PART I

ITEM 1. BUSINESS

Cautionary Statement Regarding Forward-Looking Statements

The statements in this report include forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on current expectations and beliefs and involve numerous risks and uncertainties that could cause actual results to differ materially from expectations. These forward-looking statements speak only as of the date hereof or as of the dates indicated in the statements and should not be relied upon as predictions of future events, as we cannot assure you that the events or circumstances reflected in these statements will be achieved or will occur. You can identify forward-looking statements by the use of forward-looking terminology including "believes," "expects," "may," "will," "should," "seeks," "intends," "plans," "pro forma," "estimates," "anticipates," or the negative of these words and phrases, other variations of these words and phrases or comparable terminology. The forward-looking statements relate to, among other things: possible impact of future accounting rules on AMD's consolidated financial statements; demand for AMD's products; the growth, change and competitive landscape of the markets in which AMD participates; the expected amounts to be received by AMD under the IP licensing agreement and AMD's expected royalty payments from future product sales of China JVs' products to be developed on the basis of such licensed IP; sales patterns of AMD's PC products and semi-custom System-on-Chip (SoC) products for game consoles; international sales will continue to be a significant portion of total sales in the foreseeable future; the balance of the uncertain tax benefits in the next 12 months; that AMD's cash, cash equivalents and marketable securities balances together with the availability under that certain revolving credit facility (Secured Revolving Facility) made available to AMD and certain of its subsidiaries under the Credit Agreement, will be sufficient to fund AMD's operations including capital expenditures over the next 12 months; AMD's ability to obtain sufficient external financing on favorable terms, or at all; AMD's expectation that based on the information presently known to management, the potential liability related to AMD's current litigation will not have a material adverse effect on its financial condition, cash flows or results of operations; any amounts in addition to what has been already accrued by AMD for future remediation costs under clean-up orders will not be material; we expect to file future patent applications in both the United States and abroad on significant inventions as we deem appropriate; anticipated ongoing and increased in costs related to enhancing and implementing information security controls; revenue allocated to remaining performance obligations that are unsatisfied which will be recognized over the next 12 months; all unbilled accounts receivables are expected to be billed and collected within 12 months; and a small number of customers will continue to account for a substantial part of AMD's revenue in the future. For a discussion of the factors that could cause actual results to differ materially from the forward-looking statements, see "Part I, Item 1A-Risk Factors" and the "Financial Condition" section set forth in "Part II, Item 7-Management's Discussion and Analysis of Financial Condition and Results of Operations," or MD&A, and such other risks and uncertainties as set forth below in this report or detailed in our other Securities and Exchange Commission (SEC) reports and filings. We assume no obligation to update forward-looking statements.

General

We are a global semiconductor company primarily offering:

- x86 microprocessors, as standalone devices or as incorporated into an accelerated processing unit (APU), chipsets, discrete and integrated graphics processing units (GPUs), data center and professional GPUs, and development services; and
- server and embedded processors, semi-custom System-on-Chip (SoC) products, development services and technology for game consoles.

We also license portions of our intellectual property (IP) portfolio.

For financial information about geographic areas and for segment information with respect to revenues and operating results, refer to the information set forth in Note 15 of our consolidated financial statements.

We use a 52 or 53 week fiscal year ending on the last Saturday in December. References in this report to 2019, 2018 and 2017 refer to the fiscal year unless explicitly stated otherwise.

Additional Information

Advanced Micro Devices, Inc. (AMD) was incorporated under the laws of Delaware on May 1, 1969 and became a publicly held company in 1972. Our common stock is currently listed on The NASDAQ Global Select Market (NASDAQ) under the symbol "AMD". Our mailing address and executive offices are located at 2485 Augustine Drive, Santa Clara, California 95054, and our telephone number is (408) 749-4000. The SEC's website, www.sec.gov, contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

References in this Annual Report on Form 10-K to "AMD," "we," "us," "management," "our" or the "Company" mean Advanced Micro Devices, Inc. and our consolidated subsidiaries.

AMD, the AMD Arrow logo, Athlon, EPYC, FirePro, FreeSync, Geode, Opteron, Radeon, Ryzen, Threadripper, Infinity Fabric, and combinations thereof are trademarks of Advanced Micro Devices, Inc.

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Other names are for informational purposes only and are used to identify companies and products and may be trademarks of their respective owners.

Website Access to Our SEC Filings and Corporate Governance Documents

On the Investor Relations pages of our Website, http://ir.amd.com, we post links to our filings with the SEC, our Principles of Corporate Governance, our Code of Ethics for our executive officers, all other senior finance executives and certain representatives from legal and internal audit, our Worldwide Standards of Business Conduct, which applies to our Board of Directors and all of our employees, and the charters of the Audit and Finance, Compensation and Leadership Resources, Nominating and Corporate Governance and Innovation and Technology committees of our Board of Directors. Our filings with the SEC are posted as soon as reasonably practical after they are electronically filed with, or furnished to, the SEC. You can also obtain copies of these documents by writing to us at: Corporate Secretary, AMD, 7171 Southwest Parkway, M/S B100.T, Austin, Texas 78735, or emailing us at: Corporate.Secretary@amd.com. All of these documents and filings are available free of charge.

If we make substantive amendments to our Code of Ethics or grant any waiver, including any implicit waiver, to our principal executive officer, principal financial officer, principal accounting officer, controller or persons performing similar functions, we intend to disclose the nature of such amendment or waiver on our Website.

The information contained on our Website is not incorporated by reference in, or considered to be a part of, this report.

Our Industry

We are a global semiconductor company. Semiconductors are components used in a variety of electronic products and systems. An integrated circuit (IC) is a semiconductor device that consists of many interconnected transistors on a single chip. Since the invention of the transistor in 1948, improvements in IC process and design technologies have led to the development of smaller, more complex and more reliable ICs at a lower cost-per-function.

Computing and Graphics

Computing and Graphics Markets

Central Processing Unit (CPU). A microprocessor is an IC that serves as the CPU of a computer. It generally consists of hundreds of millions or billions of transistors that process data in a serial fashion and control other devices in the system, acting as the "brain" of the computer. The performance of a microprocessor is a critical factor impacting the performance of computing and entertainment platforms, such as desktop PCs, notebooks and workstations. The principal elements used to measure CPU performance are work-per-cycle (or how many instructions are executed per cycle), clock speed (representing the rate at which a CPU's internal logic operates, measured in units of gigahertz, or billions of cycles per second) and power consumption. Other factors impacting microprocessor performance include the process technology used in its manufacture, the number and type of cores, the ability of the cores to process multi-thread or process multiple

instructions simultaneously, the bit size of its instruction set, memory size and data access speed.

Developments in IC design and manufacturing process technologies have resulted in significant advances in microprocessor performance. Since businesses and consumers require greater performance from their computer systems due to the growth of digital data and increasingly sophisticated software applications, multi-core microprocessors offer enhanced overall system performance and efficiency because computing tasks can be spread across two or more processing cores, each of which can execute a task at full speed. Multi-core microprocessors can simultaneously increase performance of a computer system without greatly increasing the total amount of power consumed and the total amount of heat emitted. Businesses and consumers also require computer systems with improved power management technology, which helps them to reduce the power consumption of their computer systems, enables smaller and more portable form factors, and can lower the total cost of ownership.

Graphics Processing Unit (GPU). A GPU is a programmable logic chip that helps render images, animations and video and is increasingly being used to handle general computing tasks. GPUs are located in plug-in cards, as a discrete processor or in a chip on the motherboard, or in the same chip as the CPU as part of an accelerated processing unit (APU) or System-on-Chip (SoC). GPUs on stand-alone cards or discrete GPUs on the motherboard typically access their own memory, while GPUs in the chipset or CPU chip share main memory with the CPU.

GPUs perform parallel operations on data to render images for a video display and are essential to presenting computer generated images on that display, decoding and rendering animations and displaying video. The more sophisticated the GPU, the higher the resolution and the faster and smoother moving objects can be displayed on video display or in a virtual environment (e.g. virtual reality (VR) and augmented reality (AR)).

In addition to graphics processing, GPUs are used to perform parallel operations on multiple sets of data and are increasingly used to perform vector processing for non-graphics applications that require repetitive computations such as supercomputing, deep learning, artificial and machine intelligence, blockchain and various other applications (e.g., cryptocurrency mining and autonomous driving).

Accelerated Processing Unit (APU). Consumers increasingly demand computing devices with improved end-user experience, system performance and energy efficiency. Consumers also continue to demand thinner and lighter mobile devices, with better performance and longer battery life. We believe that a computing architecture that optimizes the use of its components can provide these improvements.

An APU is a processing unit that integrates a CPU and a GPU onto one chip (or one piece of silicon), along with, in some cases, other special-purpose components. This integration enhances system performance by "offloading" selected tasks to the best-suited component (i.e., the CPU or the GPU) to optimize component use, increasing the speed of data flow between the CPU and GPU through shared memory and allowing the GPU to function as both a graphics engine and an application accelerator. Having the CPU and GPU on the same chip also typically improves energy efficiency by, for example, eliminating connections between discrete chips.

System-on-Chip (SoC). An SoC is a type of IC with a CPU, GPU and other components, such as a memory controller and peripheral management, comprising a complete computing system on a single chip. By combining all of these elements as an SoC, system performance and energy efficiency is improved, similar to an APU.

Chipset. A chipset is a generic term referring to a device or a collection of devices that allow the microprocessor to connect to a wider range of peripheral devices in the system (such as storage, optical drives, and Universal Serial Bus (USB) peripherals). Chipsets can perform essential logic functions, and operate in concert with the microprocessor to manage system control and power management functions of all the devices in the system. Chipsets are most often found in larger form factor systems, typically desktop systems or larger notebook platforms, which require the expanded peripheral selection that is enabled by the chipset. Typical notebook platforms and small form factor desktop platforms typically do not utilize a chipset and instead rely on the capabilities of the APU to connect to all the required devices on the platform.

Our Computing and Graphics Products

Our microprocessors are incorporated into computing platforms, which are a collection of technologies that are designed to work together to provide a more complete computing solution and to enable and advance the computing components. We believe that integrated, balanced computing platforms consisting of microprocessors, chipsets (either as discrete devices or integrated into an SoC) and GPUs (either as discrete GPUs or integrated into an APU or SoC) that work together at the system level bring end users improved system stability, increased performance and enhanced power efficiency. In addition, we believe our customers also benefit from an all-AMD platform (consisting of an APU or CPU, a discrete GPU, and a chipset when needed), as we are able to optimize interoperability, provide our customers a single point of contact for the

key platform components and enable them to bring the platforms to market quickly in a variety of PC and server system form factors.

We currently base our microprocessors and chipsets on the x86 instruction set architecture and the AMD Infinity Fabric, which connects an on-chip memory controller and input/output (I/O) channels directly to one or more microprocessor cores. We typically integrate two or more processor cores onto a single die, and each core has its own dedicated cache, which is memory that is located on the semiconductor die, permitting quick access to frequently used data and instructions. Some of our microprocessors have additional levels of cache such as L2, or second-level cache, and L3, or third-level cache, to enable fast data access and high performance.

We focus on continually improving the energy efficiency of our products through our design principles and innovations in power management technology. To that end, we offer CPUs, GPUs, APUs, SoCs and chipsets with multiple low power states that are designed to utilize lower clock speeds and voltages to reduce processor power consumption during active and idle times. The use of intelligent, dynamic power management is designed to create lower energy use by allowing compute applications to be completed quickly and efficiently, enabling a return to the ultra-low power idle state.

Desktop. In May 2019, we introduced the 3rd Gen AMD Ryzen™ desktop processor family based on the new "Zen 2" core architecture with AMD chiplet design approach. Following that introduction, we announced in November 2019 the global availability of the flagship product in our AM4 mainstream platform infrastructure, the AMD Ryzen™ 9 3950X. This product enables a high core count with 16 cores and 32 threads designed for PC buyers. At the value end of the mainstream AM4 platform portfolio, we also announced the new AMD Athlon™ 3000G processor offering better performance and value for end users building budget oriented desktop platforms. In addition to the mainstream product family, we introduced the next generation of the Ryzen™ Threadripper™ product line built on the new TRX40 platform to serve the needs of the high-end desktop segment for creators and enthusiasts. Our November 2019 introduction included the 24-core AMD Ryzen™ Threadripper™ 3960X and the 32-core AMD Ryzen™ Threadripper™ 3970X processors. In January 2020, we announced a processor for creative professionals, the 64-core, 128-thread AMD Ryzen™ Threadripper™ 3990X built to enable extreme performance for 3D, visual effects, and video professionals.

Notebooks and 2-in-1s. We continue to invest in designing and developing high performing and low power APUs for notebook PC platforms for the consumer and commercial markets. In January 2019, we announced our mobility line-up encompassing all notebook segments: second generation AMD Ryzen™ 3000 Series Mobile Processors, powering ultrathin, commercial and gaming notebooks; AMD Athlon™ 300 Series Mobile Processors, powering mainstream notebooks with the "Zen" core; and optimized seventh generation A-Series processors, elevating performance for mainstream Chromebooks™ notebook computers. In January 2020, we announced our x86 8-core ultrathin laptop processors, the AMD Ryzen™ 4000 U-Series, as part of the AMD Ryzen™ 4000 Series Mobile Processor family, built on "Zen 2" core architecture with 7nm process technology and high performance Radeon™ graphics in an SOC design. In addition, as part of the AMD Ryzen 4000 Series Mobile Processor family, we announced the Ryzen™ 4000 H-Series Mobile Processors for gaming and content creation. These processors support AMD SmartShift technology, which allows for automatic power shifting with AMD Radeon discrete mobile GPUs to enable new levels of performance in thin notebooks. We also announced the AMD Athlon™ 3000 Series Mobile Processor family powered by "Zen" architecture for mainstream notebook users.

Commercial. We offer enterprise-class desktop and notebook PC solutions sold as AMD PRO Mobile and AMD PRO desktop processors with Radeon™ Vega Graphics for the commercial client market. These solutions are designed to provide enterprise customers with the performance, security and business features such as commercial-grade quality, platform longevity and extended image stability they require. In April 2019, we announced the 2nd Gen AMD Ryzen™ PRO mobile processors with Radeon Vega Graphics and the AMD Athlon™ PRO mobile processors with Radeon Vega Graphics. These processors provide power-efficient performance, security features and commercial-grade reliability and manageability. In September 2019, we expanded our commercial desktop lineup with the global availability of our new AMD Ryzen™ PRO 3000 Series desktop processors: AMD Ryzen™ 9 PRO 3900, AMD Ryzen™ 7 PRO 3700, and AMD Ryzen™ 5 PRO 3600. The processors offer up to 12 cores and 24 threads and bring the computing performance of "Zen 2" and high core count to the commercial segment.

Chipsets. We offer a full suite of chipset products, including the new X570 chipset introduced in July 2019 which supports PCIe® 4.0 (fourth generation Peripheral Component Interconnect Express motherboard interface) designed for enthusiast desktop platforms. In addition, we also offer the B450 and the A320 chipset that are combined with AMD Ryzen processors for the AM4 desktop platform for the performance and affordable mainstream platforms segments. We also have the A300 chipsets designed for small form factors. In the High-End Desktop (HEDT) segment, we introduced the new TRX40 chipset to support the 3rd generation Ryzen Threadripper platform which offers high speed I/O and platform bandwidth. For the 1st and 2nd generation Threadripper families, we continue to offer the X399 chipset. We also continue to offer AMD 9-Series chipsets for the Socket AM3/3+ platforms serving desktop PCs, and AMD A-Series Controller Hubs

for the Socket FM2/2+ platforms. We also offer AMD 785E, 780E, 780M, 690E, SR5690, SP5100, SB600, SB710, SB850 and M690E chipsets and AMD A-Series Controller Hubs for our embedded products.

Graphics Market

The semiconductor graphics market addresses the need for improved visual and data processing in various computing devices. Many consumers value a rich visual experience to enable a more compelling and immersive experience, and, for these consumers, the PC has evolved from a traditional data processing and communications device to an entertainment platform. As a result, visual realism and graphical display capabilities are key product differentiation elements among computing devices. This has led to increasing creation and use of processing-intensive multimedia content for computing devices, including playing games, capturing media content, viewing online videos, editing photos and managing digital content. In turn, these trends have contributed to higher consumer demand for performance graphics solutions and to manufacturers designing computing devices with these capabilities. Industries that utilize computer assisted design (CAD), that develop content for media and entertainment markets and that generate professional visualizations and renderings can benefit greatly from graphics solutions optimized for the professional graphics market.

In addition to traditional graphics markets, there is a large and growing market for accelerated computing, powered by graphics processors, which is primarily made up of high-performance computing and machine learning/deep learning. Traditional high performance computing focuses on scientific research, model simulation, and exploration which is mainly driven by a need for computing throughput in universities and government research centers. The second market is the rapidly growing area of machine learning and deep learning workloads. Graphics processors are used both in the training of machine learning models as well as the application of models via inference. The expansion of compute workloads on graphics processors is driving market expansion for traditional graphics silicon.

Another area of the market for graphics compute is blockchain technology, which is a decentralized digital ledger used to securely store, transmit and process sensitive and valuable data. Blockchain applications are typically performed using specifically designed application-specific integrated circuits (ASICs) or a general purpose CPU or GPU.

Our Graphics Products

Graphics processing is a fundamental component of almost everything we create and can be found in an APU, GPU, SoC or a combination of a discrete GPU with one of the other foregoing products working in tandem. Our customers generally use our graphics solutions to enable or increase the speed of rendering images, to help improve image resolution and color definition, and increasingly to process massive data sets for cloud and data center applications. We develop our graphics products for use in various computing devices and entertainment platforms, including desktop PCs, notebook PCs, 2-in-1s, All-in-Ones (AIOs), professional workstations, and the data center. With each of our graphics products, we have available drivers and supporting software packages that enable the effective use of these products under a variety of operating systems and applications.

Our APUs deliver visual processing functionality for value and mainstream PCs by integrating a CPU and a GPU on a single chip, while discrete GPUs (which are also known as dGPUs) offer high performance graphics processing across all platforms. AMD Accelerated Parallel Processing or General Purpose GPU (GPGPU) refers to a set of advanced hardware and software technologies that enable discrete AMD GPUs, working in concert with the CPU, to accelerate computational tasks beyond traditional CPU processing by utilizing the vast number of discrete GPU cores while working with the CPU to process information cooperatively. In addition, computing devices with heterogeneous computing features can run computationally-intensive tasks more efficiently, which we believe provides a superior application experience to the end user. Moreover, heterogeneous computing allows for the elevation of the GPU to the same level as the CPU for memory access, queuing and execution.

Discrete Desktop and Notebook Graphics. Our discrete GPUs for desktop and notebook PCs support current generation application program interface (APIs) like DirectX® 12 and Vulkan®, support new displays using Radeon™ FreeSync™ and Radeon™ FreeSync 2 HDR™ technologies, and are designed to support VR in PC platforms. In January 2019, we introduced the AMD Radeon™ VII, a premium graphics card for gamers, creators and enthusiasts built on 7nm process technology and with 16GB of HBM2 memory (High Bandwidth Memory) and 1 TB/s memory bandwidth. In May 2019, we announced the RDNA gaming architecture which is designed to deliver better performance, power and memory efficiency. In July 2019, we announced the availability of the 7nm AMD Radeon™ RX 5700-series gaming graphics card family (AMD Radeon™ RX 5700 XT and RX 5700) featuring AMD RDNA architecture, high-speed GDDR6 (Graphics Double Data Rate type 6) memory and support for the PCIe 4.0 interface. In October 2019, we announced the AMD Radeon™ RX 5500 series that includes the Radeon RX 5500 graphics card that will be available in desktop PCs from manufacturers and graphics cards from board partners as well as the Radeon™ 5500M GPU for notebook PCs. In December 2019, we announced AMD

Radeon™ RX 5500 XT graphics card that is optimized to deliver high performance. In January 2020, we introduced AMD Radeon™ RX 5600 series graphics products, which includes the AMD Radeon™ RX 5600 XT graphics card and the AMD Radeon RX 5600 graphics card, with AMD RDNA architecture and software feature to provide high-performance and high-fidelity experiences for 1080p gamers.

Professional Graphics. Our AMD Radeon™ Pro family of professional graphics products includes multi-view graphics cards and GPUs designed for integration in mobile and desktop workstations. AMD Radeon Pro graphics cards are designed for demanding use cases such as design and manufacturing for CAD, and media and entertainment for broadcast and animation pipelines. AMD Radeon Pro supports end users utilizing GPU accelerated visualization for construction, architecture and mechanical design through gaming and visualization engines on high resolution displays; Radeon VR™ Creator cards are also capable of supporting this functionality with VR and AR. Software drivers for AMD Radeon Pro cards are designed to deliver high stability and performance across a wide variety of software packages including those requiring professional software vendor certifications. In June 2019, we announced the AMD Radeon™ Pro Vega II GPUs which utilizes 7nm AMD Radeon™ Vega family GPUs, HBM2 and AMD Infinity Fabric Link GPU interconnect technology designed to power demanding professional applications. In November 2019, we announced the AMD Radeon™ Pro W5700, a 7nm professional PC workstation graphics card that enables 3D designers, architects and engineers to visualize, review and interact with their designs in real time to accelerate decision-making processes and product development cycles.

Data Center Graphics. Our AMD Radeon Instinct™ family of GPU products are specifically designed to address growing demand for data center applications, including deep learning training and traditional high performance computing (HPC) workloads such as simulation where the compute capabilities of GPUs provide exceptional flexibility and performance. Combined with our open-source software, Radeon™ Open eCosystem (ROCm), our customers can deliver a differentiated acceleration platforms to address the next-generation of computing challenges while minimizing power and space needs in the data center.

In March 2019, Google announced its new Stadia™ cloud gaming service using high-performance, custom AMD Radeon data center GPUs. In May 2019, the US Department of Energy announced the Frontier exascale A+A (AMD CPUs plus AMD GPUs) system with Oakridge National Labs (ORNL). In August 2019, Microsoft announced its new NVv4-series cloud offering of Azure Virtual Machines based on Radeon Instinct™ MI25 GPUs. And in November 2019, we released ROCm 3.0, marking a major milestone in the path to Exascale class systems and platforms.

Enterprise, Embedded and Semi-Custom

The Enterprise, Embedded and Semi-Custom Markets

Server. A server is a computer system that performs services for connected customers as part of a client-server architecture. Many servers are designed to run an application or applications often for extended periods of time with minimal human intervention. Examples of servers include cloud, web, e-mail, print and on-premise servers. These servers can run a variety of applications, including business intelligence, enterprise resource planning, customer relationship management and advanced scientific or engineering models to solve advanced computational problems in disciplines ranging from financial modeling to weather forecasting to oil and gas exploration. Servers are also used in cloud computing, which is a computing model where data, applications and services are delivered over the internet or an intranet which can be rapidly provisioned and released with minimal effort. Today's data centers require new technologies and configuration models to meet the demand driven by the growing amount of data that needs to be stored, accessed, analyzed and managed. Servers must be efficient, scalable and adaptable to meet the compute characteristics of new and changing workloads.

Embedded. Embedded products address computing needs in casino gaming machines as well as enterprise-class telecommunications, networking, security, storage systems and thin clients (which are computers that serve as an access device on a network), and in PC-adjacent markets, such as industrial control and automation, digital signage, point-of-sale/self-service kiosks, and medical imaging. Typically, AMD embedded products are used in applications that require high to moderate levels of performance, where key features may include relatively low power, small form factor, and 24x7 operations. High-performance graphics are increasingly important in many embedded systems. Support for Linux®, Windows® and other operating systems as well as for increasingly sophisticated applications are also critical for some customers. Other requirements may include meeting rigid specifications for industrial temperatures, shock, vibration and reliability. The embedded market has moved from developing proprietary, custom designs to leveraging industry-standard instruction set architectures and processors as a way to help reduce costs and speed time to market.

Semi-Custom. We have leveraged our core IP, including our graphics and processing technologies developed for the gaming, VR, AR and machine intelligence markets, to develop semi-custom solutions for customers who want differentiation in their products. In this market, semiconductor suppliers work alongside system designers and manufacturers to enhance the performance and overall user experience for semi-custom customers. AMD has used this type of collaborative co-

development approach with many of today's leading game console manufacturers and can also address customer needs in many other markets beyond game consoles. AMD leverages our existing IP to create a variety of products tailored to a specific customer's needs, ranging from complex fully-customized SoCs to more modest adaptations and integrations of existing CPU, APU or GPU products.

Our Enterprise, Embedded and Semi-Custom Products

Server Processors. Our microprocessors for server platforms currently include the AMD EPYC™ Series processors and AMD Opteron™ X and A-Series processors. The AMD EPYC™ 7001 Series of high performance processors have up to 32 "Zen" compute cores and are designed to support a full range of integer, floating point, memory bandwidth and I/O benchmarks and workloads. The AMD Opteron™ X3000 Series APUs are a family of fully integrated CPU, GPU and I/O designed to provide processing and graphics performance for personal and small business needs. In August 2019, we introduced the 2nd Gen AMD EPYC family of processors that feature up to 64 "Zen 2" cores in 7nm process technology for performance and are designed to reduce total cost of ownership (TOC) by up to 50%. In September 2019, we announced a new addition to the 2nd Gen AMD EPYC family, the AMD EPYC™ 7H12 processor. The 64 core, 2.6Ghz base frequency, 3.3Ghz max boost frequency, 280W TDP processor is built for HPC customers and workloads.

Embedded Processors. Our embedded processors are increasingly driving intelligence into new areas of our lives, like interactive digital signage, casino gaming, and medical imaging devices. These products are designed to support greater connectivity and productivity, and we believe they can be a strong driver for the "internet of things" and "immersive computing" areas in the computing industry. Our products for embedded platforms include AMD Embedded V-Series APUs, CPUs and SoCs, AMD Embedded R-Series APUs, CPUs and SoCs, AMD Embedded G-Series SoC platform and AMD Embedded Radeon GPUs. In April 2019, we announced the AMD Ryzen™ Embedded R1000 Series of processors and the AMD EPYC™ Embedded 3000 Series of processors. The AMD Ryzen™ Embedded R1000 Series provides customers with dual core, quad-threaded performance as well as the ability to run fanless, low power solutions for 4K displays for applications in digital displays, high-performance edge computing, networking, thin clients and more. The AMD EPYC Embedded 3000 Series of processors addresses new markets including, networking, storage and edge computing devices.

Semi-Custom. Our semi-custom products are tailored, co-developed, high-performance, customer-specific solutions based on AMD CPU, GPU and multi-media technologies. We work closely together with our customers to define solutions to precisely match the requirements of the device or application. Historically we have leveraged our core graphics processing technology into the game console market by licensing our graphic technology in game consoles. We developed the semi-custom SoC products that power the current generation Sony PlayStation®4 and PlayStation®4 Pro and Microsoft® Xbox One™ and Xbox One S™ and Xbox One X™ game consoles. In April 2019, Sony Interactive Entertainment, Inc. released details about its next-generation game console, which will be powered by a custom AMD chip based on the "Zen 2" CPU and next generation GPU architectures. Microsoft announced in June 2019, that AMD will power its next generation game console, codenamed Project Scarlett, with a custom, high performance SoC combining the AMD Ryzen "Zen 2" CPU core 4 and a next generation GPU based on the Radeon RDNA gaming architecture.

Marketing and Sales

We sell our products through our direct sales force and through independent distributors and sales representatives in both domestic and international markets. Our sales arrangements generally operate on the basis of product forecasts provided by the particular customer, but do not typically include any commitment or requirement for minimum product purchases. We primarily use purchase orders, sales order acknowledgments and contractual agreements as evidence of our sales arrangements. Our agreements typically contain standard terms and conditions covering matters such as payment terms, warranties and indemnities for issues specific to our products.

We generally warrant that our products sold to our customers will conform to our approved specifications and be free from defects in material and workmanship under normal use and conditions for one year. We offer up to three-year limited warranties for certain product types, and sometimes provide other warranty periods based on negotiated terms with certain customers.

We market and sell our latest products under the AMD trademark. Our desktop PC product brands for microprocessors are AMD Ryzen™, AMD Ryzen™ PRO, Ryzen™ Threadripper™, AMD A-Series, AMD FX™, AMD Athlon™, AMD Athlon™ PRO, and AMD Pro A-Series processors. Our notebook and 2-in-1s for microprocessors are AMD Ryzen™ processors with Radeon™ Vega Graphics, AMD A-Series, AMD Athlon, AMD Ryzen PRO with Radeon Vega Graphics, AMD Athlon™ PRO with Radeon Vega Graphics and AMD Pro A-Series processors. Our server brands for microprocessors are AMD EPYC™ and AMD Opteron™ processors. We also sell low-power versions of our AMD Opteron, AMD Athlon, as well as AMD Geode™, AMD Ryzen, AMD EPYC, AMD R-Series and G-Series processors as embedded processor solutions. Our product brand for the consumer graphics market is AMD Radeon graphics, and AMD Embedded Radeon

graphics is our product brand for the embedded graphics market. Our product brand for professional graphics products are AMD Radeon Pro AMD FirePro™ graphics; our product brand for data center graphics is Radeon Instinct™ accelerators for servers. We also market and sell our chipsets under AMD trademarks.

We market our products through direct marketing and co-marketing programs. In addition, we have cooperative advertising and marketing programs with customers and third parties, including market development programs, pursuant to which we may provide product information, training, marketing materials and funds. Under our co-marketing development programs, eligible customers can use market development funds as reimbursement for advertisements and marketing programs related to our products and third-party systems integrating our products, subject to meeting defined criteria.

Customers

Our microprocessor customers consist primarily of original equipment manufacturers (OEMs), large direct data centers, original design manufacturers (ODMs), system integrators and independent distributors in both domestic and international markets. ODMs provide design and/or manufacturing services to branded and unbranded private label resellers, OEMs and system builders. Customers of our microprocessor products also include online retailers. Our graphics product customers include the foregoing as well as add-in-board manufacturers (AIBs). Large direct data centers consist of cloud service providers.

Customers of our chipset products consist primarily of PC OEMs, often through ODMs or other contract manufacturers, who build the OEM motherboards, as well as desktop and server motherboard manufacturers who incorporate chipsets into their channel motherboards.

We work closely with our customers to define product features, performance and timing of new products so that the products we are developing meet our customers' needs. We also employ application engineers to assist our customers in designing, testing and qualifying system designs that incorporate our products. We believe that our commitment to customer service and design support improves our customers' time-to-market and fosters relationships that encourage customers to use the next generation of our products.

We also work with our customers to create differentiated products that leverage our CPU, GPU and APU technology. Certain customers pay us non-recurring engineering fees for design and development services and a purchase price for the resulting products.

Our major customer, Sony Interactive Entertainment LLC, accounted for more than 10% of our consolidated net revenue for the year ended December 28, 2019. Sales to Sony Interactive Entertainment LLC consisted of products from our Enterprise, Embedded and Semi-Custom segment. A loss of this customer would have a material adverse effect on our business.

Original Equipment Manufacturers

We focus on three types of OEM partners: multi-nationals, selected regional accounts and some local system integrators, who target commercial and consumer end customers of all sizes. Large multi-nationals and regional accounts are the core of our OEM partners. Our OEM customers include numerous foreign and domestic manufacturers of servers and workstations, desktops, notebooks, PC motherboards and game consoles.

Third-Party Distributors

Our authorized channel distributors resell to sub-distributors and mid-sized and smaller OEMs and ODMs. Typically, distributors handle a wide variety of products, and may include those that compete with our products. Distributors typically maintain an inventory of our products. In most instances, our agreements with distributors protect their inventory of our products against price reductions and provide return rights with respect to any product that we have removed from our price book that is not more than 12 months older than the manufacturing code date. In addition, some agreements with our distributors may contain standard stock rotation provisions permitting limited levels of product returns.

Add-in-Board (AIB) Manufacturers and System Integrators

We offer component-level graphics and chipset products to AIB manufacturers who in turn build and sell board-level products using our technology to system integrators (SIs), retail buyers and sub distributors. Our agreements with AIBs protect their inventory of our products against price reductions. We also sell directly to our SI customers. SIs typically sell from positions of regional or product-based strength in the market. They usually operate on short design cycles and can respond quickly with new technologies. SIs often use discrete graphics solutions as a means to differentiate their products and add value to their customers.

Competition in the Microprocessor and Chipset Market

Intel Corporation has been the market share leader for microprocessors for many years. Intel's market share, margins and significant financial resources enable it to market its products aggressively, to target our customers and our channel partners with special incentives and to influence customers who do business with us. These aggressive activities have in the past resulted in lower unit sales and a lower average selling price for many of our products and adversely affected our margins and profitability.

Intel exerts substantial influence over computer manufacturers and their channels of distribution through various brand and other marketing programs. As a result of Intel's position in the microprocessor market, Intel has been able to control x86 microprocessor and computer system standards and benchmarks and to dictate the type of products the microprocessor market requires of us. Intel also dominates the computer system platform, which includes core logic chipsets, graphics chips, networking devices (wired and wireless), non-volatile storage and other components necessary to assemble a computer system. OEMs that purchase microprocessors for computer systems are highly dependent on Intel, which can make them less innovative on their own and, to a large extent, can become distributors of Intel technology. Additionally, Intel is able to drive de facto standards and specifications for x86 microprocessors that could cause us and other companies to have delayed access to such standards.

As long as Intel remains in this dominant position, we may be materially adversely affected by Intel's: business practices, including rebating and allocation strategies and pricing actions which may limit our market share and margins; product mix and introduction schedules; product bundling, marketing and merchandising strategies; exclusivity payments to its current and potential customers, retailers and channel partners that require or result in exclusive product arrangements; de facto control over industry standards, and heavy influence on PC manufacturers and other PC industry participants, including motherboard, memory, chipset and basic input/output system (BIOS) suppliers and software companies as well as the graphics interface for Intel platforms; and marketing and advertising expenditures in support of positioning the Intel brand over the brand of its OEM customers and retailers.

Intel has substantially greater financial resources than we do and accordingly spends substantially greater amounts on marketing and research and development than we do. We expect Intel to continue to invest heavily in marketing, research and development, new manufacturing facilities and other technology companies.

Intel could take actions that place our discrete GPUs at a competitive disadvantage, including giving one or more of our competitors in the graphics market, such as Nvidia Corporation, preferential access to its proprietary graphics interface or other useful information. Also, Intel has announced that it is developing their own high-end discrete GPUs. Intel's position in the microprocessor market and integrated graphics chipset market, its introduction of competitive new products, its existing relationships with top-tier OEMs and its aggressive marketing and pricing strategies could result in lower unit sales and lower average selling prices for our products, which could have a material adverse effect on us.

Other competitors include a variety of companies providing or developing ARM-based designs at relatively low cost and low power processors for the computing market including tablets and thin-client form factors, as well as dense servers, set-top boxes and gaming consoles. ARM Holdings designs and licenses its ARM cores and architecture to third parties, including us, and offers supporting software and services. Our ability to compete with companies who use ARM-based solutions depends on our ability to timely design and bring to market energy-efficient, high-performing products at an attractive price point.

Competition in the Graphics Markets

In the graphics market, our competitors include suppliers of discrete graphics, embedded graphics processors and integrated graphics processor (IGP) chipsets. Intel manufactures and sells embedded graphics processors and IGP chipsets, and is a dominant competitor with respect to this portion of our business. Higher unit shipments of our APUs and Intel's integrated graphics may drive computer manufacturers to reduce the number of systems they build paired with discrete graphics components, particularly for notebooks, because they may offer satisfactory graphics performance for most mainstream PC users, at a lower cost. Intel could take actions that place our discrete GPUs and IGP chipsets at a competitive disadvantage such as giving one or more of our competitors in the graphics market, such as Nvidia Corporation, preferential access to its proprietary graphics interface or other useful information. Also, Intel is developing its own high-end discrete GPUs for both consumer and commercial applications.

Our principal competitor in the discrete graphics market is Nvidia and they are considered the market share leader. Other competitors include a number of smaller companies, which may have greater flexibility to address specific market needs, but less financial resources to do so, especially as we believe that the growing complexity of graphics processors and the associated research and development costs represent an increasingly higher barrier to entry in this market.

In the data center, our principal competitor is Nvidia as the adoption of their proprietary CUDA software platform established their market share in high performance computing and machine learning. Other competitors include numerous deep learning accelerator companies, consisting mostly of early to late stage start-ups.

We are the market share leader in semi-custom game console products, where graphics performance is critical, and where we compete primarily against Nvidia.

Competition in the Server Markets

In the server market, we compete against Intel with our CPU server products and Nvidia with our GPU server products.

Research and Development

We focus our research and development activities on improving product performance and enhancing product design. Our main area of focus is on delivering the next generation of CPU and GPU IP, and designing that IP into our SoCs for our next generation of products, with, in each case, improved system performance and performance-per-watt characteristics. For example, we are focusing on improving the battery life of our APU products for notebooks and the performance and power efficiency of our discrete GPUs and our microprocessors for servers. We are also focusing on delivering a range of low-power integrated platforms to serve key markets, including commercial clients, mobile computing and gaming. We believe that these platforms will bring customers increased performance and energy efficiency. We also work with industry leaders on process technology, software and other functional intellectual property and with others in the industry and industry consortia to conduct early stage research and development. We conduct product and system research and development activities for our products in the United States with additional design and development engineering teams located in Canada, China, India, Taiwan and Singapore who undertake specific activities at the direction of our U.S. headquarters.

Manufacturing Arrangements and Assembly and Test Facilities

Third-Party Wafer Foundry Facilities

GLOBALFOUNDRIES Inc. We are a party to a Wafer Supply Agreement (WSA) with GLOBALFOUNDRIES Inc. (GF), which governs the terms by which we purchase products manufactured by GF. Pursuant to the WSA, we are required to purchase all of our microprocessor and APU product requirements, and a certain portion of our GPU products, from GF manufactured at process nodes larger than 7 nm, with limited exceptions. GF was a related party to us until May 15, 2019.

Taiwan Semiconductor Manufacturing Company. We also have foundry arrangements with Taiwan Semiconductor Manufacturing Company (TSMC) for the production of wafers for certain products.

Other Third-Party Manufacturers. We outsource board-level graphics product manufacturing to third-party manufacturers.

Assembly, Test, Mark and Packaging Facilities

Wafers for our products are delivered from third-party foundries to our assembly, test, mark and packaging partners located in the Asia-Pacific region who package and test our final semiconductor products. We are party to two assembly, test, mark and pack (ATMP) joint ventures (collectively, the ATMP JVs) with Tongfu Microelectronics Co., Ltd. The majority of our ATMP services are provided by the ATMP JVs.

Intellectual Property and Licensing

We rely on contracts and intellectual property rights to protect our products and technologies from unauthorized third-party copying and use. Intellectual property rights include copyrights, patents, patent applications, trademarks, trade secrets and mask work rights. As of December 28, 2019, we had approximately 4,000 patents in the United States and approximately 900 patent applications pending in the United States. In certain cases, we have filed corresponding applications in foreign jurisdictions. Including United States and foreign matters, we have approximately 9,900 patent matters worldwide consisting of approximately 7,200 issued patents and 2,800 patent applications pending. We expect to file future patent applications in both the United States and abroad on significant inventions, as we deem appropriate. We do not believe that any individual patent, or the expiration of any patent, is or would be material to our business.

As is typical in the semiconductor industry, we have numerous cross-licensing and technology exchange agreements with other companies under which we both transfer and receive technology and intellectual property rights. One such agreement is the cross-license agreement that we entered into with Intel on November 11, 2009. Under the cross-license

agreement, we granted to Intel and Intel granted to us, non-exclusive, royalty-free licenses to all of each other's patents that were first filed no later than November 11, 2014 and each party can exploit these patents anywhere in the world for making and selling certain semiconductor- and electronic-related products. Under the cross-license agreement, Intel has rights to make semiconductor products for third parties, but the third-party product designs are not licensed as a result of such manufacture. We have rights to perform assembly and testing for third parties but not rights to make semiconductor products for third parties. The term of the cross-license agreement continues until the expiration of the last to expire of the licensed patents, unless earlier terminated. A party can terminate the cross-license agreement or the rights and licenses of the other party if the other party materially breaches the cross-license agreement and does not correct the noticed material breach within 60 days. Upon such termination, the terminated party's license rights terminate but the terminating party's license rights continue, subject to that party's continued compliance with the terms of the cross-license agreement. The cross-license agreement will automatically terminate if a party undergoes a change of control (as defined in the cross-license agreement), and both parties' licenses will terminate. Upon the bankruptcy of a party, that party may assume, but may not assign, the cross-license agreement, and in the event that the cross-license agreement cannot be assumed, the cross-license agreement and the licenses granted will terminate.

Backlog

Sales are made primarily pursuant to purchase orders for current delivery or agreements covering purchases over a period of time. Some of these orders or agreements may be revised or canceled without penalty. Generally, in light of current industry practice, we do not believe that such orders or agreements provide meaningful backlog figures or are necessarily indicative of actual sales for any succeeding period. With respect to our semi-custom SoC products, our orders and agreements are more stringent resulting in meaningful backlog for the coming quarter.

Seasonality

Our operating results tend to vary seasonally. Historically, our net revenue has been generally higher in the second half of the year than in the first half of the year, although market conditions and product transitions could impact these trends.

Employees

As of December 28, 2019, we had approximately 11,400 employees.

Environmental Regulations

Our operations and properties have in the past been and continue to be subject to various United States and foreign laws and regulations, including those relating to materials used in our products and manufacturing processes, discharge of pollutants into the environment, the treatment, transport, storage and disposal of solid and hazardous wastes and remediation of contamination. These laws and regulations require our suppliers to obtain permits for operations making our products, including the discharge of air pollutants and wastewater. Although our management systems are designed to oversee our suppliers' compliance, we cannot assure you that our suppliers have been or will be at all times in complete compliance with such laws, regulations and permits. If our suppliers violate or fail to comply with any of them, a range of consequences could result, including fines, suspension of production, alteration of manufacturing processes, import/export restrictions, sales limitations, criminal and civil liabilities or other sanctions. We could also be held liable for any and all consequences arising out of exposure to hazardous materials used, stored, released, disposed of by us or located at, under or emanating from our facilities or other environmental or natural resource damage. While we have budgeted for foreseeable associated expenditures, we cannot assure you that future environmental legal requirements will not become more stringent or costly in the future. Therefore, we cannot assure you that our costs of complying with current and future environmental and health and safety laws, and our liabilities arising from past and future releases of, or exposure to, hazardous substances will not have a material adverse effect on us.

Environmental laws are complex, change frequently and have tended to become more stringent over time. For example, the European Union (EU) and China are two among a growing number of jurisdictions that have enacted restrictions on the use of lead and other materials in electronic products. These regulations affect semiconductor devices and packaging. As regulations restricting materials in electronic products continue to increase around the world, there is a risk that the cost, quality and manufacturing yields of products that are subject to these restrictions, may be less favorable compared to products that are not subject to such restrictions, or that the transition to compliant products may not meet customer roadmaps, or produce sudden changes in demand, which may result in excess inventory. A number of jurisdictions including the EU, Australia, California and China are developing or have finalized market entry or public procurement regulations for computers and servers based on ENERGY STAR specifications as well as additional energy consumption limits. There is the potential for certain of our products being excluded from some of these markets which could materially adversely affect us.

Certain environmental laws, including the U.S. Comprehensive, Environmental Response, Compensation and Liability Act of 1980, or the Superfund Act, impose strict or, under certain circumstances, joint and several liability on current and previous owners or operators of real property for the cost of removal or remediation of hazardous substances and impose liability for damages to natural resources. These laws often impose liability even if the owner or operator did not know of, or was not responsible for, the release of such hazardous substances. These environmental 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. Such persons can be responsible for cleanup costs even if they never owned or operated the contaminated facility.

We are named as a responsible party on Superfund clean-up orders for three sites in Sunnyvale, California that are on the National Priorities List. Since 1981, we have discovered hazardous material releases to the groundwater from former underground tanks and proceeded to investigate and conduct remediation at these three sites. The chemicals released into the groundwater were commonly used in the semiconductor industry in the United States in the wafer fabrication process prior to 1979.

In 1991, we received Final Site Clean-up Requirements Orders from the California Regional Water Quality Control Board relating to the three sites. We have entered into settlement agreements with other responsible parties on two of the orders. During the term of such agreements, other parties have agreed to assume most of the foreseeable costs as well as the primary role in conducting remediation activities under the orders. We remain responsible for additional costs beyond the scope of the agreements as well as all remaining costs in the event that the other parties do not fulfill their obligations under the settlement agreements.

To address anticipated future remediation costs under the orders, we have computed and recorded an estimated environmental liability of approximately $3 million and have not recorded any potential insurance recoveries in determining the estimated costs of the cleanup. Costs could also increase as a result of additional test and remediation obligations imposed by the Environmental Protection Agency or California Regional Water Quality Control Board. The progress of future remediation efforts cannot be predicted with certainty and these costs may change. We believe that the potential liability, if any, in excess of amounts already accrued, will not have a material adverse effect on our financial condition, cash flows or results of operations.

ITEM 1A. RISK FACTORS

The risks and uncertainties described below are not the only ones we face. If any of the following risks actually occurs, our business, financial condition or results of operations could be materially adversely affected. In addition, you should consider the interrelationship and compounding effects of two or more risks occurring simultaneously.

Intel Corporation's dominance of the microprocessor market and its aggressive business practices may limit our ability to compete effectively.

Intel Corporation has been the market share leader for microprocessors for many years. Intel's market share, margins and significant financial resources enable it to market its products aggressively, to target our customers and our channel partners with special incentives and to influence customers who do business with us. These aggressive activities have in the past resulted in lower unit sales and a lower average selling price for many of our products and adversely affect our margins and profitability.

Intel exerts substantial influence over computer manufacturers and their channels of distribution through various brand and other marketing programs. As a result of Intel's position in the microprocessor market, Intel has been able to control x86 microprocessor and computer system standards and benchmarks and to dictate the type of products the microprocessor market requires of us. Intel also dominates the computer system platform, which includes core logic chipsets, graphics chips, networking devices (wired and wireless), non-volatile storage and other components necessary to assemble a computer system. Additionally, Intel is able to drive de facto standards and specifications for x86 microprocessors that could cause us and other companies to have delayed access to such standards.

Intel has substantially greater financial resources than we do and accordingly spends substantially greater amounts on marketing and research and development than we do. We expect Intel to continue to invest heavily in marketing, research and development, new manufacturing facilities and other technology companies. To the extent Intel manufactures a significantly larger portion of its microprocessor products using more advanced process technologies, or introduces competitive new products into the market before we do, we may be more vulnerable to Intel's aggressive marketing and pricing strategies for microprocessor products.

As long as Intel remains in this dominant position, we may be materially adversely affected by Intel's business practices, including rebating and allocation strategies and pricing actions, designed to limit our market share and margins; product mix and introduction schedules; product bundling, marketing and merchandising strategies; exclusivity payments to its current and potential customers, retailers and channel partners; de facto control over industry standards, and heavy influence on PC manufacturers and other PC industry participants, including motherboard, memory, chipset and basic input/output system (BIOS) suppliers and software companies as well as the graphics interface for Intel platforms; and marketing and advertising expenditures in support of positioning the Intel brand over the brand of its original equipment manufacturer OEM customers and retailers.

Intel could also take actions that place our discrete graphics processing units (GPUs) at a competitive disadvantage, including giving one or more of our competitors in the graphics market, such as Nvidia Corporation, preferential access to its proprietary graphics interface or other useful information. Also, Intel has announced that it is developing their own high-end discrete GPUs. Intel's position in the microprocessor market and integrated graphics chipset market, its introduction of competitive new products, its existing relationships with top-tier OEMs, and its aggressive marketing and pricing strategies could result in lower unit sales and lower average selling prices for our products, which could have a material adverse effect on us.

We rely on third parties to manufacture our products, and if they are unable to do so on a timely basis in sufficient quantities and using competitive technologies, our business could be materially adversely affected.

We rely on third-party wafer foundries to fabricate the silicon wafers for all of our products. We also rely on third-party manufacturers to assemble, test, mark and pack (ATMP) our products. It is important to have reliable relationships with all of these third-party manufacturing suppliers to ensure adequate product supply to respond to customer demand.

We cannot guarantee that these manufacturers or our other third-party manufacturing suppliers will be able to meet our near-term or long-term manufacturing requirements. If we experience supply constraints from our third-party manufacturing suppliers, we may be required to allocate the affected products amongst our customers, which could have a material adverse effect on our relationships with these customers and on our financial condition. In addition, if we are unable to meet customer demand due to fluctuating or late supply from our manufacturing suppliers, it could result in lost sales and have a material adverse effect on our business.

We do not have long-term commitment contracts with some of our third-party manufacturing suppliers. We obtain some of these manufacturing services on a purchase order basis and these manufacturers are not required to provide us with any specified minimum quantity of product beyond the quantities in an existing purchase order. Accordingly, we depend on these suppliers to

allocate to us a portion of their manufacturing capacity sufficient to meet our needs, to produce products of acceptable quality and at acceptable manufacturing yields and to deliver those products to us on a timely basis and at acceptable prices. The manufacturers we use also fabricate wafers and ATMP products for other companies, including certain of our competitors. They could choose to prioritize capacity for other customers, increase the prices that they charge us on short notice or reduce or eliminate deliveries to us, which could have a material adverse effect on our business.

Other risks associated with our dependence on third-party manufacturers include limited control over delivery schedules and quality assurance, lack of capacity in periods of excess demand, misappropriation of our intellectual property, dependence on several small undercapitalized subcontractors and limited ability to manage inventory and parts. Moreover, if any of our third-party manufacturers suffer any damage to facilities, lose benefits under material agreements, experience power outages, lack sufficient capacity to manufacture our products, encounter financial difficulties, are unable to secure necessary raw materials from their suppliers or suffer any other disruption or reduction in efficiency, we may encounter supply delays or disruptions. If we are unable to secure sufficient or reliable supplies of products, our ability to meet customer demand may be adversely affected and this could materially affect our business.

If we transition the production of some of our products to new manufacturers, we may experience delayed product introductions, lower yields or poorer performance of our products. If we experience problems with product quality or are unable to secure sufficient capacity from a particular third-party manufacturer, or if we for other reasons cease utilizing one of those suppliers, we may be unable to secure an alternative supply for any specific product in a short time frame. We could experience significant delays in the shipment of our products if we are required to find alternative third-party manufacturers, which could have a material adverse effect on our business.

We are party to two ATMP joint ventures (collectively, the ATMP JVs) with Tongfu Microelectronics Co., Ltd. The majority of our ATMP services are provided by the JVs and there is no guarantee that the JVs will be able to fulfill our long-term ATMP requirements. If we are unable to meet customer demand due to fluctuating or late supply from the ATMP JVs, it could result in lost sales and have a material adverse effect on our business.

Failure to achieve expected manufacturing yields for our products could negatively impact our financial results.

Semiconductor manufacturing yields are a result of both product design and process technology, which is typically proprietary to the manufacturer, and low yields can result from design failures, process technology failures or a combination of both. Our third-party foundries are responsible for the process technologies used to fabricate silicon wafers. If our third-party foundries experience manufacturing inefficiencies or encounter disruptions, errors or difficulties during production, we may fail to achieve acceptable yields or experience product delivery delays. We cannot be certain that our third-party foundries will be able to develop, obtain or successfully implement leading-edge process technologies needed to manufacture future generations of our products profitably or on a timely basis or that our competitors will not develop new technologies, products or processes earlier. Moreover, during periods when foundries are implementing new process technologies, their manufacturing facilities may not be fully productive. A substantial delay in the technology transitions to smaller process technologies could have a material adverse effect on us, particularly if our competitors transition to more cost effective technologies before us. For example, we are presently focusing our 7 nanometer (nm) product portfolio on Taiwan Semiconductor Co., Ltd.'s (TSMC) 7nm process. If TSMC is not able to manufacture our 7nm products in sufficient quantities to meet customer demand, it could have a material adverse effect on our business.

Any decrease in manufacturing yields could result in an increase in per unit costs, which would adversely impact our gross margin and/or force us to allocate our reduced product supply amongst our customers, which could harm our relationships and reputation with our customers and materially adversely affect our business.

The success of our business is dependent upon our ability to introduce products on a timely basis with features and performance levels that provide value to our customers while supporting and coinciding with significant industry transitions.

Our success depends to a significant extent on the development, qualification, implementation and acceptance of new product designs and improvements that provide value to our customers. Our ability to develop, qualify and distribute, and have manufactured, new products and related technologies to meet evolving industry requirements, at prices acceptable to our customers and on a timely basis are significant factors in determining our competitiveness in our target markets. As consumers have new product feature preferences or have different requirements than those consumers in the PC market, PC sales could be negatively impacted, which could adversely impact our business. Our product roadmap includes our next generation AMD Ryzen™, AMD Radeon™ and AMD EPYC™ processors using 7nm+ process technology. We cannot assure you that our efforts to execute our product roadmap will result in innovative products and technologies that provide value to our customers. If we fail to or are delayed in developing, qualifying or shipping new products or technologies that provide value to our customers and address these new trends or if we fail to predict which new form factors consumers will adopt and adjust our business accordingly, we may lose competitive positioning, which could cause us to lose market share and require us to discount the selling prices of our

products. Although we make substantial investments in research and development, we cannot be certain that we will be able to develop, obtain or successfully implement new products and technologies on a timely basis or that they will be well-received by our customers. Moreover, our investments in new products and technologies involve certain risks and uncertainties and could disrupt our ongoing business. New investments may not generate sufficient revenue, may incur unanticipated liabilities and may divert our limited resources and distract management from our current operations. We cannot be certain that our ongoing investments in new products and technologies will be successful, will meet our expectations and will not adversely affect our reputation, financial condition and operating results.

Delays in developing, qualifying or shipping new products can also cause us to miss our customers' product design windows or, in some cases, breach contractual obligations or cause us to pay penalties. If our customers do not include our products in the initial design of their computer systems or products, they will typically not use our products in their systems or products until at least the next design configuration. The process of being qualified for inclusion in a customer's system or product can be lengthy and could cause us to further miss a cycle in the demand of end-users, which also could result in a loss of market share and harm our business. We also depend on the success and timing of our customers' platform launches. If our customers delay their product launches or if our customers do not effectively market their platforms with our products, it could result in a delay in bringing our products to market and cause us to miss a cycle in the demand of end-users, which could materially adversely affect our business. In addition, market demand requires that products incorporate new features and performance standards on an industry-wide basis. Over the life of a specific product, the sale price is typically reduced over time. The introduction of new products and enhancements to existing products is necessary to maintain the overall corporate average selling price. If we are unable to introduce new products with sufficiently high sale prices or to increase unit sales volumes capable of offsetting the reductions in the sale prices of existing products over time, our business could be materially adversely affected.

If we cannot generate sufficient revenue and operating cash flow or obtain external financing, we may face a cash shortfall and be unable to make all of our planned investments in research and development or other strategic investments.

Our ability to fund research and development expenditures depends on generating sufficient revenue and cash flow from operations and the availability of external financing, if necessary. Our research and development expenditures, together with ongoing operating expenses, will be a substantial drain on our cash flow and may decrease our cash balances. If new competitors, technological advances by existing competitors, or other competitive factors require us to invest significantly greater resources than anticipated in our research and development efforts, our operating expenses would increase. If we are required to invest significantly greater resources than anticipated in research and development efforts without an increase in revenue, our operating results could decline.

We regularly assess markets for external financing opportunities, including debt and equity financing. Additional debt or equity financing may not be available when needed or, if available, may not be available on satisfactory terms. The health of the credit markets may adversely impact our ability to obtain financing when needed. Any downgrades from credit rating agencies such as Moody's or Standard & Poor's may adversely impact our ability to obtain external financing or the terms of such financing. Credit agency downgrades or concerns regarding our credit worthiness may impact relationships with our suppliers, who may limit our credit lines. Our inability to obtain needed financing or to generate sufficient cash from operations may require us to abandon projects or curtail planned investments in research and development or other strategic initiatives. If we curtail planned investments in research and development or abandon projects, our products may fail to remain competitive and our business would be materially adversely affected.

The loss of a significant customer may have a material adverse effect on us.

We depend on a small number of customers for a substantial portion of our business and we expect that a small number of customers will continue to account for a significant part of our revenue in the future. If one of our key customers decides to stop buying our products, or if one of these customers materially reduces its operations or its demand for our products, our business would be materially adversely affected.

Our receipt of revenue from our semi-custom SoC products is dependent upon our technology being designed into third-party products and the success of those products.

The revenue that we receive from our semi-custom SoC products is in the form of non-recurring engineering fees charged to third parties for design and development services and revenue received in connection with sales of our semi-custom SoC products to these third parties. As a result, our ability to generate revenue from our semi-custom products depends on our ability to secure customers for our semi-custom design pipeline, our customers' desire to pursue the project, and our semi-custom SoC products being incorporated into those customer's products. Any revenue from sales of our semi-custom SoC products is directly related to sales of the third-party's products and reflective of their success in the market. Moreover, we have no control over the marketing efforts of these third parties, and we cannot make any assurances that sales of their products will be successful in current or future years. Consequently, the semi-custom SoC product revenue expected by us may not be fully realized and our

operating results may be adversely affected.

Global economic and market uncertainty may adversely impact our business and operating results.

Uncertain global economic conditions have in the past and may in the future adversely impact our business, including, without limitation, a slowdown in the Chinese economy, one of the largest global markets for desktop and notebook PCs. Uncertainty in the worldwide economic environment may negatively impact consumer confidence and spending causing our customers to postpone purchases. In addition, during challenging economic times, our current or potential future customers may experience cash flow problems and as a result may modify, delay or cancel plans to purchase our products. Additionally, if our customers are not successful in generating sufficient revenue or are unable to secure financing, they may not be able to pay, or may delay payment of, accounts receivable that they owe us. The risk related to our customers' potentially defaulting on or delaying payments to us is increased because we expect that a small number of customers will continue to account for a substantial part of our revenue. Any inability of our current or potential future customers to pay us for our products may adversely affect our earnings and cash flow. Moreover, our key suppliers may reduce their output or become insolvent, thereby adversely impacting our ability to manufacture our products. In addition, uncertain economic conditions may make it more difficult for us to raise funds through borrowings or private or public sales of debt or equity securities.

Our worldwide operations are subject to political, legal and economic risks and natural disasters, which could have a material adverse effect on us.

We maintain operations around the world, including in the United States, Canada, Europe, Australia and Asia. We rely on third-party wafer foundries in the United States, Europe and Asia. Nearly all product assembly and final testing of our products is performed at manufacturing facilities, operated by third-party manufacturing facilities, in China, Malaysia and Taiwan. We also have international sales operations. International sales, as a percent of net revenue, were 74% for the year ended December 28, 2019. We expect that international sales will continue to be a significant portion of total sales in the foreseeable future.

The political, legal and economic risks associated with our operations in foreign countries include, without limitation: expropriation; changes in a specific country's or region's political or economic conditions; changes in tax laws, trade protection measures and import or export licensing requirements; difficulties in protecting our intellectual property; difficulties in managing staffing and exposure to different employment practices and labor laws; changes in foreign currency exchange rates; restrictions on transfers of funds and other assets of our subsidiaries between jurisdictions; changes in freight and interest rates; disruption in air transportation between the United States and our overseas facilities; loss or modification of exemptions for taxes and tariffs; and compliance with U.S. laws and regulations related to international operations, including export control and economic sanctions laws and regulations and the Foreign Corrupt Practices Act.

In addition, our worldwide operations (or those of our business partners) could be subject to natural disasters such as earthquakes, tsunamis, flooding, typhoons and volcanic eruptions that disrupt manufacturing or other operations. For example, our Santa Clara operations are located near major earthquake fault lines in California. There may be conflict or uncertainty in the countries in which we operate, including public health issues (for example, an outbreak of a contagious disease such as 2019-Novel Coronavirus (2019-nCoV), avian influenza, measles or Ebola), safety issues, natural disasters, fire, disruptions of service from utilities, nuclear power plant accidents or general economic or political factors. For example, the United Kingdom's 2016 referendum, commonly referred to as "Brexit," has created economic and political uncertainty in the European Union. Also, the European Union's General Data Protection Regulation imposes significant new requirements on how we collect, process and transfer personal data, as well as significant fines for non-compliance. Any of the above risks, should they occur, could result in an increase in the cost of components, production delays, general business interruptions, delays from difficulties in obtaining export licenses for certain technology, tariffs and other barriers and restrictions, longer payment cycles, increased taxes, restrictions on the repatriation of funds and the burdens of complying with a variety of foreign laws, any of which could ultimately have a material adverse effect on our business.

Government actions and regulations such as export administration regulations, tariffs, and trade protection measures, may limit our ability to export our products to certain customers.

We have a joint venture with Higon Information Technology Co., Ltd. (THATIC), comprised of two separate legal entities, China JV1 and China JV2 (collectively, the THATIC JV). In June 2019, the United States Commerce Department's Bureau of Industry and Security (BIS) added certain Chinese entities to the Entity List, including THATIC and the THATIC JV. In October 2019, the BIS added additional Chinese entities to the Entity List. Also, the United States administration has called for changes to domestic and foreign policy. Specifically, United States-China trade relations remain uncertain. The United States administration has announced tariffs on certain products imported into the United States with China as the country of origin, and China has imposed tariffs in response to the actions of the United States. We are taking steps to mitigate the impact of these tariffs on our business and AMD processor-based products. There is also a possibility of future tariffs, trade protection measures, import or export regulations or other restrictions imposed on our products or on our customers by the United States, China or other

countries that could have a material adverse effect on our business. A significant trade disruption or the establishment or increase of any tariffs, trade protection measures or restrictions could result in lost sales adversely impacting our reputation and business.

Our products may be subject to security vulnerabilities that could have a material adverse effect on us.

The products that we sell are complex and may be subject to security vulnerabilities that could result in, among other things, the loss, corruption, theft or misuse of confidential data or system performance issues. Our efforts to prevent and address security vulnerabilities may decrease performance, be only partially effective or not successful at all. We may also depend on third parties, such as customers, vendors and end users, to deploy our mitigations or create their own, and they may delay, decline or modify the implementation of such mitigations. Our relationships with our customers could be adversely affected as some of our customers may stop purchasing our products, reduce or delay future purchases of our products, or use competing products. Any of these actions by our customers could adversely affect our revenue. We also are subject to claims and litigation related to Spectre side-channel exploits and may face additional claims or litigation for future vulnerabilities. Actual or perceived security vulnerabilities of our products may subject us to adverse publicity, damage to our brand and reputation, and could materially harm our business or financial results.

IT outages, data loss, data breaches and cyber-attacks could compromise our intellectual property or other sensitive information, be costly to remediate or cause significant damage to our business, reputation and operations.

In the ordinary course of our business, we maintain sensitive data on our information technology (IT) assets, and also may maintain sensitive information on our business partners' and third-party providers' IT assets, including our intellectual property and proprietary or confidential business information relating to our business and that of our customers and business partners. Maintaining the security of this information is important to our business and reputation. We believe that companies have been increasingly subject to a wide variety of security incidents, cyber-attacks, hacking and phishing attacks, business and system disruption attacks, and other attempts to gain unauthorized access. These threats can come from a variety of sources, all ranging in sophistication from an individual hacker or insider threat to a state-sponsored attack. Cyber threats may be generic, or they may be custom-crafted against our information systems. Cyber-attacks have become increasingly more prevalent and much harder to detect, defend against or prevent. Our network and storage applications, as well as those of our customers, business partners, and third-party providers, may be subject to unauthorized access by hackers or breached due to operator error, malfeasance or other system disruptions.

It is often difficult to anticipate or immediately detect such incidents and the damage caused by such incidents. These data breaches and any unauthorized access, misuse or disclosure of our information or intellectual property could compromise our intellectual property and expose sensitive business information. Cyber-attacks on us or our customers, business partners or third party providers could also cause us to incur significant remediation costs, result in product development delays, disrupt key business operations and divert attention of management and key information technology resources. These incidents could also subject us to liability, expose us to significant expense and cause significant harm to our reputation and business.

We also maintain confidential and personally identifiable information about our workers. The confidentiality and integrity of our worker and consumer data is important to our business and our workers and consumers have a high expectation that we adequately protect their personal information.

We anticipate ongoing and increasing costs related to: enhancing and implementing information security controls, including costs related to upgrading application, computer, and network security components; training workers to maintain and monitor our security controls; remediating any data security breach and addressing the related litigation; mitigating reputational harm; and compliance with external regulations, such as the European Union's General Data Protection Regulation and the California Consumer Privacy Act.

We often partner with third-party providers for certain worker services and we may provide certain limited worker information to such third parties based on the scope of the services provided to us. However, if these third parties fail to adopt or adhere to adequate data security practices, or in the event of a breach of their networks, our workers' data may be improperly accessed, used or disclosed.

A breach of data privacy may cause significant disruption of our business operations. Failure to adequately maintain and update our security systems could materially adversely affect our operations and our ability to maintain worker confidence. Failure to prevent unauthorized access to electronic and other confidential information, IT outages, data loss and data breaches could materially adversely affect our financial condition, our competitive position and operating results.

We have a wafer supply agreement with GLOBALFOUNDRIES Inc. (GF) with obligations to purchase all of our microprocessor and accelerated processing unit (APU) product requirements and a certain portion of our graphics processing unit (GPU) product requirements manufactured at process nodes larger than 7 nanometer from GF, with limited exceptions. If GF is not able to satisfy our manufacturing requirements, our business could be adversely impacted.

The wafer supply agreement (WSA) governs the terms by which we purchase products manufactured by GF and is in place until 2024. Pursuant to the WSA, we are required to purchase all of our microprocessor and APU product requirements and a certain portion of our GPU product requirements from GF manufactured at process nodes larger than 7 nanometer (nm), with limited exceptions. If GF is unable to achieve anticipated manufacturing yields, manufacture our products on a timely basis at competitive prices or meet our capacity requirements, then we may experience supply shortages for certain products or increased costs and our business could be materially adversely affected.

Under the terms of the WSA, we have agreed to minimum annual wafer purchase targets through 2021. If we fail to meet the agreed wafer purchase target during a calendar year, we will be required to pay to GF a portion of the difference between our actual wafer purchases and the applicable annual purchase target. If our actual wafer requirements are less than the number of wafers required to meet the applicable annual wafer purchase target, we could have excess inventory or higher inventory unit costs, both of which may adversely impact our gross margin and our results of operations.

In addition, GF has relied on Mubadala Technology Investments LLC (Mubadala Tech) for its funding needs. If Mubadala Tech fails to adequately fund GF on a timely basis, or at all, and if GF is not otherwise able to adequately fund its operations, GF's ability to manufacture products for us could be materially adversely affected.

Uncertainties involving the ordering and shipment of our products could materially adversely affect us.

We typically sell our products pursuant to individual purchase orders. We generally do not have long-term supply arrangements with our customers or minimum purchase requirements except that orders generally must be for standard pack quantities. Generally, our customers may cancel orders for standard products more than 30 days prior to shipment without incurring significant fees. We base our inventory levels in part on customers' estimates of demand for their products, which may not accurately predict the quantity or type of our products that our customers will want in the future or ultimately end up purchasing. Our ability to forecast demand is even further complicated when our products are sold indirectly through downstream channel distributors and customers, as our forecasts for demand are then based on estimates provided by multiple parties throughout the downstream channel.

PC and consumer markets are characterized by short product lifecycles, which can lead to rapid obsolescence and price erosion. In addition, our customers may change their inventory practices on short notice for any reason. We may build inventories during periods of anticipated growth, and the cancellation or deferral of product orders or overproduction due to failure of anticipated orders to materialize could result in excess or obsolete inventory, which could result in write-downs of inventory and an adverse effect on gross margins.

Factors that may result in excess or obsolete inventory, which could result in write-downs of the value of our inventory, a reduction in the average selling price or a reduction in our gross margin include: a sudden or significant decrease in demand for our products; a production or design defect in our products; a higher incidence of inventory obsolescence because of rapidly changing technology and customer requirements; a failure to accurately estimate customer demand for our products, including for our older products as our new products are introduced; or our competitors introducing new products or taking aggressive pricing actions.

Our operating results are subject to quarterly and seasonal sales patterns.

The profile of our sales may be weighted differently during the year. A large portion of our quarterly sales have historically been made in the last month of the quarter. This uneven sales pattern makes prediction of revenue for each financial period difficult and increases the risk of unanticipated variations in quarterly results and financial condition. In addition, our operating results tend to vary seasonally with the markets in which our products are sold. For example, historically, our net revenue has been generally higher in the second half of the year than in the first half of the year, although market conditions and product transitions could impact these trends. Many of the factors that create and affect quarterly and seasonal trends are beyond our control.

The agreements governing our notes and our Secured Revolving Facility impose restrictions on us that may adversely affect our ability to operate our business.

The indenture governing our 7.50% Senior Notes due 2022 (7.50% Notes) contains various covenants which limit our ability to, among other things: incur additional indebtedness; pay dividends and make other restricted payments; make certain investments, including investments in our unrestricted subsidiaries; create or permit certain liens; create or permit restrictions on the ability of certain restricted subsidiaries to pay dividends or make other distributions to us; use the proceeds from sales of assets; enter

into certain types of transactions with affiliates; and consolidate or merge or sell our assets as an entirety or substantially as an entirety.

In addition, the Secured Revolving Facility's credit agreement (Credit Agreement) restricts our ability to make cash payments on the notes to the extent that (i) on the date of such payment, an event of default exists under the Credit Agreement or would result therefrom or (ii) if we would have, on a pro forma basis after giving effect to such payment, a consolidated total leverage ratio that exceeds 3.50x. Any of our future debt agreements may contain similar restrictions. If under certain circumstances we fail to make a cash payment on a series of notes when required by the applicable indenture, it would constitute an event of default under such indenture, which, in turn, could constitute an event of default under the agreements governing our other indebtedness.

Our Secured Revolving Facility also contains various covenants which limit our ability to, among other things, incur additional indebtedness and liens, make certain investments, merge or consolidate with other entities, make certain dispositions, create any encumbrance on the ability of a subsidiary to make any upstream payments, make payments with respect to subordinated debt or certain borrowed money prior to its due date and enter into any non-arm's-length transaction with an affiliate (in each case, except for certain customary exceptions).

The agreements governing our notes and our Secured Revolving Facility contain cross-default provisions whereby a default under one agreement would likely result in cross defaults under agreements covering other indebtedness. For example, the occurrence of a default with respect to any indebtedness or any failure to repay indebtedness when due in an amount in excess of (i) $50 million would cause a cross default under the indentures (to the extent such default would result in the acceleration of such indebtedness) governing our 7.50% Notes and 2.125% Convertible Senior Notes due 2026 (2.125% Notes), and (ii) $100 million would cause a cross default under the Secured Revolving Facility. The occurrence of a default under any of these borrowing arrangements would permit the applicable note holders or the lenders under our Secured Revolving Facility to declare all amounts outstanding under those borrowing arrangements to be immediately due and payable. If the note holders or the trustee under the indentures governing our 7.50% Notes or 2.125% Notes or the lenders under our Secured Revolving Facility accelerate the repayment of borrowings, we cannot assure you that we will have sufficient assets to repay those borrowings.

The markets in which our products are sold are highly competitive.

The markets in which our products are sold are very competitive and delivering the latest and best products to market on a timely basis is critical to achieving revenue growth. We believe that the main factors that determine our product competitiveness are timely product introductions, product quality, product features and capabilities (including enabling state-of-the-art visual and virtual reality experiences), energy efficiency (including power consumption and battery life), reliability, processor clock speed, performance, size (or form factor), selling price, cost, adherence to industry standards (and the creation of open industry standards), level of integration, software and hardware compatibility, security and stability, brand recognition and availability.

We expect that competition will continue to be intense due to rapid technological changes, frequent product introductions by our competitors or new competitors of products that may provide better performance/experience or may include additional features that render our products comparatively less competitive. We may also face aggressive pricing by competitors, especially during challenging economic times. In addition, our competitors have significant marketing and sales resources which could increase the competitive environment in such a declining market, leading to lower prices and margins. Some competitors may have greater access or rights to complementary technologies, including interface, processor and memory technical information. For instance, with our APU products and other competing solutions with integrated graphics, we believe that demand for additional discrete graphics chips and cards may decrease in the future due to improvements in the quality and performance of integrated graphics. If competitors introduce competitive new products into the market before us, demand for our products could be adversely impacted and our business could be adversely affected. In addition, Intel has announced that it plans to expand its position in integrated graphics for the PC market with high-end discrete graphics solutions for a broad range of computing segments, which may negatively impact our ability to compete in these computing segments.

In addition, we are entering markets with current and new competitors who may be able to adapt more quickly to customer requirements and emerging technologies. We cannot assure you that we will be able to compete successfully against current or new competitors who may have stronger positions in these new markets or superior ability to anticipate customer requirements and emerging industry trends. We may face delays or disruptions in research and development efforts, or we may be required to invest significantly greater resources in research and development than anticipated. Also, the semiconductor industry has seen several mergers and acquisitions over the last number of years. Further consolidation could adversely impact our business due to there being fewer suppliers, customers and partners in the industry.

The conversion of the 2.125% Notes may dilute the ownership interest of our existing stockholders, or may otherwise depress the price of our common stock.

The conversion of some or all of the 2.125% Notes may dilute the ownership interests of our existing stockholders. The 2.125% Notes will mature on September 1, 2026, unless earlier redeemed or repurchased by us or converted. During the fourth quarter of 2019, the sale price for conversion was satisfied as of the end of December 31, 2019 and as a result, the 2.125% Notes are eligible for conversion during the first calendar quarter of 2020. Any sales in the public market of our common stock issuable upon such conversion could adversely affect prevailing market prices of our common stock. In addition, the existence of the 2.125% Notes may encourage short selling by market participants because the conversion thereof could be used to satisfy short positions, or the anticipated conversion of the 2.125% Notes into cash and/or shares of our common stock could depress the price of our common stock.

The demand for our products depends in part on the market conditions in the industries into which they are sold. Fluctuations in demand for our products or a market decline in any of these industries could have a material adverse effect on our results of operations.

Industry-wide fluctuations in the computer marketplace have materially adversely affected us in the past and may materially adversely affect us in the future. A large portion of our Computing and Graphics revenue is focused on the consumer desktop PC and notebook segments, which have in the past experienced a decline driven by, among other factors, the adoption of smaller and other form factors, increased competition and changes in replacement cycles. The success of our semi-custom SoC products is dependent on securing customers for our semi-custom design pipeline and consumer market conditions, including the success of the Sony PlayStation®4, Sony PlayStation®4 Pro, Microsoft® Xbox One™ S and Microsoft® Xbox One™ X game console systems worldwide. In addition, the GPU market has at times seen elevated demand due to the application of GPU products to cryptocurrency mining. For example, our GPU revenue has been affected in part by the volatility of the cryptocurrency mining market. Demand for cryptocurrency has changed and is likely to continue to change quickly. For example, China and South Korea have instituted restrictions on cryptocurrency trading and the valuations of the currencies, and corresponding interest in mining of such currencies are subject to significant fluctuations. If we are unable to manage the risks related to the volatility of the cryptocurrency mining market, our GPU business could be materially adversely affected.

Our ability to design and introduce new products in a timely manner is dependent upon third-party intellectual property.

In the design and development of new and enhanced products, we rely on third-party intellectual property such as development and testing tools for software and hardware. Furthermore, certain product features may rely on intellectual property acquired from third parties. The design requirements necessary to meet customer demand for more features and greater functionality from semiconductor products may exceed the capabilities of the third-party intellectual property or development or testing tools available to us. If the third-party intellectual property that we use becomes unavailable, is not available with required functionality or performance in the time frame or price point needed for our new products or fails to produce designs that meet customer demands, our business could be materially adversely affected.

We depend on third-party companies for the design, manufacture and supply of motherboards, software, memory and other computer platform components to support our business.

We depend on third-party companies for the design, manufacture and supply of motherboards, graphics cards, software (e.g. BIOS, operating systems, drivers), memory and other components that our customers utilize to support and/or use our microprocessor, GPU and APU offerings. We also rely on our add-in-board (AIB) partners to support our GPU and APU products. In addition, our microprocessors are not designed to function with motherboards and chipsets designed to work with Intel microprocessors. If the designers, manufacturers, AIBs and suppliers of motherboards, graphics cards, software, memory and other components cease or reduce their design, manufacture or production of current or future products that are based on or support our products, our business could be materially adversely affected.

If we lose Microsoft Corporation's support for our products or other software vendors do not design and develop software to run on our products, our ability to sell our products could be materially adversely affected.

Our ability to innovate beyond the x86 instruction set controlled by Intel depends partially on Microsoft designing and developing its operating systems to run on or support our x86-based microprocessor products. With respect to our graphics products, we depend in part on Microsoft to design and develop its operating system to run on or support our graphics products. Similarly, the success of our products in the market, such as our APU products, is dependent on independent software providers designing and developing software to run on our products. If Microsoft does not continue to design and develop its operating systems so that they work with our x86 instruction sets or does not continue to develop and maintain their operating systems to support our graphics products, independent software providers may forego designing their software applications to take advantage of our innovations and customers may not purchase PCs with our products. In addition, some software drivers licensed for use

with our products are certified by Microsoft. If Microsoft did not certify a driver, or if we otherwise fail to retain the support of Microsoft or other software vendors, our ability to market our products would be materially adversely affected.

Our reliance on third-party distributors and AIB partners subjects us to certain risks.

We market and sell our products directly and through third-party distributors and AIB partners pursuant to agreements that can generally be terminated for convenience by either party upon prior notice to the other party. These agreements are non-exclusive and permit both our distributors and AIB partners to offer our competitors' products. We are dependent on our distributors and AIB partners to supplement our direct marketing and sales efforts. If any significant distributor or AIB partner or a substantial number of our distributors or AIB partners terminated their relationship with us, decided to market our competitors' products over our products or decided not to market our products at all, our ability to bring our products to market would be impacted and we would be materially adversely affected. In addition, if we are unable to collect accounts receivable from our significant distributors and/or AIB partners, it could have a material adverse effect on our business. If we are unable to manage the risks related to the use of our third-party distributors and AIB partners or offer appropriate incentives to focus them on the sale of our products, our business could be materially adversely affected.

Additionally, distributors and AIB partners typically maintain an inventory of our products. In most instances, our agreements with distributors protect their inventory of our products against price reductions, as well as provide return rights for any product that we have removed from our price book and that is not more than 12 months older than the manufacturing date. Some agreements with our distributors also contain standard stock rotation provisions permitting limited levels of product returns. Our agreements with AIB partners protect their inventory of our products against price reductions. In the event of a significant decline in the price of our products, the price protection rights we offer would materially adversely affect us because our revenue and corresponding gross margin would decline.

We may incur future impairments of goodwill and technology license purchases.

We perform our annual goodwill impairment analysis as of the first day of the fourth quarter of each year. Subsequent to our annual goodwill impairment analysis, we monitor for any events or changes in circumstances, such as significant adverse changes in business climate or operating results, changes in management's business strategy, an inability to successfully introduce new products in the marketplace, an inability to successfully achieve internal forecasts or significant declines in our stock price, which may represent an indicator of impairment. The occurrence of any of these events may require us to record future goodwill impairment charges.

We license certain third-party technologies and tools for the design and production of our products. We report the value of those licenses as intangible assets on the balance sheet and we periodically evaluate the carrying value of those licenses based on their future economic benefit to us. Factors such as the life of the assets, changes in competing technologies, and changes to the business strategy may represent an indicator of impairment. The occurrence of any of these events may require us to record future technology license impairment charges. For example, during the fourth quarter of 2018, we recorded an impairment charge in Cost of sales of $45 million on technology licenses related to products that were no longer being used.

Our inability to continue to attract and retain qualified personnel may hinder our business.

Much of our future success depends upon the continued service our executives of numerous qualified engineering, marketing, sales and executive employees. Competition for highly skilled executives and employees in the technology industry is intense and our competitors have targeted individuals in our organization that have desired skills and experience. If we are not able to continue to attract, train and retain our leadership team and our qualified employees necessary for our business, the progress of our product development programs could be hindered, and we could be materially adversely affected. To help attract, retain and motivate our executives and qualified employees, we use share-based incentive awards such as employee stock options and non-vested share units (restricted stock units). If the value of such stock awards does not appreciate as measured by the performance of the price of our common stock, or if our share-based compensation otherwise ceases to be viewed as a valuable benefit, our ability to attract, retain and motivate our executives and employees could be weakened, which could harm our results of operations. Also, if the value of our stock awards increases substantially, this could potentially create great personal wealth for our executives and employees and affect our ability to retain our personnel. In addition, any future restructuring plans may adversely impact our ability to attract and retain key employees.

Our indebtedness could adversely affect our financial position and prevent us from implementing our strategy or fulfilling our contractual obligations.

Our total debt principal amount as of December 28, 2019 was $0.6 billion. Our indebtedness may make it difficult for us to satisfy our financial obligations, including making scheduled principal and interest payments; limit our ability to borrow additional funds for working capital, capital expenditures, acquisitions and general corporate and other purposes; limit our ability to use

our cash flow or obtain additional financing for future working capital, capital expenditures, acquisitions or other general corporate purposes; require us to use a substantial portion of our cash flow from operations to make debt service payments; place us at a competitive disadvantage compared to our competitors with relatively less debt; and increase our vulnerability to the impact of adverse economic and industry conditions.

We enter into sale and factoring arrangements from time to time with respect to certain accounts receivables, which arrangements are non-recourse to us in the event that an account debtor fails to pay for credit-related reasons, and are not included in our indebtedness. We could become obligated to repurchase such accounts receivables or otherwise incur liability to the counterparties under these arrangements under certain circumstances, such as where a commercial dispute arises between us and an account debtor.

We may not be able to generate sufficient cash to service our debt obligations or meet our working capital requirements.

Our ability to make payments on and to refinance our debt will depend on our financial and operating performance, which may fluctuate significantly from quarter to quarter, and is subject to prevailing economic, financial and business conditions along with other factors, many of which are beyond our control. We cannot assure you that we will be able to generate cash flow or that we will be able to borrow funds, including under our secured revolving credit facility for a principal amount up to $500 million (our Secured Revolving Facility), in amounts sufficient to enable us to service our debt or to meet our working capital requirements. If we are not able to generate sufficient cash flow from operations or to borrow sufficient funds to service our debt, we may be required to sell assets or equity, reduce expenditures, refinance all or a portion of our existing debt or obtain additional financing. We cannot assure you that we will be able to refinance our debt, sell assets or equity, borrow funds under our Secured Revolving Facility or borrow more funds on terms acceptable to us, if at all.

In the event of a change of control, we may not be able to repurchase our outstanding debt as required by the applicable indentures and our Secured Revolving Facility, which would result in a default under the indentures and our Secured Revolving Facility.

Upon a change of control, we will be required to offer to repurchase all of our 7.50% Notes and 2.125% Notes then outstanding at 101% of the principal amount thereof, plus accrued and unpaid interest, if any, up to, but excluding, the repurchase date. In addition, a change of control would be an event of default under our Secured Revolving Facility. As of December 28, 2019, $0.6 billion principal amount was outstanding under our notes. Future debt agreements may contain similar provisions. We may not have the financial resources to repurchase our outstanding notes and prepay all of our outstanding obligations under our Secured Revolving Facility.

The semiconductor industry is highly cyclical and has experienced severe downturns that have materially adversely affected, and may continue to materially adversely affect, our business in the future.

The semiconductor industry is highly cyclical and has experienced significant downturns, often in conjunction with constant and rapid technological change, wide fluctuations in supply and demand, continuous new product introductions, price erosion and declines in general economic conditions. We have incurred substantial losses in recent downturns, due to: substantial declines in average selling prices; the cyclical nature of supply and demand imbalances in the semiconductor industry; a decline in demand for end-user products (such as PCs) that incorporate our products; and excess inventory levels.

Industry-wide fluctuations in the computer marketplace have materially adversely affected us in the past and may materially adversely affect us in the future. Global economic uncertainty and weakness have in the past impacted the semiconductor market as consumers and businesses have deferred purchases, which negatively impacted demand for our products. Our financial performance has been, and may in the future be, negatively affected by these downturns.

The growth of our business is also dependent on continued demand for our products from high-growth adjacent emerging global markets. Our ability to be successful in such markets depends in part on our ability to establish adequate local infrastructure, as well as our ability to cultivate and maintain local relationships in these markets. If demand from these markets is below our expectations, sales of our products may decrease, which would have a material adverse effect on us.

Acquisitions, joint ventures and/or investments could disrupt our business and/or dilute or adversely affect the price of our common stock.

Our success will depend, in part, on our ability to expand our product offerings and grow our business in response to changing technologies, customer demands and competitive pressures. In some circumstances, we may pursue growth through the acquisition of complementary businesses, solutions or technologies or through joint ventures or investments rather than through internal development. The identification of suitable acquisition or joint venture candidates can be difficult, time-consuming and costly, and we may not be able to successfully complete identified acquisitions or joint ventures. Moreover, if such acquisitions or joint

ventures require us to seek additional debt or equity financing, we may not be able to obtain such financing on terms favorable to us or at all. Even if we successfully complete an acquisition or a joint venture, we may not be able to assimilate and integrate effectively or efficiently the acquired business, technologies, solutions, assets, personnel or operations, particularly if key personnel of the acquired company decide not to work for us. Acquisitions and joint ventures may also involve the entry into geographic or business markets in which we have little or no prior experience. Consequently, we may not achieve anticipated benefits of the acquisitions or joint ventures which could harm our operating results. In addition, to complete an acquisition, we may issue equity securities, which would dilute our stockholders' ownership and could adversely affect the price of our common stock, as well as incur debt, assume contingent liabilities or have amortization expenses and write-downs of acquired assets, which could adversely affect our results of operations. Acquisitions and joint ventures may also reduce our cash available for operations and other uses, which could harm our business. Also, any failure on our part to effectively evaluate and execute new business initiatives could adversely affect our business. We may not adequately assess the risk of new business initiatives and subsequent events may arise that alter the risks that were initially considered.

Furthermore, we may not achieve the objectives and expectations with respect to future operations, products and services. The majority of our ATMP services are provided by the JVs, and there is no guarantee that the JVs will be able to fulfill our long-term ATMP requirements. If we are unable to meet customer demand due to fluctuating or late supply from the JVs, it could result in lost sales and have a material adverse effect on our business.

In addition, we may not realize the anticipated benefits from any new business initiatives such as the THATIC JV. We may not realize the expected benefits from the THATIC JV's expected future performance, the receipt of any future milestone payments and royalties from certain licensed intellectual property. In June 2019, the United States Commerce Department's Bureau of Industry and Security added certain Chinese entities to the Entity List, including THATIC and the THATIC JV. We are complying with U.S. law pertaining to the Entity List designation.

Our business is dependent upon the proper functioning of our internal business processes and information systems and modification or interruption of such systems may disrupt our business, processes and internal controls.

We rely upon a number of internal business processes and information systems to support key business functions, and the efficient operation of these processes and systems is critical to our business. Our business processes and information systems need to be sufficiently scalable to support the growth of our business and may require modifications or upgrades that expose us to a number of operational risks. As such, our information systems will continually evolve and adapt in order to meet our business needs. These changes may be costly and disruptive to our operations and could impose substantial demands on management time.

These changes may also require changes in our information systems, modification of internal control procedures and significant training of employees and third-party resources. We continuously work on simplifying our information systems and applications through consolidation and standardization efforts. There can be no assurance that our business and operations will not experience any disruption in connection with this transition. Our information technology systems, and those of third-party information technology providers or business partners, may also be vulnerable to damage or disruption caused by circumstances beyond our control including catastrophic events, power anomalies or outages, natural disasters, viruses or malware, cyber-attacks, data breaches and computer system or network failures, exposing us to significant cost, reputational harm and disruption or damage to our business.

In addition, as our IT environment continues to evolve, we are embracing new ways of communicating and sharing data internally and externally with customers and partners using methods such as mobility and the cloud that can promote business efficiency. However, these practices can also result in a more distributed IT environment, making it more difficult for us to maintain visibility and control over internal and external users, and meet scalability and administrative requirements. If our security controls cannot keep pace with the speed of these changes, or if we are not able to meet regulatory and compliance requirements, our business would be materially adversely affected.

If essential equipment, materials or manufacturing processes are not available to manufacture our products, we could be materially adversely affected.

We may purchase equipment and materials for use by our back-end manufacturing service providers from a number of suppliers and our operations depend upon obtaining deliveries of adequate supplies of equipment and materials on a timely basis. Our third-party suppliers also depend on the same timely delivery of adequate quantities of equipment and materials in the manufacture of our products. In addition, as many of our products increase in technical complexity, we rely on our third-party suppliers to update their processes in order to continue meeting our back-end manufacturing needs. Certain equipment and materials that are used in the manufacture of our products are available only from a limited number of suppliers, or in some cases, a sole supplier. We also depend on a limited number of suppliers to provide the majority of certain types of integrated circuit packages for our microprocessors, including our APU products. Similarly, certain non-proprietary materials or components such as memory, printed circuit boards (PCBs), interposers, substrates and capacitors used in the manufacture of our products are

currently available from only a limited number of sources. Because some of the equipment and materials that we and our third-party manufacturing suppliers purchase are complex, it is sometimes difficult to substitute one supplier for another. From time to time, suppliers may extend lead times, limit supply or increase prices due to capacity constraints or other factors. Also, some of these materials and components may be subject to rapid changes in price and availability. Interruption of supply or increased demand in the industry could cause shortages and price increases in various essential materials. Dependence on a sole supplier or a limited number of suppliers exacerbates these risks. If we are unable to procure certain of these materials for our back-end manufacturing operations, or our third-party foundries or manufacturing suppliers are unable to procure materials for manufacturing our products, our business would be materially adversely affected.

If our products are not compatible with some or all industry-standard software and hardware, we could be materially adversely affected.

Our products may not be fully compatible with some or all industry-standard software and hardware. Further, we may be unsuccessful in correcting any such compatibility problems in a timely manner. If our customers are unable to achieve compatibility with software or hardware, we could be materially adversely affected. In addition, the mere announcement of an incompatibility problem relating to our products could have a material adverse effect on our business.

Costs related to defective products could have a material adverse effect on us.

Products as complex as those we offer may contain defects or failures when first introduced or when new versions or enhancements to existing products are released. We cannot assure you that, despite our testing procedures, errors will not be found in new products or releases after commencement of commercial shipments in the future, which could result in loss of or delay in market acceptance of our products, material recall and replacement costs, loss of revenue, writing down the inventory of defective products, the diversion of the attention of our engineering personnel from product development efforts, defending against litigation related to defective products or related liabilities, including property damage, personal injury, damage to our reputation in the industry and loss of data or intangible property, and could adversely affect our relationships with our customers. In addition, we may have difficulty identifying the end customers of the defective products in the field. As a result, we could incur substantial costs to implement modifications to correct defects. Any of these problems could materially adversely affect our business.

We could be subject to potential product liability claims if one of our products causes, or merely appears to have caused, an injury, whether tangible or intangible. Claims may be made by consumers or others selling our products, and we may be subject to claims against us even if an alleged injury is due to the actions of others. A product liability claim, recall or other claim with respect to uninsured liabilities or for amounts in excess of insured liabilities could have a material adverse effect on our business.

If we fail to maintain the efficiency of our supply chain as we respond to changes in customer demand for our products, our business could be materially adversely affected.

Our ability to meet customer demand for our products depends, in part, on our ability to deliver the products our customers want on a timely basis. Accordingly, we rely on our supply chain for the manufacturing, distribution and fulfillment of our products. As we continue to grow our business, expand to high-growth adjacent markets, acquire new customers and strengthen relationships with existing customers, the efficiency of our supply chain will become increasingly important because many of our customers tend to have specific requirements for particular products, and specific time-frames in which they require delivery of these products. If we are unable to consistently deliver the right products to our customers on a timely basis in the right locations, our customers may reduce the quantities they order from us, which could have a material adverse effect on our business.

We outsource to third parties certain supply-chain logistics functions, including portions of our product distribution, transportation management and information technology support services.

We rely on third-party providers to operate our regional product distribution centers and to manage the transportation of our work-in-process and finished products among our facilities, to our manufacturing suppliers and to our customers. In addition, we rely on third parties to provide certain information technology services to us, including help desk support, desktop application services, business and software support applications, server and storage administration, data center operations, database administration and voice, video and remote access. We cannot guarantee that these providers will fulfill their respective responsibilities in a timely manner in accordance with the contract terms, in which case our internal operations and the distribution of our products to our customers could be materially adversely affected. Also, we cannot guarantee that our contracts with these third-party providers will be renewed, in which case we would have to transition these functions in-house or secure new providers, which could have a material adverse effect on our business if the transition is not executed appropriately.

Our stock price is subject to volatility.

Our stock price has experienced price and volume fluctuations and could be subject to wide fluctuations in the future. The trading price of our stock may fluctuate widely due to various factors including actual or anticipated fluctuations in our financial conditions and operating results, changes in financial estimates by us or financial estimates and ratings by securities analysts, changes in our capital structure, including issuance of additional debt or equity to the public, interest rate changes, news regarding our products or products of our competitors, and broad market and industry fluctuations. Stock price fluctuations could impact the value of our equity compensation, which could affect our ability to recruit and retain employees. In addition, volatility in our stock price could adversely affect our business and financing opportunities.

Worldwide political conditions may adversely affect demand for our products.

Worldwide political conditions may create uncertainties that could adversely affect our business. The United States has been and may continue to be involved in armed conflicts that could have a further impact on our sales and our supply chain. The consequences of armed conflict, political instability or civil or military unrest are unpredictable, and we may not be able to foresee events that could have a material adverse effect on us. Terrorist attacks or other hostile acts may negatively affect our operations, or adversely affect demand for our products, and such attacks or related armed conflicts may impact our physical facilities or those of our suppliers or customers. Furthermore, these attacks or hostile acts may make travel and the transportation of our products more difficult and more expensive, which could materially adversely affect us. Any of these events could cause consumer spending to decrease or result in increased volatility in the United States economy and worldwide financial markets.

Unfavorable currency exchange rate fluctuations could adversely affect us.

We have costs, assets and liabilities that are denominated in foreign currencies. As a consequence, movements in exchange rates could cause our foreign currency denominated expenses to increase as a percentage of revenue, affecting our profitability and cash flows. Whenever we believe appropriate, we hedge a portion of our short-term foreign currency exposure to protect against fluctuations in currency exchange rates. We determine our total foreign currency exposure using projections of long-term expenditures for items such as payroll. We cannot assure you that these activities will be effective in reducing foreign exchange rate exposure. Failure to do so could have an adverse effect on our business, financial condition, results of operations and cash flow. In addition, the majority of our product sales are denominated in U.S. dollars. Fluctuations in the exchange rate between the U.S. dollar and the local currency can cause increases or decreases in the cost of our products in the local currency of such customers. An appreciation of the U.S. dollar relative to the local currency could reduce sales of our products.

Our inability to effectively control the sales of our products on the gray market could have a material adverse effect on us.

We market and sell our products directly to OEMs and through authorized third-party distributors. From time to time, our products are diverted from our authorized distribution channels and are sold on the “gray market.” Gray market products result in shadow inventory that is not visible to us, thus making it difficult to forecast demand accurately. Also, when gray market products enter the market, we and our distribution channels compete with these heavily discounted gray market products, which adversely affects demand for our products and negatively impacts our margins. In addition, our inability to control gray market activities could result in customer satisfaction issues because any time products are purchased outside our authorized distribution channels there is a risk that our customers are buying counterfeit or substandard products, including products that may have been altered, mishandled or damaged, or are used products represented as new.

If we cannot adequately protect our technology or other intellectual property in the United States and abroad, through patents, copyrights, trade secrets, trademarks and other measures, we may lose a competitive advantage and incur significant expenses.

We rely on a combination of protections provided by contracts, including confidentiality and nondisclosure agreements, copyrights, patents, trademarks and common law rights, such as trade secrets, to protect our intellectual property. However, we cannot assure you that we will be able to adequately protect our technology or other intellectual property from third-party infringement or from misappropriation in the United States and abroad. Any patent licensed by us or issued to us could be challenged, invalidated or circumvented or rights granted there under may not provide a competitive advantage to us.

Furthermore, patent applications that we file may not result in issuance of a patent or, if a patent is issued, the patent may not be issued in a form that is advantageous to us. Despite our efforts to protect our intellectual property rights, others may independently develop similar products, duplicate our products or design around our patents and other rights. In addition, it is difficult to monitor compliance with, and enforce, our intellectual property on a worldwide basis in a cost-effective manner. In jurisdictions where foreign laws provide less intellectual property protection than afforded in the United States and abroad, our technology or other intellectual property may be compromised, and our business would be materially adversely affected.

We are party to litigation and may become a party to other claims or litigation that could cause us to incur substantial costs or pay substantial damages or prohibit us from selling our products.

From time to time, we are a defendant or plaintiff in various legal actions. For example, as described in Note 18 of our consolidated financial statements, we have been subject to certain claims concerning federal securities laws and corporate governance. Our products are purchased by and/or used by consumers, which could increase our exposure to consumer actions such as product liability claims and consumer class action claims, including those described in Note 18 of our consolidated financial statements. On occasion, we receive claims that individuals were allegedly exposed to substances used in our former semiconductor wafer manufacturing facilities and that this alleged exposure caused harm. Litigation can involve complex factual and legal questions, and its outcome is uncertain. It is possible that if a claim is successfully asserted against us, including the claims described in Note 18 of our consolidated financial statements, it could result in the payment of damages that could be material to our business.

With respect to intellectual property litigation, from time to time, we have been notified of, or third parties may bring or have brought, actions against us and/or against our customers based on allegations that we are infringing the intellectual property rights of others, contributing to or inducing the infringement of the intellectual property rights of others, improperly claiming ownership of intellectual property or otherwise improperly using the intellectual property of others. If any such claims are asserted, we may seek to obtain a license under the third parties' intellectual property rights. We cannot assure you that we will be able to obtain all of the necessary licenses on satisfactory terms, if at all. These parties may file lawsuits against us or our customers seeking damages (potentially up to and including treble damages) or an injunction against the sale of products that incorporate allegedly infringed intellectual property or against the operation of our business as presently conducted, which could result in our having to stop the sale of some of our products or to increase the costs of selling some of our products or which could damage our reputation. The award of damages, including material royalty payments, or other types of damages, or the entry of an injunction against the manufacture and sale of some or all of our products could have a material adverse effect on us. We could decide, in the alternative, to redesign our products or to resort to litigation to challenge such claims. Such challenges could be extremely expensive and time-consuming regardless of their merit, could cause delays in product release or shipment and/or could have a material adverse effect on us. We cannot assure you that litigation related to our intellectual property rights or the intellectual property rights of others can always be avoided or successfully concluded.

Even if we were to prevail, any litigation could be costly and time-consuming and would divert the attention of our management and key personnel from our business operations, which could have a material adverse effect on us.

Our business is subject to potential tax liabilities.

We are subject to income tax, indirect tax or other tax claims by tax agencies in jurisdictions in which we conduct business. Significant judgment is required in determining our worldwide provision for income taxes. Tax laws are dynamic and subject to change as new laws are passed and new interpretations of the law are issued or applied. The Tax Cuts and Jobs Act of 2017 (the Tax Reform Act) contains many significant changes to the U.S. federal income tax laws, which the consequences of could have a material impact on the value of our deferred tax assets and could increase our future U.S. income tax expense. As additional regulatory guidance is issued by the applicable taxing authorities and as new accounting treatment is clarified, we may report additional adjustments in the period if new information becomes available. We have a significant amount of deferred tax assets and a portion of the deferred tax assets related to net operating losses or tax credits could be subject to limitations under Internal Revenue Code Section 382 or 383, separate return loss year rules, or dual consolidated loss rules. The limitations could reduce the ability of the Company to be able to utilize the net operating losses or tax credits before the expiration of the tax attributes. Tax law changes or the limitations could be material and could materially affect our tax obligations and effective tax rate.

In the ordinary course of our business, there are many transactions and calculations where the ultimate income tax, indirect tax, or other tax determination is uncertain. Although we believe our tax estimates are reasonable, we cannot assure that the final determination of any tax audits and litigation will not be materially different from that which is reflected in historical tax provisions and accruals. Should additional taxes be assessed as a result of an audit, assessment or litigation, there could be a material adverse effect on our cash, tax provisions and net income in the period or periods for which that determination is made.

We are subject to environmental laws, conflict minerals-related provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act as well as a variety of other laws or regulations that could result in additional costs and liabilities.

Our operations and properties have in the past been and continue to be subject to various United States and foreign laws and regulations, including those relating to materials used in our products and manufacturing processes, discharge of pollutants into the environment, the treatment, transport, storage and disposal of solid and hazardous wastes and remediation of contamination. These laws and regulations require our suppliers to obtain permits for operations making our products, including the discharge of air pollutants and wastewater. Although our management systems are designed to oversee our suppliers' compliance, we cannot assure you that our suppliers have been or will be at all times in complete compliance with such laws, regulations and permits.

If our suppliers violate or fail to comply with any of them, a range of consequences could result, including fines, suspension of production, alteration of manufacturing processes, import/export restrictions, sales limitations, criminal and civil liabilities or other sanctions. Such non-compliance from our manufacturing suppliers could result in disruptions in supply, higher sourcing costs, and/or reputational damage for us.

Environmental laws are complex, change frequently and have tended to become more stringent over time. For example, the European Union (EU) and China are two among a growing number of jurisdictions that have enacted restrictions on the use of lead and other materials in electronic products. These regulations affect semiconductor devices and packaging. As regulations restricting materials in electronic products continue to increase around the world, there is a risk that the cost, quality and manufacturing yields of products that are subject to these restrictions may be less favorable compared to products that are not subject to such restrictions, or that the transition to compliant products may not meet customer roadmaps, or produce sudden changes in demand, which may result in excess inventory. A number of jurisdictions including the EU, Australia, California and China are developing or have finalized market entry or public procurement regulations for computers and servers based on ENERGY STAR specifications as well as additional energy consumption limits. There is the potential for certain of our products being excluded from some of these markets which could materially adversely affect us.

Certain environmental laws, including the United States Comprehensive, Environmental Response, Compensation and Liability Act of 1980, or the Superfund Act, impose strict or, under certain circumstances, joint and several liability on current and previous owners or operators of real property for the cost of removal or remediation of hazardous substances and impose liability for damages to natural resources. These laws often impose liability even if the owner or operator did not know of, or was not responsible for, the release of such hazardous substances. These environmental 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. Such persons can be responsible for cleanup costs even if they never owned or operated the contaminated facility. We have been named as a responsible party at three Superfund sites in Sunnyvale, California. Although we have not yet been, we could be named a potentially responsible party at other Superfund or contaminated sites in the future. In addition, contamination that has not yet been identified could exist at our other facilities.

Under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, the SEC adopted disclosure and reporting requirements for companies that use “conflict” minerals originating from the Democratic Republic of Congo or adjoining countries. We continue to incur additional costs associated with complying with these requirements, such as costs related to developing internal controls for the due diligence process, determining the source of any conflict minerals used in our products, auditing the process and reporting to our customers and the SEC. In addition to the SEC regulation, the European Union, China and other jurisdictions are developing new policies focused on conflict minerals that may impact and increase the cost of our compliance program. Also, since our supply chain is complex, we may face reputational challenges if we are unable to sufficiently verify the origins of the subject minerals. Moreover, we are likely to encounter challenges to satisfy those customers who require that all of the components of our products are certified as “conflict free.” If we cannot satisfy these customers, they may choose a competitor’s products.

The United States federal government has issued new policies for federal procurement focused on eradicating the practice of forced labor and human trafficking. Germany’s federal procurement office, in collaboration with the Bitkom trade association, issued new supply chain labor requirements. In addition, the United Kingdom, Australia and the State of California have issued laws that require us to disclose our policy and practices for identifying and eliminating forced labor and human trafficking in our supply chain. Several customers as well as the Responsible Business Alliance have also issued expectations to eliminate these practices that may impact us. While we have a policy and management systems to identify and avoid these practices in our supply chain, we cannot guarantee that our suppliers will always be in conformance to these laws and expectations. We may face enforcement liability and reputational challenges if we are unable to sufficiently meet these expectations. Moreover, we are likely to encounter challenges with customers if we cannot satisfy their forced and trafficked labor polices and they may choose a competitor’s product.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

As of December 28, 2019, we leased approximately 2.35 million square feet of space for research and development, engineering, administrative and warehouse use, including our headquarters in Santa Clara, California, our principal administrative facilities in Austin, Texas, our design center in Shanghai, China, our main facility with respect to graphics and chipset products located in Markham, Ontario, Canada and a number of smaller regional sales offices located in commercial centers near customers,

principally in the United States, Europe, Asia and Latin America. These leases expire at varying dates through 2028, although some of these leases include optional renewals. We occupy 220,000 square feet of space in our headquarters in Santa Clara, California under a 10-year operating lease which commenced in August 2017 and expires in July 2027. We have the option to extend the term of the lease for two additional 5-year periods. The lease for our principal administrative facilities in Austin, Texas expires in March 2025, and provides for one 10-year optional renewal. The leases for our facilities in Markham, Ontario, Canada expire in February 2028, and provide for one 5-year optional renewals. We occupy approximately 265,000 square feet of space in our design center in Shanghai, China under a 10-year operating lease, which expires in March 2028.

We currently do not anticipate difficulty in either retaining occupancy of any of our facilities through lease renewals prior to expiration or through month-to-month occupancy or replacing them with equivalent facilities.

We believe that our existing facilities are suitable and adequate for our present purposes and that the productive capacity of such facilities is substantially being utilized or we have plans to utilize such capacity.

ITEM 3. LEGAL PROCEEDINGS

Shareholder Derivative Lawsuits **(Wessels, Hamilton and Ha)**

On March 20, 2014, a purported shareholder derivative lawsuit captioned *Wessels v. Read, et al.*, Case No. 1:14 cv-262486 (Wessels) was filed against us (as a nominal defendant only) and certain of our directors and officers in the Santa Clara County Superior Court of the State of California. The complaint purports to assert claims against us and certain individual directors and officers for breach of fiduciary duty, waste of corporate assets and unjust enrichment. The complaint seeks damages allegedly caused by alleged materially misleading statements and/or material omissions by us and the individual directors and officers regarding our 32nm technology and "Llano" product, which statements and omissions, the plaintiffs claim, allegedly operated to artificially inflate the price paid for our common stock during the period. On April 27, 2015, a similar purported shareholder derivative lawsuit captioned *Christopher Hamilton and David Hamilton v. Barnes, et al.*, Case No. 5:15-cv-01890 (Hamilton) was filed against us (as a nominal defendant only) and certain of our directors and officers in the United States District Court for the Northern District of California.

On September 29, 2015, a similar purported shareholder derivative lawsuit captioned *Jake Ha v Caldwell, et al.,* Case No. 3:15-cv-04485 (Ha) was filed against us (as a nominal defendant only) and certain of our directors and officers in the United States District Court for the Northern District of California. The lawsuit also seeks a court order voiding the stockholder vote on our 2015 proxy. The case was transferred to the judge handling the Hamilton Lawsuit and is now Case No. 4:15-cv-04485. The Wessels, Hamilton and Ha shareholder derivative lawsuits were stayed pending resolution of a class action lawsuit captioned *Hatamian v. AMD, et al.*, C.A. No. 3:14-cv-00226 filed against us in the United States District Court for the Northern District of California (the Hatamian Lawsuit). The Hatamian Lawsuit asserted claims against us and certain of our officers for alleged violations of Section 10(b) of the Exchange Act of 1934, as amended (the Exchange Act), and SEC Rule 10b-5 concerning certain statements regarding our 32nm technology and "Llano" products. On October 9, 2017, the parties signed a definitive settlement agreement resolving the Hatamian Lawsuit and submitted it to the Court for approval. Under the terms of this agreement, the settlement was funded entirely by certain of our insurance carriers and the defendants continued to deny any liability or wrongdoing. On March 2, 2018, the court approved the settlement and entered a final judgment in the Hatamian Lawsuit.

On January 30, 2018, the Wessels and Hamilton plaintiffs amended their complaints. On February 2, 2018, the Ha plaintiff also filed an amended complaint. On February 22, 2018, we filed motions to dismiss the Hamilton and Ha plaintiffs' amended complaints. On April 2, 2018, we filed a demurrer seeking to dismiss the Wessels amended complaint. On July 23, 2018, the Santa Clara Superior Court sustained our demurrer in the Wessels case, dismissing all claims in that matter with prejudice. The Wessels plaintiff filed a Notice of Appeal on September 27, 2018. On October 4, 2018, the Federal Court issued an order dismissing the Hamilton and Ha amended complaints. The Hamilton plaintiffs filed a Notice of Appeal on October 8, 2018, and the Ha plaintiffs filed a Notice of Appeal on October 15, 2018. On November 19, 2018, the Hamilton and Ha plaintiffs filed a motion seeking summary reversal of the order dismissing their claims. We opposed this motion on December 13, 2018, and the Court denied it on February 25, 2019. The Wessels, Hamilton, and Ha appeals are currently pending. Briefing has completed in each appeal.

Based upon information presently known to management, we believe that the potential liability, if any, will not have a material adverse effect on our financial condition, cash flows or results of operations.

Hauck et al. Litigation

Since January 19, 2018, three putative class action complaints have been filed against us in the United States District Court for the Northern District of California: (1) *Diana Hauck et al. v. AMD, Inc.,* Case No. 5:18-cv-0047, filed on January 19, 2018; (2) *Brian Speck et al. v. AMD, Inc.*, Case No. 5:18-cv-0744, filed on February 4, 2018; and (3) *Nathan Barnes and Jonathan Caskey-Medina, et al. v. AMD, Inc.*, Case No. 5:18-cv-00883, filed on February 9, 2018. On April 9, 2018, the court consolidated

these cases and ordered that *Diana Hauck et al. v. AMD, Inc.* serve as the lead case. On June 13, 2018, six plaintiffs (from California, Louisiana, Florida, and Massachusetts) filed a consolidated amended complaint alleging that we failed to disclose our processors' alleged vulnerability to Spectre. Plaintiffs further allege that our processors cannot perform at their advertised processing speeds without exposing consumers to Spectre, and that any "patches" to remedy this security vulnerability will result in degradation of processor performance. The plaintiffs seek damages under several causes of action on behalf of a nationwide class and four state subclasses (California, Florida, Massachusetts, Louisiana) of consumers who purchased our processors and/or devices containing AMD processors. The plaintiffs also seek attorneys' fees, equitable relief, and restitution. Pursuant to the court's order directing the parties to litigate only eight of the causes of action in the consolidated amended complaint initially, we filed a motion to dismiss on July 13, 2018. On October 29, 2018, after the plaintiffs voluntarily dismissed one of their claims, the court granted our motion and dismissed six causes of action with leave to amend. The plaintiffs filed their amended consolidated complaint on December 6, 2018. On January 3, 2019, we again moved to dismiss the subset of claims currently at issue. On April 4, 2019, the court granted our motion and dismissed all claims currently at issue with prejudice. On May 6, 2019, the court granted the parties' stipulation and request under Fed. R. Civ. P. 54(b) to enter a partial final judgment and certify for appeal the court's April 4, 2019 dismissal order, and on that same date, the plaintiffs voluntarily dismissed without prejudice their remaining claims pursuant to an agreement whereby, subject to certain terms and conditions, we agreed to toll the statute of limitations and/or statute of repose. On May 30, 2019, the plaintiffs filed a Notice of Appeal with the U.S. Court of Appeals for the Ninth Circuit. Briefing has completed for the appeal.

Based upon information presently known to management, we believe that the potential liability, if any, will not have a material adverse effect on our financial condition, cash flows or results of operations.

Quarterhill Inc. Litigation

On July 2, 2018, three entities named Aquila Innovations, Inc. (Aquila), Collabo Innovations, Inc. (Collabo), and Polaris Innovations, Ltd. (Polaris), filed separate patent infringement complaints against us in the United States District Court for the Western District of Texas. Aquila alleges that we infringe two patents (6,239,614 and 6,895,519) relating to power management; Collabo alleges that we infringe one patent (7,930,575) related to power management; and Polaris alleges that we infringe two patents (6,728,144 and 8,117,526) relating to control or use of dynamic random-access memory, or DRAM. Each of the three complaints seeks unspecified monetary damages, interest, fees, expenses, and costs against us; Aquila and Collabo also seek enhanced damages. Aquila, Collabo, and Polaris each appear to be related to a patent assertion entity named Quarterhill Inc. (formerly WiLAN Inc.). On November 16, 2018, AMD filed answers in the *Collabo* and *Aquila* cases and filed a motion to dismiss in the *Polaris* case. On January 25, 2019, we filed amended answers and counterclaims in the *Collabo* and *Aquila* cases. On July 22, 2019, our motion to dismiss in the Polaris case was denied. On August 23, 2019, the Court held a claim construction hearing in each case.

Based upon information presently known to management, we believe that the potential liability, if any, will not have a material adverse effect on our financial condition, cash flows or results of operations.

Dickey Litigation

On October 26, 2015, a putative class action complaint captioned *Dickey et al. v. AMD*, No. 15-cv-04922 was filed against us in the United States District Court for the Northern District of California. Plaintiffs allege that we misled consumers by using the term "eight cores" in connection with the marketing of certain AMD FX CPUs that are based on our "Bulldozer" core architecture. The plaintiffs allege these products cannot perform eight calculations simultaneously, without restriction. The plaintiffs seek to obtain damages under several causes of action for a nationwide class of consumers who allegedly were deceived into purchasing certain Bulldozer-based CPUs that were marketed as containing eight cores. The plaintiffs also seek attorneys' fees. On December 21, 2015, we filed a motion to dismiss the complaint, which was granted on April 7, 2016. The plaintiffs then filed an amended complaint with a narrowed putative class definition, which the Court dismissed upon our motion on October 31, 2016. The plaintiffs subsequently filed a second amended complaint, and we filed a motion to dismiss the second amended complaint. On June 14, 2017, the Court issued an order granting in part and denying in part our motion to dismiss, and allowing the plaintiffs to move forward with a portion of their complaint. On March 27, 2018, plaintiffs filed their motion for class certification. On January 17, 2019, the Court granted plaintiffs' motion for class certification. The class definition does not encompass our Ryzen or EPYC processors. On January 31, 2019, we filed a petition in the Ninth Circuit Court of Appeals seeking review of certain aspects of the January 17, 2019 class certification order. On May 9, 2019, the parties attended mediation and reached a tentative settlement. On June 3, 2019, the Ninth Circuit Court of Appeals denied our petition seeking appellate review of the January 17, 2019, class certification order. On August 9, 2019, the parties executed a formal settlement agreement. On August 23, 2019, plaintiffs filed their motion for preliminary approval of the settlement agreement. On October 4, 2019, the Court granted the motion for preliminary approval of the settlement agreement.

Based upon information presently known to management, we believe that the settlement will not have a material adverse effect on our financial condition, cash flows or results of operations.

Monterey Research Litigation

On November 15, 2019, Monterey Research, LLC filed a patent infringement complaint against us in the United States District Court for the District of Delaware. Monterey Research alleges that we infringe six U.S. patents: 6,534,805 (related to SRAM cell design); 6,629,226 (related to read interface protocols); 6,651,134 (related to memory devices); 6,765,407 (related to programmable digital circuits); 6,961,807 (related to integrated circuits and associated memory systems); and 8,373,455 (related to output buffer circuits). Monterey Research seeks unspecified monetary damages, enhanced damages, interest, fees, expenses, costs, and injunctive relief against us. On January 22, 2020, we filed a motion to dismiss part of Monterey Research's complaint.

Based upon information presently known to management, we believe that the potential liability, if any, will not have a material adverse effect on our financial condition, cash flows or results of operations.

Environmental Matters

We are named as a responsible party on Superfund clean-up orders for three sites in Sunnyvale, California that are on the National Priorities List. Since 1981, we have discovered hazardous material releases to the groundwater from former underground tanks and proceeded to investigate and conduct remediation at these three sites. The chemicals released into the groundwater were commonly used in the semiconductor industry in the United States in the wafer fabrication process prior to 1979.

In 1991, we received Final Site Clean-up Requirements Orders from the California Regional Water Quality Control Board relating to the three sites. We have entered into settlement agreements with other responsible parties on two of the orders. During the term of such agreements, other parties have agreed to assume most of the foreseeable costs as well as the primary role in conducting remediation activities under the orders. We remain responsible for additional costs beyond the scope of the agreements as well as all remaining costs in the event that the other parties do not fulfill their obligations under the settlement agreements.

To address anticipated future remediation costs under the orders, we have computed and recorded an estimated environmental liability of approximately $3 million and have not recorded any potential insurance recoveries in determining the estimated costs of the cleanup. Costs could also increase as a result of additional test and remediation obligations imposed by the Environmental Protection Agency or California Regional Water Quality Control Board. The progress of future remediation efforts cannot be predicted with certainty and these costs may change. We believe that the potential liability, if any, in excess of amounts already accrued, will not have a material adverse effect on our financial condition, cash flows or results of operations.

Other Matters

We are a defendant or plaintiff in various actions that arose in the normal course of business. With respect to these matters, based on our management's current knowledge, we believe that the amount or range of reasonably possible loss, if any, will not, either individually or in the aggregate, have a material adverse effect on our business, financial position, results of operations or cash flows.

ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable.