we announced a stock repurchase program authorizing us to repurchase up to \$30.0 billion of our common stock. In fiscal 2018, we entered into the ASR Agreements to repurchase an aggregate of \$16.0 billion of our common stock, with 178.4 million shares initially delivered to us under the ASR Agreements and retired. The ASR Agreements were completed during the fourth quarter of fiscal 2019, and an additional 68.7 million shares were delivered to us, comprising the final delivery of shares under the ASR Agreements. In total, 247.1 million shares were delivered to us under the ASR Agreements. In fiscal 2019, we repurchased and retired an additional 27.1 million shares of our common stock for \$1.8 billion, before commissions. At September 29, 2019, \$7.1 billion remained authorized for repurchase under the stock repurchase program. Since September 29, 2019, we repurchased and retired 3.9 million shares of common stock for \$300 million.

Our stock repurchase program has significantly reduced and we expect that it 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 15, 2019, we announced a cash dividend of \$0.62 per share on our common stock, payable on December 19, 2019 to stockholders of record as of the close of business on December 5, 2019. 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:

- Our purchase obligations at September 29, 2019, some of which relate to research and development activities and capital expenditures, totaled \$2.9 billion and \$286 million for fiscal 2020 and 2021, respectively, and \$178 million thereafter.
- Our research and development expenditures were \$5.4 billion in fiscal 2019 and \$5.6 billion in fiscal 2018, 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 \$887 million in fiscal 2019 and \$784 million in fiscal 2018. We expect to continue to incur capital expenditures in the future to support our business, including research and development activities.

- At September 29, 2019, \$1.4 billion was accrued related to two fines imposed by the EC (based on the exchange rate at September 29, 2019, including related foreign currency gains and accrued interest). We have provided financial guarantees in lieu of cash payment to satisfy the obligations while we appeal the EU's decisions.
- 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.

Further, regulatory authorities in certain jurisdictions have investigated our business practices and instituted proceedings against us, including the lawsuit filed against us by the FTC, in which a ruling was issued in favor of the FTC in May 2019, and they or other regulatory authorities may do so in the future. Additionally, certain of our direct and indirect customers and licensees, 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 had and could in the future have a material adverse effect on our business, revenues, results of operations, financial condition and cash flows. See "Notes to Consolidated Financial Statements, Note 7. Commitments and Contingencies" and "Part I, Item 1A. Risk Factors" in this Annual Report.

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 29, 2019 (in millions):

	Total	2020	2021-2022	2023-2024	Beyond 2024	No Expiration Date
Purchase obligations (1)	\$ 3,390	\$ 2,926	\$ 394	\$ 69	\$ 1	\$ —
Operating lease obligations	385	138	163	49	35	—
Capital lease obligations (2)	28	17	11	—	—	—
Equity funding and financing commitments (3)	154	5	1	1	—	147
Long-term debt (4)	15,500	2,000	2,000	3,500	8,000	—
Other long-term liabilities (5)(6)	2,974	250	453	574	1,136	561
Total contractual obligations	\$ 22,431	\$ 5,336	\$ 3,022	\$ 4,193	\$ 9,172	\$ 708

- (1) Purchase obligations primarily relate to integrated circuit product inventory obligations, which 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, cancellation of outstanding purchase commitments is generally allowed but requires payment of costs incurred through the date of cancellation, 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 29, 2019.
- (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 29, 2019 included \$1.6 billion in other noncurrent liabilities for uncertain tax positions, which primarily relate to a reduction of U.S. foreign tax credits that will occur if we are successful in our claim for a refund of Korean withholding tax (for which a \$1.4 billion receivable was recorded at September 29, 2019). The majority of this liability will be payable when we receive the Korean tax refund, with the remainder payable over periods up to and including the last payment of the Toll Charge in January 2026. 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 29, 2019 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.

Revenue Recognition. We derive revenues principally from sales of integrated circuit products and licensing of our intellectual property. 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, sale or use of certain wireless products. Licensees pay royalties based on their sales of products incorporating or using our licensed intellectual property and may also pay a fixed license fee in one or more installments. Sales-based 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, laptops and smartwatches, and provide for a maximum royalty amount payable per device. We estimate and recognize sales-based royalties on such licensed products in the period in which the associated sales occur, subject to certain constraints on our ability to estimate such royalties. Our estimates of sales-based royalties are based largely on an assessment of the volume of devices supplied into the market that incorporate or use our licensed intellectual property. We estimate sales-based royalties taking into consideration the mix of such sales on a licensee-by-licensee basis, as well as the licensees’ average wholesale prices of such products, and consider all information (historical, current and forecasted, which may include certain estimates from licensees) that is reasonably available to us. We also consider in our estimates of sales-based royalties any changes in pricing we plan or expect to make. 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. As a result of recognizing revenues in the period in which the licensees’ sales occur using estimates, adjustments to revenues are required in subsequent periods to reflect changes in estimates as new information becomes available, primarily resulting from actual amounts reported by our licensees.

From time to time, regulatory authorities investigate our business practices, particularly with respect to our licensing business, and institute proceedings against us. Depending on the matter, various remedies that could result from an unfavorable resolution include, among others, the loss of our ability to enforce one or more of our patents; injunctions; monetary damages or fines or other orders to pay money; the issuance of orders to cease certain conduct 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, sell chipsets to unlicensed OEMs or modify or renegotiate some or all of our existing license agreements; and determinations that some or all of our license agreements are invalid or unenforceable. Additionally, from time to time, companies initiate various strategies in an attempt to negotiate, renegotiate, reduce and/or eliminate their need to pay royalties to us for the use of our intellectual property, which may include disputing, underreporting, underpaying, not reporting and/or not paying royalties owed to us under their license agreements with us, or reporting to us in a manner that is not in compliance with their contractual obligations. In such cases, we estimate and recognize licensing revenues only when we have a contract, as defined in the revenue recognition guidance, and to the extent it is probable that a significant reversal of cumulative revenues recognized will not occur, both of which may require significant judgment. We analyze the risk of a significant revenue reversal considering both the likelihood and magnitude of the reversal and, if necessary, constrain the amount of estimated revenues recognized in order to mitigate this risk, which may result in recognizing revenues less than amounts contractually owed to us.

In May 2019, in *United States Federal Trade Commission (FTC) v. QUALCOMM Incorporated*, the court issued an Order ruling against us and imposing certain injunctive relief (see “Notes to Consolidated Financial Statements, Note 7. Commitments and Contingencies”). In August 2019, the U.S. Court of Appeals for the Ninth Circuit granted in its entirety Qualcomm’s request for a partial stay of the injunction. While we believe that our business practices do not violate either antitrust law or our FRAND (fair, reasonable and non-discriminatory) licensing commitments, significant evaluation and judgment were required in determining the impact of such ruling on the amount of licensing revenues estimated and

recognized in fiscal 2019. This included, among other items: (i) evaluating whether our license agreements remain valid and enforceable, (ii) evaluating licensees' conduct and whether they remain committed to perform their respective obligations and (iii) determining the expected impact, if any, to revenues of any license agreements that may be renegotiated and/or are newly entered into. Based on this evaluation, the impact of the ruling was not material to QTL licensing revenues in fiscal 2019 based on facts and factors currently known by us. As new information becomes available, we may be required to make adjustments to revenues in subsequent periods to reflect changes in estimates and/or this matter could have a material adverse effect on our ability to recognize future licensing revenues.

Impairment of Other Investments. We hold investments in non-marketable equity instruments in privately held companies, including those accounted for under the equity method. Non-marketable equity instruments do not have readily determinable fair values and are accounted for under the equity method or based on initial cost minus impairment, if any, plus or minus adjustments resulting from observable price changes in orderly transactions for identical or similar securities. 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 anticipated financings, and we record impairment losses in earnings when we believe an investment has experienced a decline in value (such decline in value must be considered other-than-temporary for equity method investments).

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 long-lived 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 2019, 2018 and 2017, we recorded \$203 million, \$273 million and \$76 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 29, 2019.

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 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. 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 special deductions such as FDII (foreign-derived intangible income), tax incentives, intercompany research and development cost-sharing arrangements, transfer pricing, tax credits and the realizability of deferred tax assets. While we believe we have appropriate support for the positions we have taken or that we 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.

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 July 26, 2018, we announced that we had been authorized to repurchase up to \$30 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. At September 29, 2019, the recorded value of our marketable equity securities was \$418 million. A 10% decrease in the market price of our marketable equity securities at September 29, 2019 would have caused a decrease in the carrying amounts of these securities of \$42 million. 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.

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 and demand 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 29, 2019 and 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.

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 impairment losses or realized losses on all or a part of the values of our non-marketable equity investments. At September 29, 2019, the aggregate carrying value of our non-marketable equity investments was included in other noncurrent assets and was \$1.1 billion.

Debt and Interest Rate Swap Agreements

Interest Rate Risk. At September 29, 2019, 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 29, 2019, a hypothetical increase in LIBOR-based interest rates of 100 basis points would cause our interest expense to increase by \$18 million on an annualized basis as it relates to our floating-rate notes and interest rate swap agreements. At September 30, 2018, a hypothetical increase in LIBOR-based interest rates of 100 basis points would have caused 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.

Additionally, we have a commercial paper program that provides for the issuance of up to \$5.0 billion of commercial paper. At September 29, 2019, we had \$499 million 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."

Foreign Currency Options. At September 29, 2019, 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. Based on forecasts at September 30, 2018, assuming the same hypothetical market conditions, we would also not have incurred a loss.

Foreign Currency Forwards. At September 29, 2019, our net asset related to foreign currency forward contracts designated as hedges of foreign currency risk on certain operating expenditure transactions was negligible. 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 incur a negligible loss. Based on forecasts at September 30, 2018, assuming the same hypothetical market conditions, a negligible loss would also have been incurred.

At September 29, 2019, our net asset related to foreign currency 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. Based on forecasts at September 30, 2018, assuming the same hypothetical market conditions, we would also not have incurred a loss.

Net Investment Hedges. At September 29, 2019, we have designated \$1.4 billion of foreign currency-denominated liabilities as hedges of our net investment in certain foreign subsidiaries. If foreign exchange rates were to change unfavorably by 10% in our hedged foreign currency, there would be an increase of \$136 million in the accumulated other comprehensive loss attributable to the cumulative translation adjustment at September 29, 2019 related to our net investment hedges. The change in value recorded in cumulative translation adjustment would be expected to offset a corresponding foreign currency translation gain or loss from our investment in foreign subsidiaries.

Functional Currency. 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.

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 29, 2019 and September 30, 2018 and for each of the three years in the period ended September 29, 2019 and the Report of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm, are included in this Annual Report on pages F-1 through F-44.

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 our 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 our 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 29, 2019.

PricewaterhouseCoopers LLP, the independent registered public accounting firm that audited our consolidated financial statements included in this Annual Report, has also audited the effectiveness of our internal control over financial reporting as of September 29, 2019, as stated in its report which appears on pages F-1 through F-4 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 2019 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 2020 Proxy Statement to be filed with the SEC in connection with our 2020 Annual Meeting of Stockholders (2020 Proxy Statement) in “Proposal 1: Election of Directors” under the heading “Nominees for Election.” Certain information required by this item regarding executive officers is set forth in Item 1 of Part I of this Report under the heading “Executive Officers.” The information required by this item regarding corporate governance is incorporated by reference to our 2020 Proxy Statement in the section titled “Corporate Governance” under the headings “Code of Ethics and Corporate Governance Principles and Practices,” “Board Meetings, Committees and Attendance” and “Director Nominations.”

Item 11. Executive Compensation

The information required by this item is incorporated by reference to our 2020 Proxy Statement in the sections titled “HR and Compensation Committee Report,” “Executive Compensation and Related Information” and “Director Compensation,” and in the section titled “Stock Ownership of Certain Beneficial Owners and Management” under the heading “Compensation Committee Interlocks and Insider Participation.”

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 our 2020 Proxy Statement in the section titled “Stock Ownership of Certain Beneficial Owners and Management,” and in “Proposal 3” under the heading “Equity Compensation Plan Information.”

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

The information required by this item is incorporated by reference to our 2020 Proxy Statement in the section titled “Certain Relationships and Related-Person Transactions,” and in the section titled “Corporate Governance” under the heading “Director Independence.”

Item 14. Principal Accounting Fees and Services

The information required by this item is incorporated by reference to our 2020 Proxy Statement in “Proposal 2: Ratification of Selection 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 29, 2019 and September 30, 2018	F-5
Consolidated Statements of Operations for Fiscal 2019, 2018 and 2017	F-6
Consolidated Statements of Comprehensive Income (Loss) for Fiscal 2019, 2018 and 2017	F-7
Consolidated Statements of Cash Flows for Fiscal 2019, 2018 and 2017	F-8
Consolidated Statements of Stockholders’ Equity for Fiscal 2019, 2018 and 2017	F-9
Notes to Consolidated Financial Statements	F-10
(2) Schedule II - Valuation and Qualifying Accounts for Fiscal 2019, 2018 and 2017	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	Date of First Filing	Exhibit Number	Filed Herewith
2.1	<u>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)</u>	8-K	1/13/2016	2.1	
2.2	<u>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)</u>	10-Q	1/25/2017	2.3	
2.3	<u>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)</u>	10-Q	1/25/2017	2.4	
2.4	<u>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)</u>	10-Q	4/19/2017	2.6	
3.1	<u>Amended and Restated Certificate of Incorporation.</u>	8-K	4/20/2018	3.1	
3.2	<u>Amended and Restated Bylaws.</u>	8-K	7/17/2018	3.1	
4.1	<u>Indenture, dated May 20, 2015, between the Company and U.S. Bank National Association, as trustee.</u>	8-K	5/21/2015	4.1	
4.2	<u>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.</u>	8-K	5/21/2015	4.2	
4.3	<u>Form of Floating Rate Notes due 2020.</u>	8-K	5/21/2015	4.4	
4.4	<u>Form of 2.250% Notes due 2020.</u>	8-K	5/21/2015	4.6	
4.5	<u>Form of 3.000% Notes due 2022.</u>	8-K	5/21/2015	4.7	
4.6	<u>Form of 3.450% Notes due 2025.</u>	8-K	5/21/2015	4.8	
4.7	<u>Form of 4.650% Notes due 2035.</u>	8-K	5/21/2015	4.9	
4.8	<u>Form of 4.800% Notes due 2045.</u>	8-K	5/21/2015	4.10	
4.9	<u>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.</u>	8-K	5/31/2017	4.2	
4.10	<u>Form of Floating Rate Notes due 2023.</u>	8-K	5/31/2017	4.5	
4.11	<u>Form of 2.600% Notes due 2023.</u>	8-K	5/31/2017	4.8	
4.12	<u>Form of 2.900% Notes due 2024.</u>	8-K	5/31/2017	4.9	
4.13	<u>Form of 3.250% Notes due 2027.</u>	8-K	5/31/2017	4.10	

Exhibit Number	Exhibit Description	Form	Date of First Filing	Exhibit Number	Filed Herewith
4.14	Form of 4.300% Notes due 2047.	8-K	5/31/2017	4.11	
4.15	Description of the Company's securities.				X
10.1	Form of Indemnity Agreement between the Company and its directors and officers. (2)	10-K	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	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	11/7/2012	10.105	
10.4	2006 Long-Term Incentive Plan, as amended and restated. (2)	10-Q	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	11/6/2013	10.119	
10.6	Amendment to 2006 Long-Term Incentive Plan, as amended and restated. (2)	10-Q	1/28/2015	10.126	
10.7	2016 Long-Term Incentive Plan. (2)	DEF 14A	1/21/2016	Appendix 5	
10.8	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	4/20/2016	10.32	
10.9	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	4/20/2016	10.33	
10.10	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	4/20/2016	10.34	
10.11	Form of Executive Restricted Stock Unit Grant Notice and Executive Restricted Stock Unit Agreement under the 2016 Long-Term Incentive Plan. (2)	10-K	11/2/2016	10.36	
10.12	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	11/2/2016	10.37	
10.13	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	11/9/2016	10.2	
10.14	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	11/1/2017	10.40	
10.15	Amendment to the Qualcomm Incorporated 2006 and 2016 Long-Term Incentive Plans, as amended and restated. (2)	8-K	12/22/2017	10.2	
10.16	Qualcomm Incorporated Non-Executive Officer Change in Control Severance Plan.	10-Q	1/31/2018	10.42	

Exhibit Number	Exhibit Description	Form	Date of First Filing	Exhibit Number	Filed Herewith
10.17	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	4/25/2018	10.58	
10.18	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	4/25/2018	10.59	
10.19	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	4/25/2018	10.60	
10.20	Amended and Restated QUALCOMM Incorporated 2001 Employee Stock Purchase Plan, as amended. (2)	10-Q	4/25/2018	10.62	
10.21	Qualcomm Incorporated Executive Officer Change in Control Severance Plan. (2)	8-K	5/25/2018	10.1	
10.22	Qualcomm Incorporated Executive Officer Severance Plan. (2)	8-K	9/21/2018	10.1	
10.23	Qualcomm Incorporated 2019 Director Compensation Plan. (2)	10-K	11/7/2018	10.58	
10.24	Qualcomm Incorporated 2016 Long-Term Incentive Plan CEO Performance Stock Option Grant Notice and CEO Performance Stock Option Agreement. (2)	10-K	11/7/2018	10.59	
10.25	Form of Qualcomm Incorporated 2016 Long-Term Incentive Plan Executive Performance Stock Unit Award Grant Notice and Executive Performance Stock Unit Award Agreement. (2)	10-K	11/7/2018	10.60	
10.26	Form of Qualcomm Incorporated 2016 Long-Term Incentive Plan Executive Restricted Stock Unit Grant Notice and Executive Restricted Stock Unit Agreement. (2)	10-K	11/7/2018	10.61	
10.27	Form of 2019 Annual Cash Incentive Plan Performance Unit Agreement. (2)	10-Q	1/30/2019	10.62	
10.28	QUALCOMM Incorporated Non-Qualified Deferred Compensation Plan, as amended and restated effective February 13, 2019. (2)	10-Q	5/1/2019	10.7	
10.29	Form of Qualcomm Incorporated 2016 Long-Term Incentive Plan Executive Performance Stock Unit Award RTSR Shares Grant Notice and ROIC Shares Grant Notice, and Qualcomm Incorporated 2016 Long-Term Incentive Plan Executive Performance Stock Unit Award Agreement (September 30, 2019 - September 25, 2022 Performance Period). (2)				X
10.30	Qualcomm Incorporated 2020 Director Compensation Plan. (2)				X
21	Subsidiaries of the Company.				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 Akash Palkhiwala.				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

Exhibit Number	Exhibit Description	Form	Date of First Filing	Exhibit Number	Filed Herewith
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 Akash Palkhiwala.				X
101.INS	Inline XBRL Instance Document.				X
101.SCH	Inline XBRL Taxonomy Extension Schema.				X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase.				X
101.LAB	Inline XBRL Taxonomy Extension Labels Linkbase.				X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase.				X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase.				X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).				

(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).

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 6, 2019

QUALCOMM Incorporated

By /s/ Steve Mollenkopf
Steve Mollenkopf
Chief Executive Officer

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 6, 2019
/s/ Akash Palkhiwala Akash Palkhiwala	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	November 6, 2019
/s/ Erin Polek Erin Polek	Senior Vice President and Chief Accounting Officer (Principal Accounting Officer)	November 6, 2019
/s/ Barbara T. Alexander Barbara T. Alexander	Director	November 6, 2019
/s/ Mark Fields Mark Fields	Director	November 6, 2019
/s/ Jeffrey W. Henderson Jeffrey W. Henderson	Director	November 6, 2019
/s/ Ann M. Livermore Ann M. Livermore	Director	November 6, 2019
/s/ Harish Manwani Harish Manwani	Director	November 6, 2019
/s/ Mark D. McLaughlin Mark D. McLaughlin	Chairman	November 6, 2019
/s/ Clark T. Randt, Jr. Clark T. Randt, Jr.	Director	November 6, 2019
/s/ Francisco Ros Francisco Ros	Director	November 6, 2019
/s/ Irene B. Rosenfeld Irene B. Rosenfeld	Director	November 6, 2019
/s/ Neil Smit Neil Smit	Director	November 6, 2019
/s/ Anthony J. Vinciquerra Anthony J. Vinciquerra	Director	November 6, 2019

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 29, 2019 and September 30, 2018, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended September 29, 2019, 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 29, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of September 29, 2019 and September 30, 2018 and the results of their operations and their cash flows for each of the three years in the period ended September 29, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of September 29, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for revenues from contracts with customers in fiscal 2019.

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for income tax effects of intra-entity transfers of assets other than inventory in fiscal 2019.

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 appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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

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

Definition and Limitations of Internal Control over Financial Reporting

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

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

Critical Audit Matters

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

Income Taxes

As described in Notes 1 and 3 to the consolidated financial statements, the Company is subject to income taxes in the United States and numerous foreign jurisdictions, and the assessment of tax positions involves dealing with uncertainties in the application of complex tax laws and regulations which are subject to legal and factual interpretation, judgment and uncertainty. The Company recorded a provision for income taxes of \$3.1 billion for the year ended September 29, 2019 and net deferred tax assets of \$1.1 billion, including a valuation allowance of \$1.7 billion, a noncurrent income taxes receivable of \$1.4 billion, and unrecognized tax benefits of \$1.7 billion as of September 29, 2019. Significant judgments and estimates are required when determining the provision for income taxes and other tax positions, which includes the application of complex tax laws and regulations (including new temporary regulations and evolution of court rulings), special deductions such as FDII (foreign-derived intangible income), tax incentives, intercompany research and development cost-sharing arrangements, transfer pricing, tax credits and the realizability of deferred tax assets.

The principal considerations for our determination that performing procedures relating to income taxes is a critical audit matter are the matter involved significant judgment by management when assessing complex tax laws and regulations (including new temporary regulations and recent court rulings) and special deductions such as FDII, transfer pricing and tax credits as it relates to determining the provision for income taxes and other tax positions. This led to a high degree of auditor judgment and significant audit effort in performing our procedures over income taxes, including the use of professionals with specialized skill and knowledge to assist in evaluating the audit evidence obtained from these procedures.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. The procedures included testing the effectiveness of controls relating to the provision of income taxes and other tax positions. The procedures also included, among others, testing the provision for income taxes, including the effective tax rate reconciliation, permanent and temporary differences, inspecting correspondence with tax regulators and external tax advisors, and testing the underlying data and evaluating the significant assumptions used in establishing and measuring tax-related assets and liabilities, including the application of new temporary regulations and recent court rulings. Professionals with specialized skill and knowledge were used to assist in evaluating the application of relevant tax laws, the provision for income taxes and the reasonableness of management's assessments of whether certain tax positions are more-likely-than-not of being sustained.

Legal and Regulatory Proceedings

As described in Notes 1 and 7 to the consolidated financial statements, the Company is currently involved in certain legal and regulatory proceedings. If there is at least a reasonable possibility that a material loss may have been incurred associated with

a pending legal and regulatory proceeding, management discloses such fact, and if reasonably estimable, management provides an estimate of the possible loss or range of possible loss. Management records the 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 a loss can be reasonably estimated with no best estimate in the range, management records the minimum estimated liability. As additional information becomes available, management assesses the potential liability related to pending legal or regulatory proceedings, and revises the estimates and updates the disclosures accordingly. Significant judgment is required by management in both the determination of probability of loss and the determination as to whether a loss is reasonably estimable.

The principal considerations for our determination that performing procedures relating to legal and regulatory proceedings is a critical audit matter are the matter involved significant judgment by management when assessing the likelihood of a loss being incurred and when determining whether a reasonable estimate of the loss or range of loss can be made. This led to a high degree of auditor judgment, subjectivity and significant audit effort in evaluating management's assessment of the loss contingencies associated with the legal and regulatory proceedings.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's evaluation of legal and regulatory proceedings, including controls over determining whether a loss is probable and whether the amount of loss can be reasonably estimated, including related financial statement disclosures. These procedures also included, among others: obtaining and evaluating the letters of audit inquiry with external and internal legal counsel, reading certain correspondence the Company received from regulators, reading certain documents the Company has filed with the courts and related counterparty filings, evaluating the reasonableness of management's process for identifying and assessing loss contingencies regarding whether an unfavorable outcome is probable and reasonably estimable, and evaluating the sufficiency of the Company's legal and regulatory proceedings disclosures in the consolidated financial statements.

Revenue Recognition - Estimation of Sales-based Royalty Revenues

As described in Note 1 to the consolidated financial statements, a vast majority of the \$4.6 billion of the Qualcomm Technology Licensing (QTL) segment's revenues for the year ended September 29, 2019 related to sales-based royalty arrangements and is recognized as revenues when a contract exists and to the extent it is probable that a significant reversal of cumulative revenues will not occur. As disclosed in the financial statements, the Company grants licenses or otherwise provides rights to use portions of its intellectual property portfolio, which, among other rights, includes certain patent rights essential to and/or useful in the manufacture, sale or use of certain wireless products. Licensees pay royalties based on their sales of products incorporating or using the licensed intellectual property, which are generally based upon a percentage of the licensee's selling price of complete licensed products, net of certain permissible deductions (including transportation, insurance, packing costs and other items). If a contract is determined to exist, management estimates and recognizes sales-based royalties on such licensed products in the period in which the associated sales by the licensee occur, subject to certain constraints on management's ability to estimate such royalties. As certain licensees have disputed, underreported, underpaid, not reported and/or not paid royalties owed to the Company under their license agreements, management applied significant judgment to determine whether a contract exists and, if so, the extent to which those revenues are constrained. Management analyzes the risk of a significant revenue reversal considering both the likelihood and magnitude of the reversal and, if necessary, constrains the amount of estimated revenues recognized, which may result in recognizing revenues less than amounts contractually owed to the Company.

The principal considerations for our determination that performing procedures relating to the estimation of sales-based royalty revenues for revenue recognition is a critical audit matter are there was significant judgment by management when determining whether a contract exists and in developing the estimate of sales-based royalties. This in turn led to significant auditor judgment, subjectivity and significant audit effort in performing procedures to evaluate the estimate of sales-based royalties, including management's assessment of the existence of a contract and significant assumptions related to the extent of any constraint.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. The procedures included testing the effectiveness of controls relating to the revenue recognition process, including the estimation of sales-based royalty revenues. The procedures also included, among others, testing management's process for determining the existence of a contract and management's estimate of sales-based royalties including evaluating the reasonableness of significant assumptions related to whether any further constraints are

required and testing the underlying data used in management's estimate for a sample of contracts. Evaluating management's assumptions related to the constraints involved evaluating whether the constraints assumptions used by management were reasonable considering disputes with certain licensees and the impact of any existing litigation on the estimate of sales-based royalties. Evaluating the reasonableness of the estimate of sales-based royalties also involved assessing management's ability to reasonably estimate those revenues by performing a comparison of the estimate for the prior reporting period to the actual royalties reported by licensees in the subsequent period for a sample of contracts.

/s/ PricewaterhouseCoopers LLP

San Diego, California
November 6, 2019

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

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

	September 29, 2019	September 30, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 11,839	\$ 11,777
Marketable securities	421	311
Accounts receivable, net	2,471	2,904
Inventories	1,400	1,693
Other current assets	634	699
Total current assets	16,765	17,384
Deferred tax assets	1,196	936
Property, plant and equipment, net	3,081	2,975
Goodwill	6,282	6,498
Other intangible assets, net	2,172	2,955
Other assets	3,461	1,970
Total assets	\$ 32,957	\$ 32,718
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Trade accounts payable	\$ 1,368	\$ 1,825
Payroll and other benefits related liabilities	1,048	1,081
Unearned revenues	565	500
Short-term debt	2,496	1,005
Other current liabilities	3,458	6,978
Total current liabilities	8,935	11,389
Unearned revenues	1,160	1,620
Income taxes payable	2,088	2,312
Long-term debt	13,437	15,365
Other liabilities	2,428	1,225
Total liabilities	28,048	31,911
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; 1,145 and 1,219 shares issued and outstanding, respectively	343	—
Retained earnings	4,466	542
Accumulated other comprehensive income	100	265
Total stockholders' equity	4,909	807
Total liabilities and stockholders' equity	\$ 32,957	\$ 32,718

See accompanying notes.

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

	Year Ended		
	September 29, 2019	September 30, 2018	September 24, 2017
Revenues:			
Equipment and services	\$ 14,611	\$ 17,400	\$ 16,647
Licensing	9,662	5,211	5,611
Total revenues	<u>24,273</u>	<u>22,611</u>	<u>22,258</u>
Costs and expenses:			
Cost of revenues	8,599	10,244	9,792
Research and development	5,398	5,625	5,485
Selling, general and administrative	2,195	2,986	2,658
Other	414	3,135	1,742
Total costs and expenses	<u>16,606</u>	<u>21,990</u>	<u>19,677</u>
Operating income	7,667	621	2,581
Interest expense	(627)	(768)	(494)
Investment and other income, net	441	539	900
Income before income taxes	7,481	392	2,987
Income tax expense	(3,095)	(5,356)	(543)
Net income (loss)	<u>4,386</u>	<u>(4,964)</u>	<u>2,444</u>
Net loss attributable to noncontrolling interests	—	—	1
Net income (loss) attributable to Qualcomm	<u>\$ 4,386</u>	<u>\$ (4,964)</u>	<u>\$ 2,445</u>
Basic earnings (loss) per share attributable to Qualcomm	\$ 3.63	\$ (3.39)	\$ 1.66
Diluted earnings (loss) per share attributable to Qualcomm	<u>\$ 3.59</u>	<u>\$ (3.39)</u>	<u>\$ 1.64</u>
Shares used in per share calculations:			
Basic	<u>1,210</u>	<u>1,463</u>	<u>1,477</u>
Diluted	<u>1,220</u>	<u>1,463</u>	<u>1,490</u>

See accompanying notes.

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

	Year Ended		
	September 29, 2019	September 30, 2018	September 24, 2017
Net income (loss)	\$ 4,386	\$ (4,964)	\$ 2,444
Other comprehensive loss, net of income taxes:			
Foreign currency translation (losses) gains	(110)	(136)	309
Net unrealized (losses) gains on certain available-for-sale securities, net of tax benefit (expense) of \$0, (\$8) and \$59, respectively	(6)	29	(102)
Reclassification of net realized gains on available-for-sale securities included in net income (loss), net of tax expense of \$0, \$3 and \$156, respectively	(1)	(9)	(286)
Net unrealized gains (losses) on derivative instruments, net of tax (expense) benefit of (\$7), \$6 and \$0, respectively	26	(17)	(49)
Other (losses) gains, net of tax expense of \$0, \$0 and \$3, respectively	(19)	(3)	10
Other reclassifications included in net income (loss), net of tax expense (benefit) of \$1, (\$6) and (\$42), respectively	(4)	17	74
Total other comprehensive loss	<u>(114)</u>	<u>(119)</u>	<u>(44)</u>
Total comprehensive income (loss)	4,272	(5,083)	2,400
Comprehensive loss attributable to noncontrolling interests	—	—	1
Comprehensive income (loss) attributable to Qualcomm	<u>\$ 4,272</u>	<u>\$ (5,083)</u>	<u>\$ 2,401</u>

See accompanying notes.

QUALCOMM Incorporated
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Year Ended		
	September 29, 2019	September 30, 2018	September 24, 2017
Operating Activities:			
Net income (loss)	\$ 4,386	\$ (4,964)	\$ 2,444
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization expense	1,401	1,561	1,461
Income tax provision in excess of (less than) income tax payments	1,976	4,481	(412)
Non-cash portion of share-based compensation expense	1,037	883	914
Net gains on marketable securities and other investments	(356)	(124)	(530)
Indefinite and long-lived asset impairment charges	203	273	76
Impairment losses on marketable securities and other investments	135	75	177
Other items, net	(272)	(49)	(26)
Changes in assets and liabilities:			
Accounts receivable, net	1,373	734	(1,104)
Inventories	273	337	(200)
Other assets	78	24	136
Trade accounts payable	(443)	(94)	(45)
Payroll, benefits and other liabilities	(2,376)	1,005	2,341
Unearned revenues	(129)	(234)	(231)
Net cash provided by operating activities	7,286	3,908	5,001
Investing Activities:			
Capital expenditures	(887)	(784)	(690)
Purchases of debt and equity marketable securities	—	(5,936)	(19,062)
Proceeds from sales and maturities of debt and equity marketable securities	139	9,188	41,715
Purchases of other marketable securities	—	(49)	(2,010)
Proceeds from sales and maturities of other marketable securities	—	50	2,006
Acquisitions and other investments, net of cash acquired	(252)	(326)	(1,544)
Proceeds from other investments	68	222	23
Other items, net	126	16	25
Net cash (used) provided by investing activities	(806)	2,381	20,463
Financing Activities:			
Proceeds from short-term debt	5,989	11,131	8,558
Repayment of short-term debt	(6,492)	(11,127)	(9,309)
Proceeds from long-term debt	—	—	10,953
Repayment of long-term debt	—	(5,513)	—
Proceeds from issuance of common stock	414	603	497
Repurchases and retirements of common stock	(1,793)	(22,580)	(1,342)
Dividends paid	(2,968)	(3,466)	(3,252)
Payments of tax withholdings related to vesting of share-based awards	(266)	(280)	(268)
Payment of purchase consideration related to RF360 Holdings	(1,163)	(157)	(115)
Other items, net	(107)	(111)	(151)
Net cash (used) provided by financing activities	(6,386)	(31,500)	5,571
Effect of exchange rate changes on cash and cash equivalents	(32)	(41)	48
Net increase (decrease) in total cash and cash equivalents	62	(25,252)	31,083
Total cash and cash equivalents at beginning of period	11,777	37,029	5,946
Total cash and cash equivalents at end of period	\$ 11,839	\$ 11,777	\$ 37,029

Reconciliation to the consolidated balance sheets

Cash and cash equivalents	\$ 11,839	\$ 11,777	\$ 35,029
Restricted cash and restricted cash equivalents included in other assets	—	—	2,000
Total cash and cash equivalents at end of period	\$ 11,839	\$ 11,777	\$ 37,029

See accompanying notes.

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

	Year Ended		
	September 29, 2019	September 30, 2018	September 24, 2017
Total stockholders' equity, beginning balance	\$ 807	\$ 30,725	\$ 31,768
Common stock and paid-in capital:			
Balance at beginning of period	—	274	414
Common stock issued under employee benefit plans and the related tax benefits	415	612	499
Repurchases and retirements of common stock	(910)	(1,536)	(1,342)
Share-based compensation	1,104	930	975
Tax withholdings related to vesting of share-based payments	(266)	(280)	(268)
Other	—	—	(4)
Balance at end of period	<u>343</u>	<u>—</u>	<u>274</u>
Retained earnings:			
Balance at beginning of period	542	30,067	30,936
Cumulative effect of accounting changes (Note 1)	3,455	—	—
Net income (loss) attributable to Qualcomm	4,386	(4,964)	2,445
Repurchases and retirements of common stock	(883)	(21,044)	—
Dividends	<u>(3,034)</u>	<u>(3,517)</u>	<u>(3,314)</u>
Balance at end of period	<u>4,466</u>	<u>542</u>	<u>30,067</u>
Accumulated other comprehensive income:			
Balance at beginning of period	265	384	428
Cumulative effect of accounting changes (Note 1)	(51)	—	—
Other comprehensive loss	<u>(114)</u>	<u>(119)</u>	<u>(44)</u>
Balance at end of period	<u>100</u>	<u>265</u>	<u>384</u>
Total Qualcomm stockholders' equity	4,909	807	30,725
Noncontrolling Interests			
Balance at beginning of period	—	—	(10)
Other comprehensive loss	—	—	(1)
Other	—	—	11
Balance at end of period	<u>—</u>	<u>—</u>	<u>—</u>
Total stockholders' equity, ending balance	\$ 4,909	\$ 807	\$ 30,725
Dividends per share announced	\$ 2.48	\$ 2.38	\$ 2.20

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 (Code Division Multiple Access), OFDMA (Orthogonal Frequency Division Multiple Access) and other technologies for use in mobile devices, wireless networks, broadband gateway equipment, consumer electronic devices, devices used in IoT 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. The consolidated financial statements include the assets, liabilities and operating results of Qualcomm and its subsidiaries, including our subsidiary RF360 Holdings Singapore Pte. Ltd (RF360 Holdings) since its formation in fiscal 2017 (Note 9). During the third quarter of fiscal 2018, we eliminated the one-month reporting lag previously used to consolidate RF360 Holdings 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 was included in our results of operations for fiscal 2018. Intercompany transactions and balances 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 estimation of sales-based royalty revenues; the impairment of other investments; the valuation of inventories; the valuation 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 our income tax provision, 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.

Revision of Prior Period Financial Statements. In connection with the preparation of our consolidated financial statements, we identified an immaterial error related to the recognition of certain royalty revenues of our QTL (Qualcomm Technology Licensing) segment in the quarterly and annual periods in fiscal 2018 and third and fourth quarters and annual period in fiscal 2017. In accordance with SAB No. 99, "Materiality," and SAB No. 108, "Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements," we evaluated the error and determined that the related impact was not material to our financial statements for any prior annual or interim period, but that correcting the cumulative impact of the error would be significant to our results of operations for the three months ended December 30, 2018. Accordingly, we have revised previously reported financial information for such immaterial error, as previously disclosed in our Quarterly Report on Form 10-Q for the first, second and third quarters of fiscal 2019. A summary of revisions to certain previously reported financial information presented herein for comparative purposes is included in Note 12.

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 29, 2019 and September 24, 2017 each included 52 weeks. The fiscal years ended September 30, 2018 included 53 weeks.

Recently Adopted Accounting Pronouncements.

Revenue Recognition: In May 2014, the Financial Accounting Standards Board (FASB) issued new accounting guidance related to revenue recognition (ASC 606), which outlines a comprehensive revenue recognition model and supersedes most current revenue recognition accounting guidance and requires increased disclosures. The new accounting guidance defines a five-step approach that 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. We adopted ASC 606 in the first quarter of fiscal 2019 using the modified retrospective transition method only to those contracts that were not completed as of October 1, 2018. We recognized the cumulative effect of initially applying the new revenue accounting guidance as an adjustment to opening retained earnings. Prior period results have not been restated and continue to be reported in accordance with the accounting guidance in effect for those periods (ASC 605). We have implemented new accounting policies, systems, processes and internal controls necessary to support the requirements of ASC 606.

QUALCOMM Incorporated
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Adoption of this new accounting guidance most significantly impacts the timing of sales-based royalty revenues, which are the vast majority of our QTL segment's revenues. Prior to adoption, we recognized sales-based royalties as revenues in the period in which such royalties were reported by licensees, which was after the conclusion of the quarter in which the licensees' sales occurred and when all other revenue recognition criteria had been met. Under the new accounting guidance, we estimate and recognize sales-based royalties in the period in which the associated sales occur, subject to certain constraints on our ability to estimate such amounts, resulting in an acceleration of revenue recognition compared to the historical method under ASC 605. Since we do not invoice for sales-based royalties estimated and recognized in any given quarter until after the conclusion of that quarter (which is generally the following quarter when such royalties are reported by licensees), revenues recognized from sales-based royalties results in unbilled receivables (included in accounts receivable, net on the consolidated balance sheet). The adoption of ASC 606 did not otherwise have a material impact.

The new accounting guidance also impacts the timing of recognizing certain customer incentives, which are recorded as a reduction to revenues in the period that the related revenues are earned. Prior to adoption, we accounted for certain customer incentive arrangements, 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 accounting guidance, we estimate the amount of all customer incentives.

The following table summarizes the cumulative effects of adopting the new revenue accounting guidance (substantially all of which related to the impact to QTL's sales-based royalties) on our consolidated balance sheet at October 1, 2018 (in millions):

	Balance at September 30, 2018	Adjustment	Opening Balance at October 1, 2018
Assets			
Accounts receivable, net	\$ 2,904	\$ 957	\$ 3,861
Other current assets	699	1	700
Deferred tax assets	936	(98)	838
Other assets	1,970	1	1,971
Liabilities			
Unearned revenues, current	\$ 500	\$ 6	\$ 506
Other current liabilities	6,978	125	7,103
Unearned revenues	1,620	(110)	1,510
Stockholders' equity			
Retained earnings	\$ 542	\$ 840	\$ 1,382

QUALCOMM Incorporated
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The following tables summarize the impacts of adopting the new revenue accounting guidance on our consolidated balance sheet and statement of operations (in millions):

Balance Sheet	Balance at September 29, 2019		
	As Reported ASC 606	Adjustment	ASC 605
Assets			
Accounts receivable, net			
\$ 2,471	\$ (1,171)	\$ 1,300	
Other current assets	634	(35)	599
Deferred tax assets	1,196	140	1,336
Other assets	3,461	(62)	3,399
Liabilities			
Unearned revenues, current	\$ 565	\$ 55	\$ 620
Other current liabilities	3,458	(169)	3,289
Unearned revenues	1,160	182	1,342
Other liabilities	2,428	(58)	2,370
Stockholders' equity			
Retained earnings	\$ 4,466	\$ (1,138)	\$ 3,328

Statement of Operations	Year Ended September 29, 2019		
	As Reported ASC 606	Adjustment	ASC 605
Revenues			
Equipment and services			
\$ 14,611	\$ (106)	\$ 14,505	
Licensing	9,662	(270)	9,392
Income tax expense	(3,095)	78	(3,017)
Net income	4,386	(298)	4,088

Adoption of the new accounting guidance had no impact to net cash provided (used) by operating, financing or investing activities on our consolidated statement of cash flows for fiscal 2019.

Financial Assets: In January 2016, the FASB issued new accounting guidance on classifying and measuring financial instruments, which requires that all equity investments, other than equity-method investments, in unconsolidated entities generally be measured at fair value through earnings in the statement of operations. Additionally, it changes the disclosure requirements for financial instruments. We adopted the new accounting guidance in the first quarter of fiscal 2019 using the modified retrospective transition method for investments in marketable securities, which have readily determinable fair values, with the cumulative effect of applying the new accounting guidance recognized as an adjustment to opening retained earnings. Upon adoption, we reclassified \$50 million of unrealized gains, net of the associated tax effects, related to our investments in marketable securities from accumulated other comprehensive income to opening retained earnings. We have applied the prospective transition method for investments in non-marketable securities, which are investments in privately held companies that do not have readily determinable fair values and will recognize, through earnings, any unrealized gains that have accumulated in the period in which there is an observable transaction, if any.

Prior to the adoption of the new accounting guidance in the first quarter of fiscal 2019, investments in marketable equity securities were generally classified as available-for-sale equity investments, with net unrealized gains or losses recorded as a component of accumulated other comprehensive income, net of income taxes. Beginning in fiscal 2019, all gains and losses on investments in marketable equity securities, realized and unrealized, are recognized in investment and other income, net.

Prior to the adoption of the new accounting guidance in the first quarter of fiscal 2019, investments in non-marketable equity securities were recorded at cost less impairment, if any, with any losses resulting from an impairment recognized in investment and other income, net. Beginning in fiscal 2019, investments in non-marketable equity securities are recorded at

QUALCOMM Incorporated
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

cost, less impairments, adjusted for observable price changes in orderly transactions for identical or similar securities. All gains and losses on investments in non-marketable equity securities, realized and unrealized, are recognized in investment and other income, net.

In addition, prior to adoption, we recorded impairment losses in earnings on investments in non-marketable equity securities when an impairment was considered other than temporary. Beginning in fiscal 2019, we record impairment losses in earnings when we believe an investment has experienced a decline in value.

Hedge Instruments: In August 2017, the FASB issued new accounting 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 accounting guidance also modifies disclosure requirements for hedging activities. We adopted the new accounting guidance in the first quarter of 2019 using the modified retrospective transition method and recorded a negligible adjustment to opening retained earnings. The new accounting guidance did not have a material impact on our consolidated financial statements.

Statement of Cash Flows: In August 2016, the FASB issued new accounting guidance related to the classification of certain cash receipts and cash payments in the statement of cash flows. We adopted the new accounting guidance in the first quarter of fiscal 2019 using the retrospective transition method for each period presented, which did not have a material impact on our consolidated statements of cash flows.

In November 2016, the FASB issued new accounting guidance that requires companies to include restricted cash and cash equivalents as a component in total cash and cash equivalents on the statement of cash flows. As a result, the consolidated statement of cash flows no longer reflects transfers between cash and cash equivalents and restricted cash and cash equivalents. We adopted the new accounting guidance in the first quarter of fiscal 2019 using the retrospective transition method, which resulted in certain amounts in fiscal 2017 and 2018 being adjusted to conform to the new accounting guidance. In fiscal 2017, \$2.0 billion was designated as collateral for outstanding letters of credit in connection with the then proposed acquisition of NXP Semiconductors N.V. (NXP). During fiscal 2017, \$1.3 billion of the amount held as collateral was invested in time deposits that were not considered cash equivalents, which subsequently matured. This resulted in an adjustment to investing activities for fiscal 2017 to reflect the \$1.3 billion purchase and subsequent maturity of time deposits and a \$2.0 billion reduction in investing activities to reflect removal of the activity of restricted cash and cash equivalents. In fiscal 2018, such restricted cash and cash equivalents were released from restriction, which resulted in a decrease in investing activities by such amount.

Income Taxes: In October 2016, the FASB issued new accounting guidance that changes the accounting for the income tax effects of intra-entity transfers of assets other than inventory. Under the new accounting 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 adopted the new accounting guidance in the first quarter of fiscal 2019 using the modified retrospective transition method, with the cumulative effect of applying the new accounting guidance recognized as an adjustment to opening retained earnings of \$2.6 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. During fiscal 2019, the United States Treasury Department issued new temporary regulations that resulted in a change to the deductibility of dividend income received by a U.S. stockholder from a foreign corporation. As a result of this change, pursuant to an agreement with the Internal Revenue Service, we relinquished the federal tax basis step-up in such distributed intellectual property. Therefore, the related deferred tax asset was derecognized, resulting in a \$2.5 billion charge to income tax expense in fiscal 2019 (Note 3). The ongoing impact of this accounting guidance will be dependent on the facts and circumstances of any transactions within its scope.

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 marketable equity securities and available-for-sale debt securities 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 with all realized and unrealized gains and losses on investments in marketable equity securities and realized gains and losses on available-for-sale debt securities recognized in investment and

QUALCOMM Incorporated
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

other income, net. Net unrealized gains or losses on available-for-sale debt 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 debt 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; the market and economy in general; 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 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.

Equity Method and Non-marketable Equity Investments. 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. Our share of gains and losses in equity method investments are recorded in investment and other income, net. Non-marketable equity investments (for which we do not have significant influence or control) are investments without readily determinable fair values that are recorded based on initial cost minus impairment, if any, plus or minus adjustments resulting from observable price changes in orderly transactions for identical or similar securities. All gains and losses on investments in non-marketable equity securities, realized and unrealized, are recognized in investment and other income, net. We monitor equity method investments and non-marketable equity securities 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 anticipated financings, and recognize a charge to investment and other income, net for the difference between the estimated fair value and the carrying value. For equity method investments, we record impairment losses in earnings only when impairments are considered other-than-temporary.

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 29, 2019 and September 30, 2018, the aggregate fair value of our interest rate swaps related to our long-term debt issued in May 2015 was negligible and \$50 million, respectively. The fair values of the swaps were recorded in other current liabilities and other noncurrent assets at September 29, 2019 and in other noncurrent liabilities at September 30, 2018. At September 29, 2019 and 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.

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 such contracts that are designated as cash flow hedging instruments

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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. 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 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 were negligible at September 29, 2019. 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.

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 29, 2019 and September 30, 2018.

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

	September 29, 2019	September 30, 2018
Forwards	\$ 878	\$ 682
Options	176	1,375
Swaps	1,750	1,750
	<hr/> <u>\$ 2,804</u>	<hr/> <u>\$ 3,807</u>

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

	September 29, 2019	September 30, 2018
Chinese renminbi	\$ 463	\$ 650
Euro	—	938
Indian rupee	440	336
Japanese yen	12	17
United States dollar	1,889	1,866
	<hr/> <u>\$ 2,804</u>	<hr/> <u>\$ 3,807</u>

Other Hedging Activities. We have designated \$1.4 billion of foreign currency-denominated liabilities related to the fines imposed by the European Commission (Note 7) as hedges of our net investment in certain foreign subsidiaries as of September 29, 2019. Gains and losses arising from the portion of these balances that are designated as net investment hedges are recorded in accumulated other comprehensive income as a component of the foreign currency translation adjustment.

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:

- 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.

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- 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 measured at fair value 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. 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 to occur.

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 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 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 liabilities and related assets, which consist of mutual funds 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 primarily estimated using either a real options or discounted cash flow model, which includes 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 receivables that will not be collected. We determine the allowance based on customer credit-worthiness, historical payment experience, the age of outstanding receivables and collateral, to the extent applicable.

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 15 years. Leasehold improvements and buildings on leased land are amortized over the shorter of their estimated useful lives, not to exceed 15 years and 30 years, respectively, 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.

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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. 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. As a result of the adoption of ASC 606, we revised our revenue recognition policy beginning in fiscal 2019 as follows.

We derive revenues principally from sales of integrated circuit products and licensing of our intellectual property. We also generate revenues from licensing system software and by performing development and other services and from other product sales. 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 performance obligations.

Revenues from sales of our products are recognized upon transfer of control to the customer, which is generally at the time of shipment. Revenues from providing services are typically recognized over time as our performance obligation is satisfied. Revenues from providing services and licensing system software were each less than 5% 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, sale or use of certain wireless products. Licensees pay royalties based on their sales of products incorporating or using our licensed intellectual property and may also pay a fixed license fee in one or more installments. Sales-based 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, laptops and smartwatches, and provide for a maximum royalty amount payable per device. We estimate and recognize sales-based royalties on such licensed products in the period in which the associated sales occur, subject to certain constraints on our ability to estimate such royalties. Our estimates of sales-based royalties are based largely on an assessment of the volume of devices supplied into the market that incorporate or use our licensed intellectual property. We estimate sales-based royalties taking into consideration the mix of such sales on a licensee-by-licensee basis, as well as the licensees' average wholesale prices of such products, and consider all information (historical, current and forecasted, which may include certain estimates from licensees) that is reasonably available to us. We also consider in our estimates of sales-based royalties any changes in pricing we plan or expect to make. 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. As a result of recognizing revenues in the period in which the licensees' sales occur using

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estimates, adjustments to revenues are required in subsequent periods to reflect changes in estimates as new information becomes available, primarily resulting from actual amounts reported by our licensees.

License agreements that require payment of license fees contain a single performance obligation that represents ongoing access to a portfolio of intellectual property over the license term since such agreements provide the licensee the right to access a portfolio of intellectual property that exists at inception of the license agreement and to updates and new intellectual property that is added to the licensed portfolio during the term of the agreement that are highly interdependent or interrelated. Since we expect to expend efforts to develop and transfer updates to our licensed portfolio on an even basis, license fees are recognized as revenues on a straight-line basis over the estimated period of benefit of the license to the licensee.

We account for a contract with a customer/licensee when it is legally enforceable, the parties are committed to perform their respective obligations, the rights of the parties regarding the goods and/or services to be transferred are identified, payment terms are identified, the contract has commercial substance and collectability of substantially all of the consideration is probable. If all such conditions are not met, revenues and any associated receivables are generally not recognized until such time that the required conditions are met. Cash collected from customers prior to a contract existing is recorded to other customer-related liabilities in other current liabilities.

From time to time, regulatory authorities investigate our business practices, particularly with respect to our licensing business, and institute proceedings against us. Depending on the matter, various remedies that could result from an unfavorable resolution include, among others, the loss of our ability to enforce one or more of our patents; injunctions; monetary damages or fines or other orders to pay money; the issuance of orders to cease certain conduct 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, sell chipsets to unlicensed original equipment manufacturers (OEMs) or modify or renegotiate some or all of our existing license agreements; and determinations that some or all of our license agreements are invalid or unenforceable. Additionally, from time to time, companies initiate various strategies in an attempt to negotiate, renegotiate, reduce and/or eliminate their need to pay royalties to us for the use of our intellectual property, which may include disputing, underreporting, underpaying, not reporting and/or not paying royalties owed to us under their license agreements with us, or reporting to us in a manner that is not in compliance with their contractual obligations. In such cases, we estimate and recognize licensing revenues only when we have a contract, as defined in the revenue recognition guidance, and to the extent it is probable that a significant reversal of cumulative revenues recognized will not occur, both of which may require significant judgment. We analyze the risk of a significant revenue reversal considering both the likelihood and magnitude of the reversal and, if necessary, constrain the amount of estimated revenues recognized in order to mitigate this risk, which may result in recognizing revenues less than amounts contractually owed to us.

In May 2019, in *United States Federal Trade Commission (FTC) v. QUALCOMM Incorporated*, the court issued an Order ruling against us and imposing certain injunctive relief (Note 7). In August 2019, the U.S. Court of Appeals for the Ninth Circuit granted in its entirety Qualcomm's request for a partial stay of the injunction. While we believe that our business practices do not violate either antitrust law or our FRAND (fair, reasonable and non-discriminatory) licensing commitments, significant evaluation and judgment were required in determining the impact of such ruling on the amount of licensing revenues estimated and recognized in fiscal 2019. This included, among other items: (i) evaluating whether our license agreements remain valid and enforceable, (ii) evaluating licensees' conduct and whether they remain committed to perform their respective obligations and (iii) determining the expected impact, if any, to revenues of any license agreements that may be renegotiated and/or are newly entered into. Based on this evaluation, the impact of the ruling was not material to QTL licensing revenues in fiscal 2019 based on facts and factors currently known by us. As new information becomes available, we may be required to make adjustments to revenues in subsequent periods to reflect changes in estimates and/or this matter could have a material adverse effect on our ability to recognize future licensing revenues.

We measure revenues (including our estimates of sales-based royalties) based on the amount of consideration we expect to receive in exchange for products or services. We record reductions to revenues for customer incentive arrangements, including volume-related and other pricing rebates and cost reimbursements for marketing and other activities involving certain of our products and technologies, in the period that the related revenues are earned. The charges for such arrangements are recorded as a reduction to accounts receivable, net or as other current liabilities based on whether we have the intent and contractual right of offset. Certain of these charges are considered variable consideration and are included in the transaction price primarily based on estimating the most likely amount expected to be provided to the customer/licensee.

Revenues recognized from sales of our products and sales-based royalties are generally included in accounts receivable, net (including unbilled receivables) based on our unconditional right to payment for satisfied or partially satisfied performance obligations.

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We disaggregate our revenues by segment (Note 8) and type of product and services (as presented on our consolidated statement of operations), as we believe this best depicts how the nature, amount, timing and uncertainty of our revenues and cash flows are affected by economic factors. Substantially all of QCT's revenues consist of equipment revenues that are recognized at a point in time, and substantially all of QTL's revenues represent licensing revenues that are recognized over time.

Revenues recognized from performance obligations satisfied (or partially satisfied) in previous periods were \$4.1 billion for fiscal 2019, and primarily related to licensing revenues of \$4.7 billion recognized in the third quarter of fiscal 2019 (a portion of which was attributable to fiscal 2019) resulting from the settlement with Apple and its contract manufacturers, consisting of a payment from Apple and the release of certain of our obligations to pay Apple and the contract manufacturers customer-related liabilities.

Unearned revenues (which are considered contract liabilities) consist primarily of license fees for intellectual property with continuing performance obligations. In fiscal 2019, we recognized revenues of \$481 million that were recorded as unearned revenues at October 1, 2018.

Remaining performance obligations, substantially all of which are included in unearned revenues, represent the aggregate amount of the transaction price of certain customer contracts yet to be recognized as revenues as of the end of the reporting period and exclude revenues related to (a) contracts that have an original expected duration of one year or less and (b) sales-based royalties (i.e., future royalty revenues) pursuant to our license agreements. Our remaining performance obligations are primarily comprised of certain customer contracts for which QTL received license fees upfront. At September 29, 2019, we had \$1.7 billion of remaining performance obligations, of which \$544 million, \$453 million, \$440 million, \$196 million and \$50 million is expected to be recognized as revenues for each of the subsequent five years from fiscal 2020 through 2024, respectively, and \$27 million thereafter.

Concentrations. 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 24%, 15% and 10% of total consolidated revenues in fiscal 2019 and 11%, 16% and 11% in fiscal 2018. Revenues from two customers/licensees comprised 18% and 17% in fiscal 2017. Revenues in 2018 and 2017 were negatively impacted by our prior dispute with Apple Inc. and its contract manufacturers (Hon Hai Precision Industry Co., Ltd./Foxconn, its affiliates and other suppliers to Apple). Revenues in fiscal 2019 were positively impacted by our settlement of such dispute in the third quarter of fiscal 2019.

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. 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. Share-based compensation expense is adjusted to exclude amounts related to share-based awards that are expected to be forfeited.

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

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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 ourselves 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 recorded 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.

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.

Earnings (Loss) Per Common Share. Basic earnings (loss) per common share is computed by dividing net income (loss) attributable to Qualcomm by the weighted-average number of common shares outstanding during the reporting period. Diluted earnings per common share is 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. The accelerated share repurchase agreements were entered into in fiscal 2018 (Note 4) and, due to the net loss in fiscal 2018, all of the common share equivalents issuable under share-based compensation plans 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):

	2019	2018	2017
Dilutive common share equivalents included in diluted shares	10.4	—	13.0
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	7.5	51.2	3.0

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Recent Accounting Pronouncements Not Yet Adopted.

Leases: In February 2016, the FASB issued new accounting guidance related to leases that outlines a comprehensive lease accounting model and supersedes the current lease accounting guidance. The new accounting guidance requires lessees to recognize right-of-use assets and corresponding lease liabilities on the balance sheet for leases with a lease term 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 accounting guidance in the first quarter of fiscal 2020 using the modified retrospective approach and will not restate comparative periods. In addition, we will elect certain practical expedients. We do not expect finance leases to be material at the time of adoption. We currently expect to record lease assets and liabilities of approximately \$400 million to \$500 million on our consolidated balance sheet upon adoption. We do not expect the adoption of the new accounting guidance will have a material impact on our consolidated statements of operations or consolidated statements of cash flows.

Financial Assets: In June 2016, the FASB issued new accounting guidance that changes the accounting for recognizing impairments of financial assets. Under the new accounting guidance, credit losses for financial assets held at amortized cost will be estimated based on expected losses rather than the current incurred loss impairment model. The new accounting guidance also modifies the impairment model for available-for-sale debt securities. The new accounting guidance generally requires the modified retrospective transition method, with the cumulative effect of applying the new accounting 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. We will adopt the new accounting guidance in the first quarter of fiscal 2021, and the impact of this new accounting guidance will largely depend on the composition and credit quality of our investment portfolio, as well as economic conditions at the time of adoption.

Note 2. Composition of Certain Financial Statement Items

Accounts Receivable (in millions)

	September 29, 2019	September 30, 2018
Trade, net of allowances for doubtful accounts of \$47 and \$56, respectively	\$ 1,046	\$ 2,667
Unbilled receivables	1,411	201
Other	14	36
	\$ 2,471	\$ 2,904

The increase in unbilled receivables was primarily due to the adoption of new revenue recognition guidance in fiscal 2019 (Note 1). Accounts receivable, trade at September 30, 2018 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 did not have the contractual right to offset these amounts. In the third quarter of fiscal 2019, we entered into settlement agreements with Apple and its contract manufacturers to dismiss all outstanding litigation between the parties, and as a result, these amounts, as well as others, were settled.

Inventories (in millions)

	September 29, 2019	September 30, 2018
Raw materials	\$ 77	\$ 72
Work-in-process	667	715
Finished goods	656	906
	\$ 1,400	\$ 1,693

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<i>Property, Plant and Equipment (in millions)</i>	September 29, 2019	September 30, 2018
Land	\$ 170	\$ 186
Buildings and improvements	1,546	1,575
Computer equipment and software	1,356	1,419
Machinery and equipment	4,007	3,792
Furniture and office equipment	86	85
Leasehold improvements	301	325
Construction in progress	182	79
	7,648	7,461
Less accumulated depreciation and amortization	(4,567)	(4,486)
	\$ 3,081	\$ 2,975

Depreciation and amortization expense related to property, plant and equipment for fiscal 2019, 2018 and 2017 was \$674 million, \$776 million and \$684 million, respectively.

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 2019 and 2018 (in millions):

	QCT	QTL	Nonreportable Segments	Total
Balance at September 24, 2017	\$ 5,581	\$ 741	\$ 301	\$ 6,623
Impairments (Note 10)	—	(22)	(107)	(129)
Other (1)	6	(1)	(1)	4
Balance at September 30, 2018 (2)	5,587	718	193	6,498
Acquisitions	18	—	—	18
Impairments (Note 10)	—	—	(146)	(146)
Other (1)	(40)	(1)	(47)	(88)
Balance at September 29, 2019 (2)	<u>\$ 5,565</u>	<u>\$ 717</u>	<u>\$ —</u>	<u>\$ 6,282</u>

(1) Includes changes in goodwill amounts resulting from the sale of our mobile health nonreportable segment in fiscal 2019, foreign currency translation and purchase accounting adjustments.

(2) Cumulative goodwill impairments were \$812 million and \$666 million at September 29, 2019 and September 30, 2018, respectively.

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

	September 29, 2019			September 30, 2018		
	Gross Carrying Amount	Accumulated Amortization	Weighted- average amortization period (years)	Gross Carrying Amount	Accumulated Amortization	Weighted- average amortization period (years)
Technology-based	\$ 5,958	\$ (3,851)	10	\$ 6,334	\$ (3,461)	10
Other	134	(69)	9	149	(67)	8
	<u>\$ 6,092</u>	<u>\$ (3,920)</u>	<u>10</u>	<u>\$ 6,483</u>	<u>\$ (3,528)</u>	<u>10</u>

All of these intangible assets are subject to amortization and the amortization expense related to these intangible assets was \$727 million, \$785 million and \$777 million for fiscal 2019, 2018 and 2017, respectively. Amortization expense related to these intangible assets is expected to be \$610 million, \$496 million, \$399 million, \$275 million and \$121 million for each of the five years from fiscal 2020 through 2024, respectively, and \$271 million thereafter. At September 29, 2019 and September 30, 2018, all acquired in-process research and development projects were completed and are being amortized over

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their useful lives.

Equity Method and Non-marketable Equity Investments. The carrying values of our equity method and non-marketable equity investments are recorded in other noncurrent assets and were as follows (in millions):

	September 29, 2019	September 30, 2018
Equity method investments	\$ 343	\$ 402
Non-marketable equity investments	787	650
	<u>\$ 1,130</u>	<u>\$ 1,052</u>

Transactions with equity method investees are considered related party transactions. Revenues from certain services contracts were \$152 million and \$100 million with one of our equity method investees in fiscal 2019 and 2018, respectively, and revenues from certain license and services contracts were \$165 million with two of our equity method investees in fiscal 2017. 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. At September 29, 2019 and September 30, 2018, we had no accounts receivable from these equity method investees.

During fiscal 2019, non-marketable debt and equity securities (non-cash consideration) with an aggregate estimated fair value of \$98 million were received related to a development contract with one of our equity method investees, which was recognized as revenues in fiscal 2019. In addition, during fiscal 2019, non-marketable equity securities (non-cash consideration) with an estimated fair value of \$53 million were received in connection with the sale of certain assets as part of the Cost Plan (Note 10).

Other Current Liabilities (in millions)

	September 29, 2019	September 30, 2018
Customer incentives and other customer-related liabilities	\$ 1,129	\$ 3,500
Accrual for EC fines (Note 7)	1,379	1,167
Income taxes payable	480	453
RF360 Holdings Put and Call Option (Note 9)	—	1,137
Other	470	721
	<u>\$ 3,458</u>	<u>\$ 6,978</u>

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Accumulated Other Comprehensive Income. Changes in the components of accumulated other comprehensive income, net of income taxes, in stockholders' equity during fiscal 2019 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 Gains (Losses) on Other Available- for-Sale Securities	Net Unrealized Gain (Loss) on Derivative Instruments	Other Gains (Losses)	Total Accumulated Other Comprehensive Income
Balance at September 30, 2018	\$ 11	\$ 23	\$ 243	\$ (13)	\$ 1	\$ 265
Other comprehensive (loss) income before reclassifications	(110)	—	(6)	26	(19)	(109)
Reclassifications from accumulated other comprehensive income	—	—	(51)	(5)	—	(56)
Other comprehensive (loss) income	(110)	—	(57)	21	(19)	(165)
Balance at September 29, 2019	<u>\$ (99)</u>	<u>\$ 23</u>	<u>\$ 186</u>	<u>\$ 8</u>	<u>\$ (18)</u>	<u>\$ 100</u>

Reclassifications from accumulated other comprehensive income included adjustments of \$51 million to the opening retained earnings balance as a result of the adoption of new accounting guidance in the first quarter of fiscal 2019 related to financial instruments and hedge instruments (Note 1). Reclassifications from accumulated other comprehensive income (excluding adjustments to opening retained earnings) related to available-for-sale securities were negligible during fiscal 2019 and 2018. Reclassifications from accumulated other comprehensive income related to available-for-sale securities were \$201 million during fiscal 2017 and were recorded in investment and other income, net. Reclassifications from accumulated other comprehensive income related to foreign currency translation adjustments and derivative instruments were negligible for all periods presented.

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

	2019	2018	2017
Cost of revenues	\$ 35	\$ 38	\$ 38
Research and development	725	594	588
Selling, general and administrative	277	251	288
Share-based compensation expense before income taxes	1,037	883	914
Related income tax benefit	(184)	(140)	(161)
	<u>\$ 853</u>	<u>\$ 743</u>	<u>\$ 753</u>

Other Income, Costs and Expenses. Other expenses in fiscal 2019 consisted of a \$275 million charge for the fine imposed by the European Commission (EC) related to the Icera complaint (2019 EC fine) (Note 7) and \$213 million in net restructuring and restructuring-related charges related to our Cost Plan (Note 10), partially offset by a \$43 million gain due to the partial recovery of a fine we previously paid to the Korea Fair Trade Commission (KFTC) and a \$31 million gain related to a favorable legal settlement.

Other expenses in fiscal 2018 consisted of a \$2.0 billion charge related to a fee paid in connection with the termination of our purchase agreement to acquire NXP, a \$1.2 billion charge for the fine imposed by the EC related to an investigation (2018 EC fine) (Note 7) and \$629 million in restructuring and restructuring-related charges related to our Cost Plan, partially offset by a \$676 million benefit related to the settlement of the Taiwan Fair Trade Commission (TFTC) investigation.

Other expenses for fiscal 2017 consisted of a \$927 million charge related to the a fine imposed by the KFTC (Note 7), including related foreign currency losses, a \$778 million charge related to the TFTC fine and \$37 million in restructuring and restructuring-related charges related to our Strategic Realignment Plan that was completed in fiscal 2017.

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Investment and Other Income, Net (in millions)

	2019	2018	2017
Interest and dividend income	\$ 316	\$ 625	\$ 619
Net gains on marketable securities	288	41	456
Net gains on other investments	68	83	74
Impairment losses on marketable securities and other investments	(135)	(75)	(177)
Net (losses) gains on derivative instruments	(14)	(27)	32
Equity in net losses of investees	(93)	(145)	(74)
Net gains (losses) on foreign currency transactions	11	37	(30)
	<u>\$ 441</u>	<u>\$ 539</u>	<u>\$ 900</u>

Net gains on marketable securities included realized gains and losses of available-for-sale debt securities. During fiscal 2019 and 2018, gross realized gains or losses on sales of available-for-sale debt securities were negligible. During fiscal 2017, gross realized gains and losses on sales of available-for-sale debt securities were \$361 million and \$98 million, respectively.

Note 3. Income Taxes

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

	2019	2018	2017
Current provision (benefit):			
Federal	\$ 1,563	\$ 2,559	\$ 72
State	2	(1)	3
Foreign	(407)	777	1,256
	<u>1,158</u>	<u>3,335</u>	<u>1,331</u>
Deferred provision (benefit):			
Federal	2,037	1,846	(598)
State	17	1	4
Foreign	(117)	174	(194)
	<u>1,937</u>	<u>2,021</u>	<u>(788)</u>
	<u>\$ 3,095</u>	<u>\$ 5,356</u>	<u>\$ 543</u>

The foreign component of the income tax provision (benefit) included 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):

	2019	2018	2017
United States	\$ 7,042	\$ (1,834)	\$ (795)
Foreign	439	2,226	3,782
	<u>\$ 7,481</u>	<u>\$ 392</u>	<u>\$ 2,987</u>

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In fiscal 2018 and 2017, 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):

	2019	2018	2017
Expected income tax provision at federal statutory tax rate	\$ 1,571	\$ 97	\$ 1,045
State income tax provision, net of federal benefit	10	2	8
Derecognition of deferred tax asset on distributed intellectual property	2,472	—	—
Benefits from establishing new U.S. net deferred tax assets	(570)	—	—
Benefits from foreign-derived intangible income (FDII) deduction	(419)	—	—
Benefits related to research and development tax credits	(110)	(136)	(81)
Benefits from foreign income taxed at other than U.S. rates	(54)	(834)	(963)
Nondeductible charges (reversals) related to the EC, KFTC and TFTC investigations	51	(119)	363
Impact of changes in tax reserves and audit settlements for prior year tax positions	20	—	111
Taxes on undistributed foreign earnings	8	87	—
Toll Charge from U.S. tax reform	—	5,236	—
Valuation allowance on deferred tax assets related to NXP termination fee	—	494	—
Remeasurement of deferred taxes due to changes in statutory rate due to U.S. tax reform	—	443	—
Other	116	86	60
	<hr/> <u>\$ 3,095</u>	<hr/> <u>\$ 5,356</u>	<hr/> <u>\$ 543</u>

The 2017 Tax Cuts and Jobs Act (the Tax Legislation), which was enacted during the first quarter of fiscal 2018, significantly revised the United States corporate income tax by, among other things, lowering the corporate income tax rate to 21% and imposing a one-time repatriation tax on deemed repatriated earnings and profits of U.S.-owned foreign subsidiaries (the Toll Charge). The Tax Legislation fundamentally changed the taxation of multinational entities, including a shift from a system of worldwide taxation with deferral to a hybrid territorial system, featuring a participation exemption regime with current taxation of certain foreign income, a minimum tax on low-taxed foreign earnings and new measures to deter base erosion and promote U.S. production. As a fiscal-year taxpayer, certain provisions of the Tax Legislation became effective starting at the beginning of fiscal 2019, including GILTI (global intangible low-taxed income), a new tax on income of foreign corporations, BEAT (base-erosion and anti-abuse tax) and FDII (foreign-derived intangible income). In response to the Tax Legislation and to better align our profits with our activities, we implemented certain tax restructuring in fiscal 2018 and 2019. As a result, beginning in fiscal 2019, substantially all of our income is in the U.S., of which a significant portion qualifies for preferential treatment as FDII at a 13% effective tax rate. The impact of GILTI and BEAT is negligible. Accordingly, our annual effective tax rate for fiscal 2019 reflected the effects of these provisions of the Tax Legislation. Our annual effective tax rate for fiscal 2018 reflected a blended federal statutory rate of approximately 25%.

As a result of the Tax Legislation, in fiscal 2019, several of our foreign subsidiaries made 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. Although beginning in fiscal 2019 the income of these entities will be included in our consolidated U.S. tax return, we believe that by treating these foreign subsidiaries 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. As a result of making these check-the-box elections, we recorded a tax benefit of \$570 million in the first quarter of fiscal 2019 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 new accounting guidance in the first quarter of fiscal 2019, we recorded a deferred tax asset of approximately \$2.6 billion primarily related to the distributed intellectual property, with an adjustment to opening retained earnings (Note 1). During the third quarter of fiscal 2019, the United States Treasury Department issued new temporary regulations that resulted in a change to the deductibility of dividend income

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received by a U.S. stockholder from a foreign corporation. As a result of this change, pursuant to an agreement with the Internal Revenue Service, we relinquished the federal tax basis step-up of intellectual property that was distributed in fiscal 2018 by one of our foreign subsidiaries to a U.S. subsidiary. Therefore, the related deferred tax asset was derecognized, resulting in a \$2.5 billion charge to income tax expense in fiscal 2019.

In the fourth quarter of fiscal 2019, as a result of recent court rulings in Korea, among other factors, we decided to apply for a partial refund claim for taxes previously withheld from licensees in Korea on payments due under their license agreements to which we have claimed a foreign tax credit in the United States. As a result, we established a noncurrent income taxes receivable of \$1.4 billion (recorded in other assets and included as foreign current benefit in the components of the income tax provision) and a noncurrent liability for uncertain tax benefits of \$1.4 billion (recorded in other liabilities and included as federal current provision in the components of the income tax provision).

Income tax expense for fiscal 2019 also reflected benefits from our FDII deduction (including the impact of the Apple settlement) and research and development credits, as well as the impact of the 2019 EC fine, which is not deductible for tax purposes.

In fiscal 2018, as a result of the Tax Legislation, we recorded a charge of \$5.7 billion to income tax expense, 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. After application of certain tax credits, the total cash payment is expected to be \$2.5 billion. The first payment was made on January 15, 2019. At September 29, 2019, we estimated remaining future payments of \$2.3 billion for the Toll Charge, after application of certain tax credits (including excess tax credits generated in fiscal 2019), which is payable in installments over the next seven years. At September 29, 2019, \$209 million was included in other current liabilities, reflecting the next installment due in January 2020.

Income tax expense for fiscal 2018 was also 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 impacted by the EC, KFTC and TFTC fines, and settlement with the TFTC, which were not deductible for tax purposes (or taxable in the case of the settlement) 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, a payment to BlackBerry in connection with an arbitration decision.

Income tax expense for fiscal 2017 reflected an 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 in effect when certain deferred tax assets reversed. 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. During fiscal 2018, one of our Singapore subsidiaries distributed certain intellectual property to a U.S. subsidiary reducing the benefit of these tax incentives almost entirely going forward. 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):

	2019	2018	2017
Additional income tax expense	\$ —	\$ 652	\$ 493
Reduction to diluted earnings (loss) per share	—	0.45	0.33

We continue to assert that substantially all of our foreign earnings are not indefinitely reinvested. We recorded a charge of \$8 million and \$87 million to income tax expense in fiscal 2019 and 2018, respectively, related to outside basis differences that are not permanently reinvested. Income tax expense in fiscal 2018 reflected a one-time charge resulting from a change in our assertion as a result of the Tax Legislation, which eliminated certain material tax effects on the repatriation of cash to the United States. At September 29, 2019, we had not recorded a deferred tax liability of approximately \$25 million related to foreign withholding taxes on approximately \$225 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

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earnings outside the United States, we would have to adjust the income tax provision in the period we make such determination.

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

	September 29, 2019	September 30, 2018
Unused tax credits	\$ 1,137	\$ 1,044
Accrued liabilities and reserves	648	396
Unused net operating losses	619	696
Unearned revenues	376	478
Unrealized losses on other investments and marketable securities	164	126
Share-based compensation	115	97
Other	144	26
Total gross deferred tax assets	3,203	2,863
Valuation allowance	(1,672)	(1,529)
Total net deferred tax assets	1,531	1,334
Intangible assets	(216)	(322)
Property, plant and equipment	(102)	(49)
Unrealized gains on other investments and marketable securities	(99)	(26)
Accrued withholding taxes	(19)	(90)
Accrued revenues	—	(202)
Other	(2)	—
Total deferred tax liabilities	(438)	(689)
Net deferred tax assets	<u>\$ 1,093</u>	<u>\$ 645</u>
Reported as:		
Non-current deferred tax assets	\$ 1,196	\$ 936
Non-current deferred tax liabilities (1)	(103)	(291)
	<u>\$ 1,093</u>	<u>\$ 645</u>

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

At September 29, 2019, we had unused federal net operating loss carryforwards of \$188 million expiring from 2021 through 2035, unused state net operating loss carryforwards of \$740 million expiring from 2020 through 2039 and unused foreign net operating loss carryforwards of \$2.1 billion, of which \$1.8 billion expire in 2027. At September 29, 2019, we had unused state tax credits of \$1.0 billion, of which substantially all may be carried forward indefinitely, unused federal tax credits of \$169 million expiring from 2026 through 2030 and unused tax credits of \$34 million in foreign jurisdictions expiring from 2033 through 2039. We do not expect our federal net operating loss carryforwards to expire unused.

At September 29, 2019, we have provided a valuation allowance on certain state tax credits, foreign deferred tax assets, federal capital losses, state net operating losses and federal foreign tax credits of \$1.0 billion, \$536 million, \$83 million, \$26 million and \$20 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. 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.

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A summary of the changes in the amount of unrecognized tax benefits for fiscal 2019, 2018 and 2017 follows (in millions):

	2019	2018	2017
Beginning balance of unrecognized tax benefits	\$ 217	\$ 372	\$ 271
Additions based on prior year tax positions	1,238	7	92
Reductions for prior year tax positions and lapse in statute of limitations	(3)	(11)	(11)
Additions for current year tax positions	253	18	23
Settlements with taxing authorities	—	(169)	(3)
Ending balance of unrecognized tax benefits	<u>\$ 1,705</u>	<u>\$ 217</u>	<u>\$ 372</u>

Of the \$1.7 billion of unrecognized tax benefits, \$1.6 billion has been recorded to other noncurrent liabilities. We believe that it is reasonably possible that certain unrecognized tax benefits recorded at September 29, 2019 may result in a cash payment in fiscal 2020. Unrecognized tax benefits at September 29, 2019 included \$125 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 related receivables or 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 increase in unrecognized tax benefits in fiscal 2019 was primarily due to our plan to apply for a refund of Korean withholding tax (which had an insignificant impact to our income tax provision). If successful, the refund will result in a corresponding reduction in U.S. foreign tax credits. The decrease in unrecognized tax benefits in fiscal 2018 was primarily due to an agreement reached with the Internal Revenue Service (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 likely that the total amount of unrecognized tax benefits at September 29, 2019 will increase in fiscal 2020 as licensees in Korea continue to withhold taxes on future payments due under their licensing agreements at a rate higher than we believe is owed; such increase is not expected to have a significant impact on our income tax provision.

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. 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. At September 29, 2019, 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 \$1.1 billion, \$877 million and \$1.0 billion for fiscal 2019, 2018 and 2017, 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. 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 remaining \$3.2 billion was recorded as a reduction to stockholders’ equity as an unsettled forward contract indexed to our own stock. During September 2019, the ASR Agreements were completed, and an additional 68.7 million shares were delivered to us, which were retired, and the forward contract was settled with no

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adjustment to stockholders' equity. In total, we purchased 247.1 million shares based on the volume-weighted average stock price of our common stock during the terms of the transactions, less a discount.

During fiscal 2019, 2018 and 2017, we repurchased and retired an additional 27.1 million, 24.2 million and 22.8 million shares of common stock, respectively, for \$1.8 billion, \$1.4 billion and \$1.3 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, if any. At September 29, 2019, \$7.1 billion remained authorized for repurchase under our stock repurchase program. Since September 29, 2019, we repurchased and retired 3.9 million shares of common stock for \$300 million.

Shares Outstanding. Shares of common stock outstanding at September 29, 2019 were as follows (in millions):

	2019
Balance at beginning of period	1,219
Issued	22
Repurchased	(96)
Balance at end of period	<u><u>1,145</u></u>

Dividends. On October 15, 2019, we announced a cash dividend of \$0.62 per share on our common stock, payable on December 19, 2019 to stockholders of record as of the close of business on December 5, 2019.

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 \$64 million, \$78 million and \$76 million in fiscal 2019, 2018 and 2017, 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 29, 2019, approximately 50.4 million shares were available for future grant under the 2016 Plan.

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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:

	Number of Shares (In thousands)	Weighted- Average Grant Date Fair Value	Aggregate Intrinsic Value (In billions)
RSUs outstanding at September 30, 2018	23,097	\$ 62.12	
RSUs granted	20,879	63.10	
RSUs canceled/forfeited	(2,812)	62.45	
RSUs vested	(14,475)	62.64	
RSUs outstanding at September 29, 2019	<u>26,689</u>	<u>\$ 62.57</u>	<u>2.0</u>

The weighted-average estimated fair values of employee RSUs that contain only service requirements to vest granted during fiscal 2018 and 2017 were \$62.61 and \$66.54 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 7%, 6% and 5% in fiscal 2019, 2018 and 2017, respectively.

At September 29, 2019, total unrecognized compensation expense related to such non-vested RSUs granted prior to that date was \$1.1 billion, which is expected to be recognized over a weighted-average period of 1.9 years. The total vest-date fair value of such RSUs that vested during fiscal 2019, 2018 and 2017 was \$977 million, \$940 million and \$820 million, respectively. The total shares withheld to satisfy statutory tax withholding requirements related to all share-based awards were approximately 4.2 million, 4.4 million and 4.2 million in fiscal 2019, 2018 and 2017, 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. Total outstanding stock option shares at September 29, 2019 and September 30, 2018, were 1.1 million and 5.1 million, respectively. The decrease in the number of stock option shares outstanding during fiscal 2019 related primarily to stock options exercised.

The total tax benefits realized, including the excess tax benefits, related to share-based awards during fiscal 2019, 2018 and 2017 were \$237 million, \$254 million and \$301 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 29, 2019. The shares reserved for future issuance were approximately 32.8 million at September 29, 2019. During fiscal 2019, 2018 and 2017, approximately 6.1 million, 5.8 million and 5.7 million shares, respectively, were issued under the plan at an average price of \$42.13, \$49.41 and \$45.29 per share, respectively. At September 29, 2019, total unrecognized compensation expense related to non-vested purchase rights granted prior to that date was \$27 million. We recorded cash received from the exercise of purchase rights of \$257 million, \$286 million and \$260 million during fiscal 2019, 2018 and 2017, respectively.

Note 6. Debt

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, of which \$8.5 billion remained outstanding at September 29, 2019. 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 other general corporate purposes. In May 2017, we issued an aggregate principal amount of

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\$11.0 billion of unsecured floating- and fixed-rate notes (May 2017 Notes) with varying maturities, of which \$7.0 billion remained outstanding at September 29, 2019. 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, a then proposed acquisition and other related transactions and for general corporate purposes.

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

	September 29, 2019		September 30, 2018	
	Amount	Effective Rate	Amount	Effective Rate
May 2015 Notes				
Floating-rate three-month LIBOR plus 0.55% notes due May 20, 2020	\$ 250	2.74%	\$ 250	2.93%
Fixed-rate 2.25% notes due May 20, 2020	1,750	2.64%	1,750	3.13%
Fixed-rate 3.00% notes due May 20, 2022	2,000	2.89%	2,000	3.73%
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	4.73%
Fixed-rate 4.80% notes due May 20, 2045	1,500	4.72%	1,500	4.72%
May 2017 Notes				
Floating-rate three-month LIBOR plus 0.73% notes due January 30, 2023	500	3.06%	500	3.14%
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	3.45%	2,000	3.46%
Fixed-rate 4.30% notes due May 20, 2047	1,500	4.47%	1,500	4.47%
Total principal	<u>15,500</u>		<u>15,500</u>	
Unamortized discount, including debt issuance costs	(75)		(85)	
Hedge accounting fair value adjustments	9		(50)	
Total long-term debt	<u><u>\$ 15,434</u></u>		<u><u>\$ 15,365</u></u>	
Reported as:				
Short-term debt	\$ 1,997		\$ —	
Long-term debt	13,437		15,365	
Total	<u><u>\$ 15,434</u></u>		<u><u>\$ 15,365</u></u>	

At September 29, 2019, future principal payments were \$2.0 billion in fiscal 2020, \$2.0 billion in fiscal 2022, \$2.0 billion in fiscal 2023, \$1.5 billion in fiscal 2024 and \$8.0 billion after fiscal 2024; no principal payments are due in fiscal 2021. At September 29, 2019 and September 30, 2018, the aggregate fair value of the notes, based on Level 2 inputs, was approximately \$16.5 billion and \$15.1 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 29, 2019, 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 as interest expense in the current period. We did not enter into 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-term debt, net of cash received from the related interest rate swaps, was \$563 million, \$662 million and \$313 million during fiscal 2019, 2018 and 2017, respectively.

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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 29, 2019 and September 30, 2018, we had \$499 million and \$1.0 billion, respectively, of outstanding commercial paper recorded as short-term debt with a weighted-average interest rate of 2.17% and 2.35%, respectively, which included fees paid to the commercial paper dealers, and weighted-average remaining days to maturity of 41 days and 16 days, respectively. The carrying value of the outstanding commercial paper approximated its estimated fair value at September 29, 2019 and September 30, 2018.

Revolving Credit Facility. We have an Amended and Restated Revolving Credit Facility (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 Revolving Credit Facility, if drawn, are expected to be used for general corporate purposes. Loans under the Revolving Credit Facility will bear interest, at our option, at either the reserve-adjusted Eurocurrency Rate or the Base Rate (both of which are determined in accordance with the 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%, respectively. The Revolving Credit Facility has a facility fee, which accrues at a rate of 0.07% per annum. At September 29, 2019 and September 30, 2018, we had not borrowed any funds under the Revolving Credit Facility.

Debt Covenants. The Revolving Credit Facility requires 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 29, 2019 and September 30, 2018, we were in compliance with the applicable covenants under the Revolving Credit Facility.

Note 7. Commitments and Contingencies

Legal and Regulatory Proceedings.

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 (Ninth Circuit). A hearing was held on July 11, 2019, and on July 23, 2019, the Ninth Circuit affirmed the District Court's dismissal of the second amended complaint in its entirety. On August 29, 2019, the Ninth Circuit denied the plaintiffs' request for en banc review. The plaintiffs have until November 27, 2019 to file a petition for certiorari to request that the United States Supreme Court hear the matter or the dismissal becomes final. 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, we filed a motion to dismiss the consolidated amended complaint. On March 18, 2019, the court denied our motion to dismiss the complaint. Discovery has commenced and is scheduled to be completed by March 3, 2020. We believe the plaintiffs' claims are without merit.

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In re Qualcomm/Broadcom Merger Securities Litigation (formerly 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 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 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 sought unspecified damages, interest, fees and costs. On January 22, 2019, the Court appointed the lead plaintiff in the action and designated that the case be captioned “In re Qualcomm/Broadcom Merger Securities Litigation.” On March 18, 2019, the plaintiffs filed a consolidated complaint asserting the same basic theories of liability and requesting the same basic relief. On May 10, 2019, we filed a motion to dismiss the consolidated complaint. The court has not yet ruled on our motion. 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. At September 29, 2019, 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. On January 23, 2019, the United States Court of Appeals for the Ninth Circuit (Ninth Circuit) granted us permission to appeal the court’s class certification order. On January 24, 2019, the court stayed the case pending our appeal. A hearing on our appeal of the class certification order is scheduled for December 2, 2019 before the Ninth Circuit. We believe the plaintiffs’ claims are without merit.

Canadian Consumer Class Action Lawsuits: Since November 9, 2017, eight 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 U.S. consumer class action complaint. The complaints seek unspecified damages. One of the complaints in the Supreme Court of British Columbia has since been discontinued by the plaintiffs. We have not yet answered the complaints. We expect the Ontario and British Columbia complaints will be consolidated into one proceeding in British Columbia with a class certification hearing no earlier than late 2020. Once the certification hearing is scheduled, we expect the court to set a timetable for the exchange of evidence and briefing. As to the complaint filed in Quebec, on April 15, 2019, the Quebec Superior Court held a class certification hearing, and on April 30, 2019, the court issued an order certifying a class. Before the end of calendar 2019, we expect the court to set a timetable for pre-trial steps, including discovery as well as the exchange of expert evidence. We do not expect the trial to occur before 2022. We believe the plaintiffs’ claims are without merit.

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 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

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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. Hearings on our action to cancel the KFTC's decision were held before the Seoul High Court on August 12 and 14, 2019. Under the current procedural plan of the Seoul High Court, we believe these will be the final hearings before that court issues its 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. On July 16, 2015, the EC announced that it had initiated formal proceedings in this matter. On July 18, 2019, the EC issued a decision confirming their preliminary view that between 2009 and 2011, we engaged in predatory pricing by selling certain baseband chipsets to two customers at prices below cost with the intention of hindering competition and imposed a fine of approximately 242 million euros. On October 1, 2019, we filed an appeal of the EC's decision with the General Court of the European Union. The court has not yet ruled on our appeal. We believe that our business practices do not violate the EU competition rules.

In the third quarter of fiscal 2019, we recorded a charge of \$275 million to other expenses related to such EC fine. We provided a financial guarantee in the first quarter of fiscal 2020 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. In the fourth quarter of fiscal 2019, we designated the liability as a hedge of our net investment in certain foreign subsidiaries, with gains and losses recorded in accumulated other comprehensive income as a component of the foreign currency translation adjustment. At September 29, 2019, the liability, including related foreign currency gains and accrued interest (which, to the extent they were not related to the net investment hedge, were recorded in investment and other income, net), was \$265 million and included in other current liabilities.

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 January 24, 2018, the EC issued a decision finding that pursuant to an agreement with Apple Inc. we paid significant amounts to Apple on the condition that it exclusively use our baseband chipsets in its smartphones and tablets, reducing Apple's incentives to source baseband chipsets from our competitors and harming competition and innovation for certain baseband chipsets, 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 yet ruled on our appeal. We believe that our business practices do not violate the EU competition rules.

In the first quarter of fiscal 2018, we recorded a charge of \$1.2 billion to other expenses related to such EC fine. 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. In the first quarter of fiscal 2019, we designated the liability as a hedge of our net investment in certain foreign subsidiaries, with gains and losses recorded in accumulated other comprehensive income as a component of the foreign currency translation adjustment. At September 29, 2019, the liability, including related foreign currency gains and accrued interest (which, to the extent they were not related to the net investment hedge, were recorded in investment and other income, net), was \$1.11 billion and included in other current liabilities.

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 cellular modem chipsets on the purchaser first agreeing to a license to

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our cellular standard-essential patents, paying incentives to purchasers of cellular modem chipsets to induce them to accept certain license terms, refusing to license our cellular standard-essential patents to our competitors, and entering into alleged exclusive dealing arrangements with Apple Inc. The complaint sought a permanent injunction against our alleged violations of the FTCA and other unspecified ancillary equitable relief. 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 cellular modem chipsets. On November 6, 2018, the court granted the FTC's partial summary judgment motion. Trial was held January 4-29, 2019.

On May 21, 2019, the court issued an Order setting forth its Findings of Fact and Conclusions of Law. The court concluded that we had monopoly power in the CDMA and premium-tier LTE (Long Term Evolution) cellular modem chip markets, and that we had used that power in these two markets to engage in anticompetitive acts, including (1) using threats of lack of access to cellular modem chip supply to coerce OEMs (original equipment manufacturers) to accept license terms that include unreasonably high royalty rates; (2) refusing to license our cellular standard-essential patents to competitors selling cellular modem chips; and (3) entering into exclusive dealing arrangements with OEMs that foreclosed our rivals. The court further found that the royalties we charge OEMs are unreasonably high and reflect the use of our monopoly power over CDMA and premium-tier LTE cellular modem chips rather than just the value of our patents. The court concluded that our unreasonably high royalties constitute an anticompetitive surcharge on cellular modem chips sold by our competitors, which increases the effective price of our competitors' cellular modem chips, reduces their margins and results in exclusivity. The court also found that our practice of not licensing competitors' cellular modem chips violated our commitments to certain standard-development organizations and a duty under the antitrust laws to license competing cellular modem chip makers and helped us maintain our royalties at unreasonably high levels. Finally, the court found that incentive funds entered into with certain OEMs further harmed competing cellular modem chip makers' ability to undermine our monopoly position, prevented rivals from entering the market and restricted the sales of those competitors that do enter. The court concluded that the combined effect of our conduct, together with our monopoly power, harmed the competitive process.

The court imposed the following injunctive relief: (1) we must not condition the supply of cellular modem chips on a customer's patent license status, and we must negotiate or renegotiate license terms with customers in good faith under conditions free from the threat of lack of access to or discriminatory provision of cellular modem chip supply or associated technical support or access to software; (2) we must make exhaustive cellular standard-essential patent licenses available to cellular modem chip suppliers on fair, reasonable and non-discriminatory (FRAND) terms and submit, as necessary, to arbitral or judicial dispute resolution to determine such terms; (3) we may not enter into express or de facto exclusive dealing agreements for the supply of cellular modem chips; and (4) we may not interfere with the ability of any customer to communicate with a government agency about a potential law enforcement or regulatory matter. The court also ordered us to submit to compliance and monitoring procedures for a period of seven years and to report to the FTC on an annual basis regarding our compliance with the above remedies.

We disagree with the court's conclusions, interpretation of the facts and application of the law. Accordingly, on May 28, 2019, we filed a Motion to Stay Pending Appeal in the court, which the court denied on July 3, 2019. On May 31, 2019, we filed with the court a Notice of Appeal to the United States Court of Appeals for the Ninth Circuit (Ninth Circuit). On July 8, 2019, we filed a Motion for Partial Stay of Injunction Pending Appeal and a Consent Motion to Expedite Appeal in the Ninth Circuit. On August 23, 2019, the Ninth Circuit granted our Motion. Thus, pending the resolution of the appeal in the Ninth Circuit or until further order of the Ninth Circuit, the portions of the court's injunction requiring that we must (i) make exhaustive cellular standard-essential patent licenses available to cellular modem chip suppliers and (ii) not condition the supply of cellular modem chips on a customer's patent license status and must negotiate or renegotiate license terms with customers are stayed. On July 10, 2019, the Ninth Circuit granted our Motion to Expedite Appeal, and we expect briefing to be completed before the end of the calendar year. We currently expect the Ninth Circuit to schedule oral argument for February 2020.

Contingent losses and other considerations: We will continue to vigorously defend ourselves 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 fines, we have not recorded any accrual at September 29, 2019 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

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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 29, 2019, 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 29, 2019 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, cancellation of outstanding purchase commitments is generally allowed but requires payment of costs incurred through the date of cancellation, 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 20 years and with provisions in certain leases for cost-of-living increases. Rental expense for fiscal 2019, 2018 and 2017 was \$146 million, \$160 million and \$129 million, respectively.

Obligations under our purchase agreements, which primarily relate to integrated circuit product inventory obligations, and future minimum lease payments under our operating leases at September 29, 2019 were as follows (in millions):

	Purchase Obligations	Operating Leases
2020	\$ 2,926	\$ 138
2021	286	97
2022	108	66
2023	53	31
2024	16	18
Thereafter	1	35
Total	\$ 3,390	\$ 385

Other Commitments. At September 29, 2019, we have committed to fund certain strategic investments up to \$154 million, most of which 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.

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, sale or use 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

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investee. We also have nonreportable segments, including Qualcomm Government Technologies or QGOV (formerly Qualcomm Cyber Security Solutions) 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 and property, plant and equipment 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.

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 fiscal 2019, all research and development costs associated with 5G technologies were included in segment results. Additionally, beginning in fiscal 2019, certain research and development costs associated with early research and development that were historically included in our QCT segment were allocated to our QTL segment. The net effect of these changes negatively impacted QTL's EBT by \$489 million in fiscal 2019 and positively impacted QCT's EBT by \$160 million in fiscal 2019.

Beginning in fiscal 2019, we combined our Small Cells business, which sells products designed for the implementation of small cells to address the challenge of meeting the increased demand for mobile data, into our QCT segment. Revenues and operating results related to the Small Cells business were included in nonreportable segments through the end of fiscal 2018. Prior period segment information has not been adjusted to conform to the new segment presentation as such adjustments are insignificant.

The table below presents revenues, EBT and total assets for reportable segments (in millions):

	2019	2018	2017
Revenues			
QCT	\$ 14,639	\$ 17,282	\$ 16,479
QTL	4,591	5,042	6,412
QSI	152	100	113
Reconciling items	4,891	187	(746)
Total	\$ 24,273	\$ 22,611	\$ 22,258
EBT			
QCT	\$ 2,143	\$ 2,966	\$ 2,747
QTL	2,954	3,404	5,142
QSI	344	24	65
Reconciling items	2,040	(6,002)	(4,967)
Total	\$ 7,481	\$ 392	\$ 2,987
Assets			
QCT	\$ 2,307	\$ 3,041	\$ 3,830
QTL	1,541	1,472	1,735
QSI	1,708	1,279	1,037
Reconciling items	27,401	26,926	58,896
Total	\$ 32,957	\$ 32,718	\$ 65,498

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, accounts receivable and other investments. QSI assets at

QUALCOMM Incorporated
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

September 29, 2019, September 30, 2018 and September 24, 2017 included \$230 million, \$283 million and \$254 million, respectively, related to investments in equity method investees. 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 and non-marketable securities, property, plant and equipment, deferred tax assets, goodwill, intangible assets, noncurrent income taxes receivable and assets of nonreportable segments. The net book value of long-lived tangible assets located outside of the United States was \$1.4 billion at September 29, 2019, September 30, 2018 and September 24, 2017. The net book values of long-lived tangible assets located in the United States were \$1.7 billion, \$1.6 billion and \$1.8 billion at September 29, 2019, September 30, 2018 and September 24, 2017, 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):

	2019	2018	2017
China (including Hong Kong)	\$ 11,610	\$ 15,149	\$ 14,579
Ireland	2,957	1	—
United States	2,774	603	513
South Korea	2,400	3,175	3,538
Other foreign	4,532	3,683	3,628
	<hr/> <u>\$ 24,273</u>	<hr/> <u>\$ 22,611</u>	<hr/> <u>\$ 22,258</u>

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

	2019	2018	2017
Revenues			
Nonreportable segments	\$ 168	\$ 287	\$ 311
Reduction to revenues related to BlackBerry arbitration decision	—	—	(962)
Other unallocated revenues	4,723	(100)	(95)
	<hr/> <u>\$ 4,891</u>	<hr/> <u>\$ 187</u>	<hr/> <u>\$ (746)</u>
EBT			
Reduction to revenues related to BlackBerry arbitration decision	\$ —	\$ —	\$ (962)
Other unallocated revenues	4,723	(100)	(95)
Unallocated cost of revenues	(430)	(486)	(517)
Unallocated research and development expenses	(989)	(1,154)	(1,056)
Unallocated selling, general and administrative expenses	(413)	(576)	(647)
Unallocated other expenses (Note 2)	(414)	(3,135)	(1,742)
Unallocated interest expense	(619)	(761)	(488)
Unallocated investment and other income, net	243	566	913
Nonreportable segments	(61)	(356)	(373)
	<hr/> <u>\$ 2,040</u>	<hr/> <u>\$ (6,002)</u>	<hr/> <u>\$ (4,967)</u>

Certain revenues (and reduction to revenues) were not allocated to our segments in our management reports because they were not considered in evaluating segment results. Other unallocated revenues in fiscal 2019 were comprised of licensing revenues resulting from the settlement with Apple and its contract manufacturers. 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 our QTL segment. In fiscal 2017, we recognized a reduction to revenues related to an arbitration decision and resulting Joint Stipulation Regarding Final Award Agreement entered into with BlackBerry Limited, the substantial impact of which was not allocated to QTL.

QUALCOMM Incorporated
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 9. Acquisitions

On February 3, 2017 (the Closing Date), 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. Upon formation, the joint venture was 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. We had the option to acquire (and EPCOS had an option to sell) EPCOS's interest in the joint venture for \$1.15 billion (Settlement Amount), beginning on August 4, 2019, for a period of 60 days (the Put and Call Option). The Put and Call Option was recorded as a liability at fair value as part of the total purchase price of \$3.1 billion on the Closing Date. The liability was accreted to the Settlement Amount (with the offset recorded as interest expense) and was included in other current liabilities at September 30, 2018 (Note 2). On September 16, 2019, the Put and Call Option was exercised, and we acquired EPCOS's remaining minority ownership interest in RF360 Holdings for \$1.15 billion.

At the Closing Date, we determined that RF360 Holdings was a variable interest entity, and its results of operations and statement of financial position have been included in our consolidated financial statements since its formation as the governance structure of RF360 Holdings provided us with the power to direct the activities of the joint venture that most significantly impacted its economic performance. Since the Put and Call Option was considered a financing of our purchase of EPCOS's interest in RF360 Holdings, noncontrolling interest was not recorded in our consolidated financial statements.

At the Closing Date, intangible assets acquired subject to amortization totaled \$833 million, which primarily comprised of \$738 million of technology-based intangible assets that are being amortized on a straight-line basis over the weighted-average useful lives of seven years.

The following table presents the unaudited pro forma results for fiscal 2017. 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	
Pro forma revenues	\$	22,806
Pro forma net income attributable to Qualcomm	\$	2,614

Note 10. 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 initiated a series of targeted actions across our businesses with the objective to reduce annual costs by \$1 billion, excluding incremental costs resulting from any future acquisition of a business. Actions taken under this plan have been completed and resulted in us achieving substantially all of this target in fiscal 2019 based on our run rate exiting the second quarter of fiscal 2019, excluding litigation costs that were in excess of the baseline spend.

Total restructuring and restructuring-related charges related to the Cost Plan were as follows (in millions):

	2019	2018 (1)	Total
Restructuring-related charges (2)	\$ 151	\$ 334	\$ 485
Restructuring charges (3)	62	353	415
	<u>\$ 213</u>	<u>\$ 687</u>	<u>\$ 900</u>

- (1) 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.
- (2) Restructuring-related charges primarily related to asset impairment charges in fiscal 2019 and 2018 and also included a \$52 million net gain in fiscal 2019 from the sale of certain assets related to wireless electric vehicle charging applications and the sale of our mobile health nonreportable segment, as well as a \$41 million gain in fiscal 2018 resulting from fair value adjustments of certain

QUALCOMM Incorporated
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

contingent consideration related to a business combination.

(3) Restructuring charges primarily consisted of severance and consulting costs in fiscal 2019 and 2018, which were payable 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. At September 29, 2019 and September 30, 2018, the restructuring accrual was \$17 million and \$83 million, 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 29, 2019 (in millions):

	Level 1	Level 2	Level 3	Total
Assets				
Cash equivalents	\$ 6,493	\$ 4,084	\$ —	\$ 10,577
Marketable securities:				
Corporate bonds and notes	—	4	—	4
Auction rate securities	—	—	35	35
Equity and preferred securities	418	—	—	418
Total marketable securities	418	4	35	457
Derivative instruments	—	25	—	25
Other investments	416	—	73	489
Total assets measured at fair value	<u>\$ 7,327</u>	<u>\$ 4,113</u>	<u>\$ 108</u>	<u>\$ 11,548</u>
Liabilities				
Derivative instruments	\$ —	\$ 1	\$ —	\$ 1
Other liabilities	416	—	35	451
Total liabilities measured at fair value	<u>\$ 416</u>	<u>\$ 1</u>	<u>\$ 35</u>	<u>\$ 452</u>

Activity within Level 3 of the Fair Value Hierarchy. Other investments and other liabilities included in Level 3 at September 29, 2019 and September 30, 2018 were comprised of convertible debt instruments issued by private companies and contingent consideration related to business combinations, respectively. Activity for marketable securities, other investments and other liabilities classified within Level 3 of the valuation hierarchy was insignificant during fiscal 2019, which was primarily related to issuances of convertible debt instruments by private companies and settlements of contingent consideration, and fiscal 2018, which was primarily related to settlements of convertible debt.

Nonrecurring Fair Value Measurements. We measure certain assets and liabilities at fair value on a nonrecurring basis. These assets and liabilities include equity method and non-marketable equity investments, 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 2019 and 2018, certain property, plant and equipment, non-marketable equity securities, intangible assets and goodwill were written down to their estimated fair values (Note 10). We also measured certain non-marketable equity securities received as non-cash consideration at fair value on a nonrecurring basis (Note 2). We determined the fair values using cost, market and income approaches. The estimation of fair value used in the fair value measurements required the use of significant unobservable inputs, and as a result, the fair value measurements were classified as Level 3. 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 for all periods presented.

QUALCOMM Incorporated
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 12. Revision of Prior Period Financial Statements

We revised certain prior period financial statements for an immaterial error related to the recognition of certain royalty revenues of our QTL segment (Note 1). A summary of revisions to our previously reported financial statements presented herein for comparative purposes is included below (in millions, except per share data).

Revised Consolidated Balance Sheets.

	As of September 30, 2018		
	As reported	Adjustment	As revised
Deferred tax assets (noncurrent)	\$ 904	\$ 32	\$ 936
Total assets	32,686	32	32,718
Other current liabilities	6,825	153	6,978
Total current liabilities	11,236	153	11,389
Total liabilities	31,758	153	31,911
Retained earnings	663	(121)	542
Total stockholders' equity	928	(121)	807
Total liabilities and stockholders' equity	32,686	32	32,718

Revised Consolidated Statements of Operations.

	Year Ended					
	September 30, 2018			September 24, 2017		
	As reported	Adjustment	As revised	As reported	Adjustment	As revised
Licensing revenues	\$ 5,332	\$ (121)	\$ 5,211	\$ 5,644	\$ (33)	\$ 5,611
Total revenues	22,732	(121)	22,611	22,291	(33)	22,258
Operating income	742	(121)	621	2,614	(33)	2,581
Income before income taxes	513	(121)	392	3,020	(33)	2,987
Income tax expense	(5,377)	21	(5,356)	(555)	12	(543)
Net (loss) income	(4,864)	(100)	(4,964)	2,465	(21)	2,444
Net (loss) income attributable to Qualcomm	(4,864)	(100)	(4,964)	2,466	(21)	2,445
Basic (loss) earnings per share	(3.32)	(0.07)	(3.39)	1.67	(0.01)	1.66
Diluted (loss) earnings per share	(3.32)	(0.07)	(3.39)	1.65	(0.01)	1.64

Revised Consolidated Statements of Comprehensive Income (Loss).

	Year Ended					
	September 30, 2018			September 24, 2017		
	As reported	Adjustment	As revised	As reported	Adjustment	As revised
Net (loss) income	\$ (4,864)	\$ (100)	\$ (4,964)	\$ 2,465	\$ (21)	\$ 2,444
Total comprehensive (loss) income	(4,983)	(100)	(5,083)	2,421	(21)	2,400
Comprehensive (loss) income attributable to Qualcomm	(4,983)	(100)	(5,083)	2,422	(21)	2,401

QUALCOMM Incorporated
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Revised Consolidated Statements of Cash Flows.

We revised our consolidated statements of cash flows for the years ended September 30, 2018 and September 24, 2017 for this correction, which had no impact to net cash provided by operating activities in each such period.

	Year Ended September 30, 2018			
	As reported	Reclassification adjustment (1)	Revision adjustment	As revised
Operating Activities:				
Net loss	\$ (4,864)	\$ —	\$ (100)	\$ (4,964)
Income tax provision in excess of (less than) income tax payments	4,502	—	(21)	4,481
Other items, net	129	(178)	—	(49)
Other assets	30	(6)	—	24
Payroll, benefits and other liabilities	687	197	121	1,005
Net cash provided by operating activities	3,895	13	—	3,908
	Year Ended September 24, 2017			
	As reported	Reclassification adjustment (1)	Revision adjustment	As revised
Operating Activities:				
Net income	\$ 2,465	\$ —	\$ (21)	\$ 2,444
Income tax provision in excess of (less than) income tax payments	(400)	—	(12)	(412)
Other items, net	146	(172)	—	(26)
Other assets	169	(33)	—	136
Payroll, benefits and other liabilities	2,103	205	33	2,341
Net cash provided by operating activities	5,001	—	—	5,001

- (1) Certain previously reported amounts have been reclassified to conform to the current year presentation.

Revised Segment Information.

QTL segment results were revised for this correction (Note 8), which resulted in a decrease in QTL revenues and EBT (earnings before income taxes) of \$121 million and \$33 million for fiscal 2018 and 2017, respectively.

QUALCOMM Incorporated
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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 2019 and 2018 (in millions, except per share data):

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2019 (1)				
Revenues (2)	\$ 4,842	\$ 4,982	\$ 9,635	\$ 4,814
Operating income (2)	710	940	5,317	701
Net income (2)	1,068	663	2,149	506
Basic earnings per share (3):	\$ 0.88	\$ 0.55	\$ 1.77	\$ 0.42
Diluted earnings per share (3):	0.87	0.55	1.75	0.42
2018 (1) (4)				
Revenues	\$ 6,035	\$ 5,220	\$ 5,577	\$ 5,778
Operating (loss) income (5)	(4)	400	903	(679)
Net (loss) income (5)	(5,983)	330	1,202	(513)
Basic (loss) earnings per share (3):	\$ (4.05)	\$ 0.22	\$ 0.81	\$ (0.36)
Diluted (loss) earnings per share (3):	(4.05)	0.22	0.81	(0.36)

- (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) Revenues, operating income and net income in the third quarter of fiscal 2019 included licensing revenues recognized of \$4.7 billion resulting from the settlement with Apple and its contract manufacturers. Operating income and net income in the third quarter of fiscal 2019 were impacted by a \$275 million charge related to the 2019 EC Fine. Net income in the first quarter of fiscal 2019 was impacted by an income tax benefit of \$570 million due to establishing new U.S. net deferred tax assets from making certain check-the-box elections. Net income in the third quarter of fiscal 2019 was impacted by a \$2.5 billion charge to income tax expense resulting from the derecognition of a deferred tax asset related to the distributed intellectual property.
- (3) Earnings (loss) 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.
- (4) As previously disclosed in our Quarterly Reports on Form 10-Q for the quarters ended December 30, 2018, March 31, 2019 and June 30, 2019, we revised certain prior period financial information for an immaterial error related to the recognition of certain royalty revenues of our QTL segment (Note 1).
- (5) Operating loss and net loss in the fourth quarter of fiscal 2018 were impacted by a \$2.0 billion charge related to the NXP termination fee. Net loss in the first quarter of fiscal 2018 was 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 impacted by a \$1.2 billion charge related to the 2018 EC fine.

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

	Balance at Beginning of Period	Charged (Credited) to Costs and Expenses	Deductions	Balance at End of Period
Year ended September 29, 2019				
Allowance on trade receivables	\$ 56	\$ 3	\$ (12)	\$ 47
Valuation allowance on deferred tax assets	1,529	143	—	1,672
	\$ 1,585	\$ 146	\$ (12)	\$ 1,719
Year ended September 30, 2018				
Allowance on trade receivables	\$ 11	\$ 45	\$ —	\$ 56
Valuation allowance on deferred tax assets	863	666	—	1,529
	\$ 874	\$ 711	\$ —	\$ 1,585
Year ended September 24, 2017				
Allowance on trade receivables	\$ 1	\$ 10	\$ —	\$ 11
Valuation allowance on deferred tax assets	754	109	—	863
	\$ 755	\$ 119	\$ —	\$ 874

EXHIBIT 21

SUBSIDIARIES OF REGISTRANT

Subsidiaries of Qualcomm Incorporated	State or Other Jurisdiction of Incorporation
QUALCOMM CDMA Technologies Asia-Pacific Pte. Ltd.	Singapore
Qualcomm Global Trading Pte. Ltd.	Singapore
Qualcomm Technologies International, Ltd.	United Kingdom
Qualcomm Technologies, Inc.	Delaware
RF360 Europe GmbH	Germany
RF360 Singapore Pte. Ltd.	Singapore
SnapTrack, Inc.	California

The names of other subsidiaries are omitted. Such subsidiaries would not, if considered in the aggregate as a single subsidiary, constitute a significant subsidiary within the meaning of Item 601(b)(21)(ii) of Regulation S-K.

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-225063) and Form S-8 (No. 333-137692, No. 333-150423, No. 333-166246, No. 333-173184, No. 333-174649, No. 333-188104, No. 333-197445, No. 333-203575, No. 333-210048 and No. 333-226336) of QUALCOMM Incorporated of our report dated November 6, 2019 relating to the financial statements, the financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

San Diego, California
November 6, 2019

EXHIBIT 31.1

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Steve Mollenkopf, certify that:

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

Dated: November 6, 2019

/s/ Steve Mollenkopf

Steve Mollenkopf
Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Akash Palkhiwala, certify that:

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

Dated: November 6, 2019

/s/ Akash Palkhiwala

Akash Palkhiwala

Executive Vice President and
Chief Financial Officer

EXHIBIT 32.1

**CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002
(18 U.S.C. SECTION 1350)**

In connection with the accompanying Annual Report of QUALCOMM Incorporated (the "Company") on Form 10-K for the fiscal year ended September 29, 2019 (the "Report"), I, Steve Mollenkopf, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 6, 2019

/s/ Steve Mollenkopf

Steve Mollenkopf
Chief Executive Officer

EXHIBIT 32.2

**CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002
(18 U.S.C. SECTION 1350)**

In connection with the accompanying Annual Report of QUALCOMM Incorporated (the “Company”) on Form 10-K for the fiscal year ended September 29, 2019 (the “Report”), I, Akash Palkhiwala, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 6, 2019

/s/ Akash Palkhiwala

Akash Palkhiwala

Executive Vice President and
Chief Financial Officer