

WESTERN DIGITAL CORP
Form 10-K
August 24, 2018
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended June 29, 2018

Or

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

For the transition period from _____ to _____
Commission file number: 1-8703

WESTERN DIGITAL CORPORATION
(Exact Name of Registrant as Specified in Its Charter)

Delaware 33-0956711
(State or other jurisdiction of (I.R.S. Employer
incorporation or organization) Identification No.)

5601 Great Oaks Parkway 95119
San Jose, California
(Address of principal executive offices) (Zip Code)
Registrant's telephone number, including area code: (408) 717-6000

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, \$.01 Par Value Per Share	The Nasdaq Stock Market LLC (Nasdaq Global Select Market)

Securities registered pursuant to Section 12(g) of the Act:

None

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and

post such files). Yes No

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Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant’s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	Accelerated filer	Non-accelerated filer	Smaller reporting company	Emerging growth company
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Do not check if a smaller reporting company)

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

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

The aggregate market value of the registrant’s common stock held by non-affiliates of the registrant on December 29, 2017, the last business day of the registrant’s most recently completed second fiscal quarter, was \$18.9 billion, based on the closing sale price as reported on the Nasdaq Global Select Market.

There were 291,356,809 shares of common stock, par value \$0.01 per share, outstanding as of the close of business on August 15, 2018.

Documents Incorporated by Reference

Part III incorporates by reference certain information from the registrant’s definitive proxy statement (the “Proxy Statement”) for the 2018 Annual Meeting of Stockholders, which will be filed with the Securities and Exchange Commission within 120 days after the end of the 2018 fiscal year. Except with respect to information specifically incorporated by reference in this Form 10-K, the Proxy Statement is not deemed to be filed as part hereof.

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Unless otherwise indicated, references herein to specific years and quarters are to our fiscal years and fiscal quarters, and references to financial information are on a consolidated basis. As used herein, the terms “we,” “us,” “our,” the “Company,” “WDC” and “Western Digital” refer to Western Digital Corporation and its subsidiaries, unless we state, or the context indicates, otherwise.

WDC, a Delaware corporation, is the parent company of our data storage business. Our principal executive offices are located at 5601 Great Oaks Parkway, San Jose, California 95119. Our telephone number is (408) 717-6000 and our website is www.wdc.com. The information on our website is not incorporated in this Annual Report on Form 10 K.

Western Digital, WD, SanDisk, Tegile, and Upthere are registered trademarks or trademarks of Western Digital or its affiliates in the U.S. and/or other countries. All other trademarks, registered trademarks and/or service marks, indicated or otherwise, are the property of their respective owners.

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FORWARD-LOOKING STATEMENTS

This document contains forward-looking statements within the meaning of the federal securities laws. Any statements that do not relate to historical or current facts or matters are forward-looking statements. You can identify some of the forward-looking statements by the use of forward-looking words, such as “may,” “will,” “could,” “would,” “project,” “believe,” “anticipate,” “expect,” “estimate,” “continue,” “potential,” “plan,” “forecast,” and the like, or the use of future tense. Statements concerning current conditions may also be forward-looking if they imply a continuation of current conditions.

Examples of forward-looking statements include, but are not limited to, statements concerning:

- expectations regarding our Flash Ventures joint venture with Toshiba Memory Corporation;
- our quarterly cash dividend policy and share repurchase program;
- expectations regarding our product development and technology plans;
- expectations regarding our future results of operations;
- expectations regarding the outcome of legal proceedings in which we are involved;
- expectations regarding the impact of the Tax Cuts and Jobs Act enacted on December 22, 2017 on the Company;
- expectations regarding the repatriation of funds from our foreign operations;
- our beliefs regarding tax benefits and the timing of future payments, if any, relating to the unrecognized tax benefits, and the adequacy of our tax provisions;
- expectations regarding capital investments and sources of funding for those investments; and
- our beliefs regarding the sufficiency of our available liquidity to meet our working capital, debt, dividend and capital expenditure needs.

Forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those expressed in the forward-looking statements. You are urged to carefully review the disclosures we make concerning risks and other factors that may affect our business and operating results, including those made in Part I, Item 1A of this Annual Report on Form 10 K, and any of those made in our other reports filed with the Securities and Exchange Commission. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this document. We do not intend, and undertake no obligation, to publish revised forward-looking statements to reflect events or circumstances after the date of this document or to reflect the occurrence of unanticipated events.

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PART I

Item 1. Business

General

Western Digital Corporation (“Western Digital”) is a leading developer, manufacturer, and provider of data storage devices and solutions that address the evolving needs of the information technology (“IT”) industry and the infrastructure that enables the proliferation of data in virtually every other industry. Our broad portfolio of technology and products address the following key markets: Client Devices; Data Center Devices and Solutions; and Client Solutions. We also generate license and royalty revenue related to our intellectual property (“IP”) which is included in each of these three categories.

Founded in 1970 in Santa Ana, California and now headquartered in San Jose, California, Western Digital has one of the technology industry’s most valuable patent portfolios with more than 14,000 patents awarded worldwide. Since 2009, we have been a Standard & Poor’s 500 (“S&P 500”) company. We have a rich heritage of innovation and operational excellence, a wide range of IP assets and broad research and development (“R&D”) capabilities. The unabated growth and value of data continues creating a global need for a larger and more capable storage infrastructure. We continue to transform ourselves to address this growth by providing the broadest range of storage technologies in the industry with a comprehensive product portfolio and global reach.

Built on decades of expertise in developing leading technology and components, we are enabling enterprises to capture, preserve and access virtually limitless data. We enable cloud service providers to build more powerful, cost effective and efficient data centers. We have relationships with the full range of original equipment manufacturers (“OEM”) and data center customers currently addressing storage opportunities, such as storage subsystem suppliers, major server OEMs, Internet and social media infrastructure players, and personal computer (“PC”) and Mac™ OEMs. We have also built strong consumer brands by providing effective tools to manage fast-accumulating libraries of personal content. We market our products primarily under the HGST, SanDisk and WD brands. Our products are sold through distribution, retail and direct channels worldwide. We are a vertically integrated company with deep capabilities to transform disk drive and flash-based components into products and solutions. We operate a series of joint ventures with Toshiba Memory Corporation (“TMC”) that provide us with our flash-based technologies and products (see “Ventures with Toshiba Memory” Section below).

We are well positioned to capitalize on the ongoing expansion in digital content generation and management driven by the uses of Artificial Intelligence (“AI”), Machine Learning and Data Analytics. These trends are linked directly to commercial enterprises’ and consumers’ need for data storage. The ways in which people and organizations are creating and using data are changing and the amount of data considered useful to store is expanding. More digital content is being stored and managed in a cloud environment on both hard disk drives (“HDDs”) and solid state drives (“SSDs”). With a focus on innovation and value creation, our goal is to grow through strong execution and targeted investments in data center infrastructure, mobility and the cloud.

Industry

We operate in the data storage and data management industry. Our devices and solutions are made using either rotating magnetic or flash-based technologies that together provide a broad range of reliability, performance, storage capacity and data retention capabilities to our customers. The ability to capture and create value through the use of data analytics is an important asset to our customers. In a connected global marketplace, there is a proliferation in the methods by and the rates at which content is generated, consumed and stored by end users. When combined with fast global networks, these trends create tremendous need for cost effective, high-performance and/or high-capacity

storage solutions in mobile, computing and consumer electronic devices, as well as in a wide range of storage systems, servers and data centers.

The growth in computing complexity, cloud computing applications, connected mobile devices and Internet connected products is driving unabated growth in the volume of digital content to be stored. This growth has led to a proliferation of data storage form factors. The storage industry is increasingly utilizing tiered architectures with HDDs, SSDs and other flash-based storage devices to address an expanding set of uses and applications. We continuously monitor the advantages, disadvantages and advances of the full array of storage technologies, including review of these technologies with our customers, to ensure we are appropriately resourced to meet our customers' storage needs. Storage solutions that hold large amounts of data are a key enabler of the trends seen in the evolution of a data driven economy, underpinned by the increase of digital content creation, consumption and monetization.

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We are a market and customer driven company, focused on growth, innovation and value creation for our customers, employees and shareholders. We develop deep and collaborative relationships with our customers with a goal of enabling their continued success, an approach that has made us a trusted business partner in our served markets. As our portfolio of storage solutions expands further, we believe our customer engagement approach is one of the key factors that will help us continue to achieve strong financial performance over the long term. We continue to evolve our customer engagement and go-to-market model to address changing customer and market needs. We are well positioned to expand our value-creation model within an evolving and growing storage ecosystem with our diversified product platform and unique competitive advantages.

Competition

Our industry is highly competitive. We compete with manufacturers of HDDs and flash-based memory for client devices and solutions, and data center devices and solutions. The HDD market consists of three principal manufacturers: Seagate Technology plc, with its Maxtor and Samsung brands, Toshiba Electronic Devices & Storage Corporation (“Toshiba”) and Western Digital, with our HGST and WD brands. In flash-based memory, we compete with a wide range of manufacturers, from numerous small startup companies to large multinational corporations, including captive NAND suppliers SK hynix, Inc. (“SK hynix”), Intel Corporation (“Intel”), Micron Technology, Inc., Samsung Electronics Co., Ltd. (“Samsung Electronics”) and TMC.

Business Strategy

Our overall strategy is to leverage our innovation and execution capabilities to be an industry-leading and broad-based developer, manufacturer and provider of storage devices and solutions that support the evolving IT industry infrastructure that has enabled the unabated proliferation of data. We strive to successfully execute our strategy through the following foundational elements in order to deliver the best outcome for our customers, partners, investors and employees:

Technology Leadership: We continue to innovate and develop advanced technologies in both HDD and Flash to deliver timely new products and solutions to meet growing demands for scale, performance and cost efficiency in the market.

Broad Product Portfolio: We leverage our capabilities in firmware, software and systems to deliver compelling and differentiated storage solutions to our customers that offer the best combinations of performance, cost, power consumption, form factor, quality and reliability, while creating new use cases for our solutions in emerging markets.

Operational Excellence: We are focused on delivering the best value for our customers in data center, client and consumer markets through a relentless focus on appropriately scaling our operations to efficiently support business growth, achieving best in class cost, quality and cycle-time, maintaining industry leading manufacturing capabilities, and having a competitive advantage in supply-chain management.

Our strategy provides the following benefits, which distinguish us in the dynamic and competitive storage industry:

- enables scaling for efficiency and flexibility, allowing us to leverage our R&D and capital expenditures to deliver storage solutions to multiple markets;

• results in continued diversification of our storage solutions portfolio and entry into additional growing adjacent markets; and

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allows us to achieve strong financial performance, including healthy cash generation, thereby enabling organic and inorganic business investments and allocation of capital to shareholders.

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Data Storage Solutions

We offer a broad line of data storage solutions to meet the evolving storage needs of end markets which include the following:

Client Devices

Client Devices consist of HDDs and SSDs for computing devices, such as desktop and notebook PCs, security surveillance systems, gaming consoles and set top boxes; flash-based embedded storage products for mobile phones, tablets, notebook PCs and other portable and wearable devices, automotive, IoT, industrial and connected home applications; and flash-based memory wafers. Our HDDs and SSDs are designed for use in devices requiring high performance, reliability and capacity with various attributes such as low cost per GB, quiet acoustics, low power consumption and protection against shocks. Our embedded storage include custom embedded solutions and iNAND[®] embedded flash products, such as our multi-chip package (“MCP”) solutions that combine flash-based and mobile dynamic random-access memory (“DRAM”) in an integrated package.

Data Center Devices and Solutions

Data Center Devices and Solutions consist of high-capacity enterprise HDDs and high-performance enterprise SSDs, data center software and system solutions. Our capacity enterprise helium hard drives provide high capacity storage needs and low total cost of ownership benefits for the growing cloud data center market. Our high-performance enterprise class SSDs include high-performance flash-based SSDs and software solutions which are optimized for performance applications providing a range of capacity and performance levels primarily for use in enterprise servers, supporting high volume on-line transactions, data analysis and other enterprise applications. Our data center solutions also include a wide range of high-capacity HDDs and drive configurations which provide enterprise class reliability at the lowest cost per gigabyte (“GB”). These drives are primarily for use in data storage systems, in tiered storage models and where data must be stored reliably for years. Our system solutions provide petabyte scalable capacity with high performance at compelling economics. We also provide higher value data storage platforms and systems to the market through our vertically integrated scale-out object storage active archive systems.

Client Solutions

Client Solutions consist of HDDs and SSDs embedded into external storage products and removable flash-based products which include cards, universal serial bus (“USB”) flash drives and wireless drives. Our external HDD storage products in both mobile and desktop form factors provide affordable, high quality, reliable storage for backup and capacity expansion that are designed to keep digital content secure. We offer client SSDs with a range of capacities and performance characteristics to address a broad spectrum of the client storage market. Our removable cards are designed primarily for use in consumer devices, such as mobile phones, tablets, imaging systems, still cameras, action video cameras and security surveillance systems. Our USB flash drives are used in the computing and consumer markets and are designed for high-performance and reliability. Our wireless drive products allow in-field back up of created content, as well as wireless streaming of high-definition movies, photos, music and documents to tablets, smartphones and PCs.

Technology

Rotating Magnetic Storage

HDDs provide non-volatile data storage based on the recording of magnetic information on a rotating disk. We have successfully developed and commercialized HDDs that operate in an enclosed helium environment, instead of air,

delivering industry leading HDD capacity and performance attributes. Our improvements in HDD capacity, which lower product costs over time, have been enabled largely through advancements in recording head and magnetic media technology. We develop and manufacture substantially all of the recording heads and magnetic media used in our hard drive products. We invest considerable resources in R&D, manufacturing infrastructure and capital equipment for recording head and media technology, as well as other aspects of the magnetic recording system such as HDD mechanics, controller and firmware technology, in order to secure our competitive position and cost structure. In 2018, we announced the world's first microwave-assisted magnetic recording ("MAMR") HDD - a breakthrough in innovation for delivering ultra-high capacity HDDs to meet the future demands of Big Data with proven data center-level reliability.

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Solid State Storage

Solid state storage products provide non-volatile storage based on flash-based technology. We develop and manufacture solid state storage products in different form factors for a variety of different markets, including enterprise or cloud storage, client storage, automotive, mobile devices and removable memory devices.

Our solid state storage products utilize our captive flash-based technology which we develop and manufacture through our business ventures with Toshiba Memory Corporation (“TMC”). We focus significant research, development and effort on developing highly reliable, high-performance, cost-effective flash-based technology. Over time, we have successfully developed and commercialized an increased number of bits per cell in an increasingly smaller form factor, further driving cost reductions. In 2018, we successfully introduced and commercialized 4-bits-per-cell architectures (X4 technology), on 3-dimensional (“3D”) NAND technology, which we refer to as BiCS3, with 64 layers of vertical storage capability which features advances in high aspect ratio semiconductor processing. BiCS3 X4 technology delivers an industry-leading storage capacity of 768 gigabits on a single chip. In addition, we leveraged our advanced UFS and e.MMC interface technologies to introduce a new portfolio of advanced iNAND® embedded flash drives to empower smartphone users to unlock the full potential of today’s data-driven applications and experiences.

We expect to develop and commercialize additional generations of 3D NAND technologies over the next several years while continuing to utilize our older technology for certain markets and applications.

We are leveraging our expertise, resources and strategic investments in non-volatile memories to explore a wide spectrum of persistent memory and storage class memory technologies. We have also initiated, defined and developed standards to meet new market needs and to promote wide acceptance of flash storage standards through interoperability and ease-of-use.

Our products generally leverage a common platform for various products within product families, and in some cases across product families, resulting in the commonality of components which reduces our exposure to changes in demand, facilitates inventory management and allows us to achieve lower costs through purchasing economies. This platform strategy also enables our customers to leverage their qualification efforts onto successive product models. For a discussion of associated risks, see Part I, Item 1A, Risk Factors, of this Annual Report on Form 10 K.

Research and Development

We devote substantial resources to the development of new products and the improvement of existing products. We focus our engineering efforts on coordinating our product design and manufacturing processes to bring our products to market in a cost-effective and timely manner. R&D expenses totaled \$2.40 billion, \$2.44 billion and \$1.63 billion in 2018, 2017 and 2016, respectively. For a discussion of associated risks, see Part I, Item 1A, Risk Factors, of this Annual Report on Form 10 K.

Patents, Licenses and Proprietary Information

We rely on a combination of patents, trademarks, copyright and trade secret laws, confidentiality procedures and licensing arrangements to protect our IP rights.

We have more than 14,000 active patents worldwide and have many patent applications in process. We continually seek additional United States (“U.S.”) and international patents on our technology. We believe that, although our active patents and patent applications have considerable value, the successful manufacturing and marketing of our products also depends upon the technical and managerial competence of our staff. Accordingly, the patents held and applied for

cannot alone ensure our future success.

In addition to patent protection of certain IP rights, we consider elements of our product designs and processes to be proprietary and confidential. We believe that our non-patented IP, particularly some of our process technology, is an important factor in our success. We rely upon non-disclosure agreements, contractual provisions and a system of internal safeguards to protect our proprietary information. Despite these safeguards, there is a risk that competitors may obtain and use such information. The laws of foreign jurisdictions in which we conduct business may provide less protection for confidential information than the laws of the U.S.

We rely on certain technology that we license from other parties to manufacture and sell our products. We believe that we have adequate cross-licenses and other agreements in place in addition to our own IP portfolio to compete successfully in the storage industry. For a discussion of associated risks, see Part I, Item 1A, Risk Factors, of this Annual Report on Form 10 K.

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Manufacturing

We believe that we have significant know-how, unique product manufacturing processes, test and tooling, execution skills, human resources and training to continue to be successful and to grow our manufacturing operations as necessary. We strive to maintain manufacturing flexibility, high manufacturing yields, reliable products and high-quality components. The critical elements of our production of HDD and flash-based products are high-volume and utilization, low-cost assembly and testing, strict adherence to quality metrics and maintaining close relationships with our strategic component suppliers to access best-in-class technology and manufacturing capacity. We continually monitor our manufacturing capabilities to respond to the changing requirements of our customers and maintain our competitiveness and position as a data technology leader.

HDD and flash-based product manufacturing are complex processes involving the production and assembly of precision components with narrow tolerances and rigorous testing. The assembly process occurs in a “clean room” environment that demands skill in process engineering and efficient space utilization to control the operating costs of this manufacturing environment. We continually evaluate our manufacturing processes in an effort to increase productivity, sustain and improve quality and decrease manufacturing costs. We continually evaluate which steps in the manufacturing process would benefit from automation and how automated manufacturing processes can improve productivity and reduce manufacturing costs.

Substantially all of our flash-based supply requirements for our flash-based products is obtained from our business ventures with TMC, which provide us with leading-edge, high-quality and low-cost flash-based memory wafers. This represents a captive supply and we are obligated to take our share of the output from these ventures or pay the fixed costs associated with that capacity. See “Ventures with Toshiba Memory” below for additional information. While substantially all of our flash memory supply utilized for our products is purchased from these ventures, from time-to-time, we also purchase flash memory from other flash-based manufacturers, which we refer to as non-captive. While we do not unilaterally control the operations of these ventures, we believe that our business venture relationship with TMC helps us to reduce the costs of producing our products, increases our ability to control the quality of our products and speeds delivery of our products to our customers. Our vertically integrated manufacturing operations for our flash-based products are concentrated in three locations, with our business ventures with TMC located in Yokkaichi, Japan, and our in-house assembly and test operations located in Shanghai, China and Penang, Malaysia.

We also leverage the efficiencies of contract manufacturers when strategically advantageous. For a discussion of associated risks, see Part I, Item 1A, Risk Factors, of this Annual Report on Form 10 K.

Materials and Supplies

HDD primarily consists of recording heads, magnetic media and a printed circuit board assembly. We design and manufacture substantially all of the recording heads and magnetic media required for our products. As a result, we are more dependent upon our own development and execution efforts and less reliant on recording head and magnetic media technologies developed by other manufacturers. We depend on an external supply base for all remaining components and materials for use in our HDD product design and manufacturing.

Our flash-based product consists of flash-based memory and controllers. Substantially all of our flash-based memory is supplied by our business ventures with TMC. Controllers are primarily designed in-house and manufactured by third-party foundries or acquired from third-party suppliers. We believe the use of our in-house assembly and test facilities, as well as contract manufacturers, provides flexibility and gives us access to increased production capacity. We have developed deep relationships with these vendors and TMC to establish continuous supply of flash-based memory and controllers.

We generally retain multiple suppliers for our component requirements but in some instances use sole or single sources for business or technology reasons. Currently, we believe that there are no major issues with component availability. For a discussion of associated risks, see Part I, Item 1A, Risk Factors, of this Annual Report on Form 10 K.

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Ventures with Toshiba Memory

We and TMC currently operate three business ventures in 300-millimeter flash-based manufacturing facilities in Yokkaichi, Japan, which provide us leading-edge, cost-competitive flash-based memory wafers for our end products. Through Flash Partners Ltd., Flash Alliance Ltd., and Flash Forward Ltd., which we collectively refer to as Flash Ventures, we and TMC collaborate in the development and manufacture of flash-based memory wafers using semiconductor manufacturing equipment owned or leased by each of the Flash Venture entities. We hold a 49.9% ownership position in each of the Flash Venture entities. Each Flash Venture entity purchases wafers from TMC at cost and then resells those wafers to us and TMC at cost plus a mark-up. We are obligated to purchase half of Flash Ventures' flash-based memory wafer supply or pay for half of Flash Ventures' fixed costs regardless of the output we choose to purchase. We are also obligated to fund 49.9% to 50% of Flash Ventures' investments to the extent that Flash Ventures' operating cash flow is insufficient to fund these investments. We and TMC also collaborate on certain R&D activities in support of Flash Ventures.

The agreements governing the operations of the Flash Venture entities also set out a framework for any investment by the joint venture partners in NAND manufacturing capacity. Flash Ventures' manufacturing site in Yokkaichi, Japan is owned and operated by TMC and includes five wafer fabrication facilities, the newest of which are known as "New Fab 2" and "Fab 6." The primary purpose of New Fab 2 and Fab 6 is to provide clean room space to support the continued conversion of existing 2-dimensional ("2D") NAND wafer capacity to 3D NAND. We have jointly invested, and intend to continue to jointly invest, with TMC in manufacturing equipment for these facilities. In addition, TMC has announced that it is starting construction of a new wafer fabrication facility for the manufacture of 3D NAND in Kitakami, Iwate, Japan. Pursuant to our agreements governing Flash Ventures, which give us priority to participate in expansions and conversions of NAND manufacturing capacity, we intend to jointly invest with TMC in manufacturing equipment at the new facility in Kitakami, based on our ongoing discussions with TMC.

On June 1, 2018, TMC, formerly a wholly owned subsidiary of Toshiba Corporation, was purchased by a consortium led by Bain Capital (the "Bain Consortium") that includes SK hynix Inc. and other competitors, as well as key customers.

For a discussion of risks associated with our business ventures with TMC, see Part I, Item 1A, Risk Factors, of this Annual Report on Form 10 K.

Sales and Distribution

We maintain sales offices in selected parts of the world including the major geographies of the Americas, Asia Pacific, Europe and the Middle East. Our international sales, which include sales to foreign subsidiaries of U.S. companies but do not include sales to U.S. subsidiaries of foreign companies, represented 78%, 80% and 72% of our net revenue for 2018, 2017 and 2016, respectively. Sales to international customers are subject to certain risks not normally encountered in domestic operations, including exposure to tariffs and various trade regulations. For a discussion of associated risks, see Part I, Item 1A, Risk Factors, of this Annual Report on Form 10 K.

We perform our marketing and advertising functions internally and through outside firms utilizing both consumer media and trade publications targeting various reseller and end-user categories. We also maintain customer relationships through direct communication and by providing information and support through our website. In accordance with standard storage industry practice, we provide distributors and retailers with limited price protection and programs under which we reimburse certain marketing expenditures. We also provide distributors, resellers and OEMs with other sales incentive programs. While these groups of customers make up our end markets, some of these customers cross into multiple groups. We define these customers as follows:

Original Equipment Manufacturers. OEMs, including large-scale data center operators, system integrators and cloud customers who bundle, embed, or integrate our storage solutions, purchase our products either directly or through a contract manufacturer such as an original design manufacturer (“ODM”) and assemble them into the devices they build. OEMs typically seek to qualify two or more providers for each generation of products and generally will purchase products from those vendors for the life of that product. Many of our OEM customers utilize just-in-time inventory management processes. As a result, for certain OEMs, we maintain a base stock of finished goods inventory in facilities located near or adjacent to the OEM’s operations. In addition, we sell directly to cloud infrastructure players as well as flash storage solutions to customers that offer our products under their own brand name in the retail market, which we also classify as OEMs.

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Distributors. We use a broad group of distributors to sell our products to non-direct customers such as small computer and consumer electronics (“CE”) manufacturers, dealers, value-added resellers, systems integrators, online retailers and other resellers. Distributors generally enter into non-exclusive agreements with us for the purchase and redistribution of our products in specific territories.

Retailers. We sell our branded products directly to a select group of major retailers such as computer superstores, warehouse clubs, online retailers and computer electronics stores, and authorize sales through distributors to smaller retailers. The retail channel complements our other sales channels while helping to build brand awareness for us and our products. We also sell our branded products through our websites.

For each of 2018, 2017 and 2016, no single customer accounted for 10% or more of our net revenue. For a discussion of associated risks, see Part I, Item 1A, Risk Factors, of this Annual Report on Form 10 K. For additional information regarding revenue recognition, sales by geographic region and major customers, see Part II, Item 8, Note 1, Organization and Basis of Presentation and Note 10, Business Segment, Geographic Information and Concentration of Risk, of the Notes to Consolidated Financial Statements included in this Annual Report on Form 10 K.

Backlog

A substantial portion of our orders are generally for shipments within 60 days of the placement of the order. Customers’ purchase orders may be canceled with relatively short notice to us, with little or no cost to the customer, or modified by customers to provide for delivery at a later date. In addition, for many of our OEMs utilizing just-in-time inventory, we do not generally require firm order commitments and instead receive a periodic forecast of requirements. Therefore, backlog information as of the end of a particular period is not necessarily indicative of future levels of our revenue and profit and may not be comparable to prior periods.

Seasonality

We have historically experienced seasonal fluctuations in our business with higher levels of demand in the first and second quarters of our fiscal year as a result of increased customer spending. Seasonality can also be impacted by the growth in emerging markets and macroeconomic conditions. For a discussion of associated risks, see Part I, Item 1A, Risk Factors, of this Annual Report on Form 10 K.

Service and Warranty

We generally warrant our newly manufactured products against defects in materials and workmanship from one to five years from the date of sale depending on the type of product, with a small number of products having a warranty ranging up to ten years or more. Our warranty obligation is generally limited to repair or replacement. We have engaged third parties in various countries in multiple regions to provide various levels of testing, processing, or recertification of returned products for our customers. For additional information regarding our service and warranty policy, see Part II, Item 8, Note 1, Organization and Basis of Presentation, of the Notes to Consolidated Financial Statements included in this Annual Report on Form 10 K.

Environmental Regulation

We are subject to a variety of U.S. and foreign laws and regulations in connection with our operations and relating to the protection of the environment, including those governing discharges of pollutants into the air and water, the management and disposal of hazardous substances and the clean-up of contaminated sites. Some of our operations require environmental permits and controls to prevent and reduce air and water pollution. These permits are subject to modification, renewal and revocation by issuing authorities. We believe that we have obtained or are in the process of

obtaining all necessary environmental permits for our operations.

We have established environmental management systems and continually update our environmental policies and standard operating procedures for our operations worldwide. We believe that our operations are in material compliance with applicable environmental laws, regulations and permits. We budget for operating and capital costs on an ongoing basis to comply with environmental laws.

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Our properties have in some cases been operated for many years and may contain soil or groundwater contamination. In certain of our facilities we are undertaking voluntary monitoring of soil and groundwater. Based on available information, including our voluntary monitoring activities, we do not believe that we have a current affirmative legal obligation for any remedial action.

For a discussion of associated risks, see Part I, Item 1A, Risk Factors, of this Annual Report on Form 10 K.

Employees

As of June 29, 2018, we employed a total of approximately 71,600 employees worldwide, excluding temporary employees and contractors. Many of our employees are highly skilled and our continued success depends in part upon our ability to attract and retain such employees. Accordingly, we offer employee benefit programs that we believe are, in the aggregate, competitive with those offered by our competitors.

While the substantial majority of our employees are not party to a collective bargaining agreement, a majority of our employees in Japan and China are subject to collective bargaining agreements. We consider our employee relations to be good. For a discussion of associated risks, see Part I, Item 1A, Risk Factors, of this Annual Report on Form 10 K.

Corporate Responsibility and Sustainability

We are committed to growing our company in a strong and sustainable way and fostering a sustainable future for the communities we serve. We believe that corporate social responsibility is an essential factor for our overall success. This includes adopting ethical and sustainable practices to direct how we do business while keeping the interests of our stakeholders and the environment in mind, including valuing and challenging the talented men and women who comprise our workforce, and investing in and improving the communities where we live and work.

Our practices and policies underscore this commitment:

• We treat all employees with dignity and respect and foster diversity and inclusion globally.

• We establish processes and policies for our employees to uphold ethical standards and comply with applicable laws and our internal guidelines, including a Code of Business Ethics adopted by our Board of Directors and applicable to members of our Board of Directors and all employees, a Global Code of Conduct applicable to all employees and an actively-managed ethics hotline.

• We establish policies and procedures intended to promote the idea that the quality of our products and services, consistency of production and employee well-being are predicated on a safe and healthy work environment.

• We establish policies and processes intended to promote environmental responsibility as an integral part of our culture, and we publish an environmental report detailing emissions output and set goals to reduce our greenhouse gas emissions and electronic waste profile.

• We engage with local communities across the globe, focusing on science, technology, engineering and math (targeting underrepresented and underprivileged youth), hunger relief, and environmental quality.

Available Information

We maintain an Internet website at www.wdc.com. Our Annual Report on Form 10 K, Quarterly Reports on Form 10 Q, Current Reports on Form 8 K and amendments to reports filed or furnished pursuant to Sections 13(a) and

15(d) of the Securities Exchange Act of 1934, as amended, are available on our website at www.wdc.com, free of charge, as soon as reasonably practicable after the electronic filing of these reports with, or furnishing of these reports to, the Securities and Exchange Commission (“SEC”). Any materials we file with the SEC are available at the SEC’s Public Reference Room at 100 F Street NE, Washington, DC 20549. Additional information about the operation of the Public Reference Room can also be obtained by calling the SEC at 1 800 SEC 0330. In addition, the SEC maintains a website at www.sec.gov that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC, including us.

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Item 1A. Risk Factors

Our business, financial condition and operating results can be affected by a number of risks and uncertainties, whether currently known or unknown, any one or more of which could, directly or indirectly, cause our actual results of operations and financial condition to vary materially from past, or from anticipated future, results of operations and financial condition. The risks and uncertainties discussed below are not the only ones facing our business, but do represent those risks and uncertainties that we believe are material to us. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also adversely affect our business, financial condition, results of operations or the market price of our common stock.

Adverse global economic conditions and credit market uncertainty could harm our business, results of operations and financial condition.

Adverse global economic conditions and uncertain conditions in the credit market have had, and in the future could have, a significant adverse effect on our company and on the storage industry as a whole. Several factors contribute to these conditions and this uncertainty, including, but not limited to, volatility in the equity, credit and other financial markets and real estate markets, slower growth in certain geographic regions, lower levels of consumer liquidity, risk of default on sovereign debt, higher interest rates, materials and component cost increases, political uncertainty and other macroeconomic factors, such as the trade and tariff actions recently announced by the U.S., China and other countries, and changes to policies, rules and regulations. Some of the risks and uncertainties we face as a result of these conditions include, but are not limited to, the following:

- Our direct and indirect customers may delay or reduce their purchases of our products and systems containing our products.

- If demand for our products slows as a result of a deterioration in economic conditions, we may undertake restructuring activities to realign our cost structure with softening demand.

We extend credit and payment terms to some of our customers and we could suffer significant losses if a customer whose accounts receivable we have not insured, or have underinsured, fails to pay us on their accounts receivable balances.

If negative or uncertain global economic conditions result in circumstances, such as a sustained decline in our stock price and market capitalization or a decrease in our forecasted cash flows, indicating that the carrying value of our long-lived assets or goodwill may be impaired, we could be required to record a significant charge to earnings in our Consolidated Financial Statements.

These actions and conditions could result in reductions in our revenue, increased operating costs, impairment charges and other expenses, which could adversely affect our business, results of operations and financial condition.

We rely substantially on our business ventures with Toshiba Memory Corporation (“TMC”) for the supply of flash-based memory and the development of flash-based technology, which subjects us to risks and uncertainties that could harm our business, financial condition and operating results.

We are dependent on our ventures with TMC to develop and manufacture flash-based memory products for our flash-based memory supply, and therefore our business, financial condition and operating results are dependent on the continued success of Flash Ventures. We partner with TMC on the development of flash-based technology, including the next technology transitions of flash-based memory, as well as other non-volatile memory technology in support of Flash Ventures. Flash Ventures is subject to various risks that could harm the value of our investments, our revenue

and costs, our future rate of spending, our technology plans and our future growth opportunities.

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Substantially all of our flash-based memory is supplied by Flash Ventures, which limits our ability to respond to market demand and supply changes. A failure to accurately forecast demand could cause us to over-invest or under-invest in technology transitions or the expansion of captive memory capacity in Flash Ventures. Over-investment could result in excess supply, which could cause significant decreases in our product prices, significant excess, obsolete inventory or inventory write-downs or under-utilization charges, and the potential impairment of our investments in Flash Ventures. On the other hand, if we or TMC under-invest in captive memory capacity or technology transitions, if we grow capacity more slowly than the rest of the industry, if our technology transitions do not occur on the timeline that we expect, if we encounter unanticipated difficulties in implementing these transitions, or if we implement technology transitions more slowly than our competitors, we may not have enough captive supply of the right type of memory or at all to meet demand on a timely and cost effective basis and we may lose opportunities for revenue, gross margin and market share as a result. If our flash-based memory supply is limited, we may make strategic decisions with respect to the allocation of our supply among our products and customers, and these strategic allocation decisions may result in less favorable gross margin or damage certain customer relationships. We are also contractually obligated to pay for 50% of the fixed costs of Flash Ventures regardless of whether we purchase any wafers from Flash Ventures. Furthermore, purchase orders placed with Flash Ventures and under the foundry arrangements with TMC for up to three months are binding and cannot be canceled. Therefore, once our purchase decisions have been made, our production costs for flash memory are fixed, and we may be unable to reduce costs to match any subsequent declines in pricing or demand, which would harm our gross margin. Our limited ability to react to fluctuations in flash memory supply and demand makes our financial results particularly susceptible to variations from our forecasts and expectations.

Under the terms of our venture agreements with TMC, which govern the operations of Flash Ventures, we have limited power to unilaterally direct most of the activities that most significantly impact Flash Ventures' performance and we have limits to our ability to source or fabricate flash-based products outside of the Flash Ventures. We may not always agree with TMC on our joint R&D roadmap or expansions or conversions of production capacity. In addition, TMC's shift in strategic priorities could adversely impact our business.

On June 1, 2018, Toshiba Corporation announced it had completed the sale of TMC, including its interests in Flash Ventures, to a consortium led by SK hynix Inc. and Bain Capital (the "Bain Consortium") that includes other competitors, as well as key customers. The sale of TMC to the Bain Consortium could lead to delays in decision-making, disputes, or changes in strategic direction that could adversely impact Flash Ventures and/or adversely affect our business prospects, results of operations and financial condition. The Bain Consortium might not have the same interest that we do in protecting and growing Flash Ventures' business and there may exist conflicts of interest between the Bain Consortium and Flash Ventures or us. Misalignment between us and TMC or the Bain Consortium on the strategic direction of Flash Ventures could adversely impact Flash Ventures' ability to stay at the forefront of technological advancement and/or our investment in Flash Ventures. Flash Ventures' competitiveness and/or our investment in Flash Ventures could also be harmed by a mishandling or misuse of IP or other competitively sensitive confidential information regarding Flash Ventures, such as its technology roadmap, business or investment plans, by a third party that might gain access to such information.

Flash Ventures requires significant investments by both TMC and us for technology transitions, including the transition to 3D NAND, and capacity expansions. The Bain Consortium has entered into financing agreements in connection with its purchase of TMC that could limit TMC's ability to timely fund or finance investments in Flash Ventures or our joint development efforts, as well as limit Flash Ventures' ability to enter into lease financings. To the extent that lease financings for Flash Ventures are not accessible on favorable terms or at all, more cash would be required to fund investments. If TMC does not or we do not provide sufficient resources, or have adequate access to credit, to timely fund investments in Flash Ventures, our investments could be delayed or reduced. Delayed or reduced investment in manufacturing capacity or research and development by TMC or us could harm Flash Ventures' competitiveness and/or our investment in Flash Ventures. In addition, the financing arrangements that the Bain

Consortium has entered into in connection with its purchase of TMC are secured by TMC's equity interests in Flash Ventures, permitting the lenders to foreclose on those equity interests under certain circumstances.

TMC has announced that it is starting construction of a new wafer fabrication facility for the manufacture of 3D NAND in Kitakami, Iwate, Japan. Although we intend to enter into agreements with TMC in due course to participate in the new Kitakami facility, there is no certainty as to when, and on what terms, we will do so. If we are unable to extend our partnership with TMC to the Kitakami facility on favorable terms, our future supply of captive flash-based memory could be adversely impacted, which could adversely affect our long-term business and financial results.

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We participate in a highly competitive industry that is subject to volatile demand, declining average selling prices (“ASPs”), rapid technological change and industry consolidation, all of which could adversely affect our operating results and financial condition.

Demand for our devices, software and solutions that we offer to our customers, which we refer to in this Item 1A as our “products”, depends in large part on the demand for systems (including personal computers (“PCs”) and mobile devices) manufactured by our customers and on storage upgrades to existing systems. The demand for systems has been volatile in the past and often has had an exaggerated effect on the demand for our products in any given period. The prices of our products are influenced by, among other factors, the balance between supply and demand, including the effects of new fab capacity in the industry, macroeconomic factors, business conditions, technology transitions, and other actions taken by us or our competitors. The price of NAND flash memory is also influenced by conversion of industry DRAM capacity to NAND and conversion of 2D NAND capacity to 3D NAND. The storage market has experienced periods of excess capacity, which can lead to liquidation of excess inventories and significant reductions in price. If these price changes occur unnecessarily or in an unexpected manner, there will likely be an adverse impact on our revenue and gross margins.

In addition, we compete based on our ability to offer our customers competitive solutions that provide the most current and desired product and service features. We expect that competition will continue to be intense, and there is a risk that our competitors may be able to gain a technological or cost structure advantage over us, which may allow their products to be less costly or enable them to provide better performance or to include additional features when compared to our products. Further, some of our competitors may utilize certain pricing strategies, including offering products at prices at or below cost, that we may be unable to competitively match. In addition, the Chinese government and various agencies, state-owned or affiliated enterprises and investment funds are making significant investments to promote China’s domestic semiconductor industry consistent with the government’s stated national policy objectives. If we are unable to effectively compete with any manufacturers located in China or non-Chinese competitors benefitting from alliances with Chinese companies in the markets where we compete, our operating results and financial condition will suffer.

Additionally, some of our competitors offer products and technologies that we do not offer and may be able to use their broader product and technology portfolio to win sales from us. Our ASPs and gross margins also tend to decline when there is a shift in the mix of product sales, and sales of lower priced products increase relative to those of higher priced products. Further, we face potential gross margin pressures resulting from our ASPs declining more rapidly than our cost of goods sold. Rapid technological changes often reduce the volume and profitability of sales of existing products and increase the risk of inventory obsolescence. Finally, the data storage industry as a whole has experienced consolidation over the past several years through acquisitions, mergers and decisions by industry players to exit the industry. Further consolidation across the industry could enhance the capacity, abilities and resources and lower the cost structure of some of our competitors, causing us to be at a competitive disadvantage. These factors, along with others, may also result in significant shifts in market share among the industry’s major participants, including a substantial decrease in our market share, all of which could adversely impact our operating results and financial condition.

Expansion into new markets may increase the complexity of our business and cause us to increase our R&D expenses and investments in manufacturing capability, technology enhancements and go-to-market capability, and if we are unable to successfully adapt our business processes and product offerings as required by these new markets, our ability to grow will be adversely affected.

To remain a significant supplier in the storage industry and to expand into new markets, we will need to offer a broader range of storage products to our customers. As we expand our product lines to sell into new markets, the overall complexity of our business may increase at an accelerated rate and we may become subject to different market

dynamics. These dynamics may include, among other things, different demand volume, cyclicality, seasonality, product requirements, sales channels, and warranty and return policies. In addition, expansion into new markets may result in increases in R&D expenses and substantial investments in manufacturing capability, technology enhancements and go-to-market capability. If we fail to successfully expand into new markets with products that we do not currently offer, we may lose business to our competitors or new entrants who offer these products.

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If we do not properly manage technology transitions, our competitiveness and operating results may be negatively affected.

The storage markets in which we offer our products continuously undergo technology transitions that we must anticipate and adapt our products to address in a timely manner. If we fail to implement new technologies successfully, or if we are slower than our competitors at implementing new technologies, we may not be able to competitively offer products that our customers desire or keep pace with ASP reduction, which could harm our operating results. For example, in transitioning our 2D NAND manufacturing capacity to 3D NAND technology, we could experience delays or other challenges in the production ramp, qualification of wafers, shipment of samples to customers or customer approval process. 3D NAND and any new manufacturing node may be more susceptible to manufacturing yield issues. Manufacturing yield issues may not be identified during the development or production process or solved until an actual product is manufactured and tested, further increasing our costs. If our technology transitions, including the production ramp of 3D NAND technology, take longer, are more costly to complete than anticipated, or do not improve manufacturing yield or other manufacturing efficiencies, our flash memory costs may not remain competitive with other flash-based memory producers or may not fall commensurate with declines in the price of flash-based memory, which would harm revenues, our gross margin and operating results.

For additional technology transition risks related to 3D NAND, see the risk factors entitled “We rely substantially on our business ventures with Toshiba Memory Corporation (“TMC”) for the supply of flash-based memory and the development of flash-based technology, which subjects us to risks and uncertainties that could harm our business, financial condition and operating results” and “Our strategic relationships subject us to risks that could adversely affect our business, financial condition and results of operations.”

With respect to HDDs, we announced that we will use microwave-assisted magnetic recording (MAMR) technology to increase HDD capacities. If our HDD technology transitions, including the production ramp of MAMR HDDs, take longer or are more costly to complete than anticipated or if we otherwise fail to implement new HDD technologies successfully, we may not remain competitive with other HDD producers, which could adversely affect our revenues, our gross margin and operating results.

Moving to new technologies may require us to align to, and build, a new supply base. Our success in new product areas may be dependent in part on our ability to develop close relationships with new suppliers and on our ability to enter into favorable supply agreements. Where this cannot be done, our business and operations may be adversely affected. In addition, if our customers choose to delay transition to new technologies, if demand for the products that we develop is lower than expected or if the supporting technologies to implement these new technologies are not available, we may be unable to achieve the cost structure required to support our profit objectives or may be unable to grow or maintain our market position.

The substitution or replacement of our technologies and products by new technologies could make our products obsolete and harm our operating results.

Given the pace of technological development, there is a possibility that new technologies could substitute for or replace our current technologies and products and make them obsolete. Historically, when the industry experiences a fundamental change in storage technologies or standards, any manufacturer that fails to successfully and timely adjust its designs and processes to accommodate or manufacture the new technology or standard fails to remain competitive.

There are some revolutionary technologies that, if implemented by a competitor on a commercially viable basis ahead of the industry, could put us at a competitive disadvantage, including shingled magnetic recording, energy-assisted magnetic recording, patterned magnetic media and advanced signal processing.

Many companies, including some of our competitors, have also developed or are attempting to develop alternative non-volatile technologies, including non-NAND technologies such as magnetoresistive random-access memory (MRAM), resistive random-access memory (ReRAM) and phase change memory (PCM), and NAND-based vertical or stacked 3D memories based on charge trap, floating gate and other cell architectures.

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In addition, a provider of processors and non-volatile memory solutions may be developing a new standard to attach ultra-low latency non-volatile memory to its processor memory bus, which it may choose not to license to its competitors, resulting in it being a single source provider of such non-volatile memory solutions. As a result of these shifts in technology and standards, we could incur substantial costs in developing new technologies, such as recording heads, magnetic media and tools, in adopting new standards or in investing in different capital equipment or manufacturing processes to remain competitive. If we fail to successfully implement these new technologies or standards, or if we are significantly slower than our competitors at implementing new technologies or standards, we may not be able to offer products with capacities and capabilities that our customers desire, which could harm our operating results.

If we do not properly manage new product development, our competitiveness and operating results may be negatively affected.

Our success depends in part on our ability to develop and introduce new products in a timely manner in order to keep pace with technology advancements and compete with alternative storage technologies. If our products fail to offer a superior value proposition to alternative storage products, we will be at a competitive disadvantage and our business will suffer. As we introduce new products, standards or technologies, it can take time for these new standards or technologies to be adopted, for customers to accept and transition to these new standards or technologies and for significant sales to be generated, if at all. Failure of our customers to adopt our new products, standards or technologies could harm our results of operations as we fail to reap the benefits of our investments.

In addition, the success of our new product introductions depends on a number of other factors, including:

- difficulties faced in manufacturing ramp;
- implementing at an acceptable cost product features expected by our customers;
- our ability to successfully transition future core, processor and controller development to the RISC-V architecture;
- market acceptance/qualification;
- effective management of inventory levels in line with anticipated product demand;
- our ability to respond to customer requests for new products and software associated with our products;
- our ability to incorporate open source software elements into our products and operate in an open source environment;
- quality problems or other defects in the early stages of new product introduction and problems with compatibility between our products and those of our customers that were not anticipated in the design of those products;
- our ability to increase our software development capability; and
- the effectiveness of our go-to-market capability in selling new products.

Our strategic relationships subject us to risks that could adversely affect our business, financial condition and results of operations.

We have entered into strategic relationships with various partners for future product development, sales growth and the supply of technologies, components, equipment and materials for use in our product design and manufacturing,

including our partnership with TMC for flash-based memory development and manufacturing. See the risk factor entitled “Because we are dependent on a limited number of qualified suppliers, a disruption in our supply chain, including a shortage in supply or a supplier’s failure to support us in a timely manner with goods or services at a quality level and cost acceptable to us, or supplier consolidation, could adversely affect our margins, revenues and operating results” for a further description of the risks associated with our reliance on external suppliers. These strategic relationships are subject to various risks that could adversely affect the value of our investments and our results of operations and financial condition. These risks include, but are not limited to, the following:

our interests could diverge from our partners’ interests or we may not agree with co-venturers on ongoing activities, technology transitions or on the amount, timing or nature of further investments in the relationship;

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we may experience difficulties and delays in product and technology development at, ramping production at, and transferring technology to, our business ventures;

our control over the operations of our business ventures is limited;

due to financial constraints, our co-venturers may be unable to meet their commitments to us or may pose credit risks for our transactions with them;

due to differing business models, financial constraints or long-term business goals, our partners may decide not to join us in funding capital investment by our business ventures, which may result in higher levels of cash expenditures by us or prevent us from proceeding in the investment;

we may lose the rights to technology or products being developed by the strategic relationship, including if any of our co-venturers is acquired by another company or otherwise transfers its interest in the business venture, files for bankruptcy or experiences financial or other losses;

a bankruptcy event involving a co-venturer could result in the early termination or adverse modification of the business venture or agreements governing the business venture;

we may experience difficulties or delays in collecting amounts due to us from our co-venturers;

the terms of our arrangements may turn out to be unfavorable; and

changes in tax, legal or regulatory requirements may necessitate changes in the agreements with our co-venturers.

If our strategic relationships are unsuccessful or there are unanticipated changes in, or termination of, our strategic relationships, our business, results of operations and financial condition may be adversely affected.

Because we are dependent on a limited number of qualified suppliers, a disruption in our supply chain, including a shortage in supply or a supplier's failure to support us in a timely manner with goods or services at a quality level and cost acceptable to us, or supplier consolidation, could adversely affect our margins, revenues and operating results.

We depend on an external supply base for technologies, software (including firmware), preamps, controller, components, equipment and materials for use in our product design and manufacturing. We also depend on suppliers for a portion of our wafer testing, chip assembly, product assembly and product testing, and on service suppliers for providing technical support for our products. In addition, we use logistics partners to manage our just-in-time hubs, distribution centers and freight from suppliers to our factories and from our factories to our customers throughout the world. Many of the components and much of the equipment we acquire must be specifically designed to be compatible for use in our products or for developing and manufacturing our future products, and are only available from a limited number of suppliers, some of whom are our sole-source suppliers. We are therefore dependent on these suppliers to be able and willing to dedicate adequate engineering resources to develop components that can be successfully integrated into our products, technology and equipment.

From time to time, our suppliers have experienced difficulty meeting our requirements. If we are unable to purchase sufficient quantities from our current suppliers or qualify and engage additional suppliers, we may not be able to meet demand for our products. Delays or cost increases experienced by our suppliers in developing or sourcing materials and components for use in our products or incompatibility or quality issues relating to our products, could also harm our financial results as well as business relationships with our customers. We do not have long-term contracts with some of our existing suppliers, nor do we always have guaranteed manufacturing capacity with our suppliers and,

therefore, we cannot guarantee that they will devote sufficient resources or capacity to manufacturing our products. Any significant problems that occur at our suppliers, or their failure to perform at the level we expect, could lead to product shortages or quality assurance problems, either of which would harm our operating results and financial condition. In addition, if we are unable to purchase sufficient quantities from our current suppliers, we may not be able to engage alternative suppliers who are able or willing to provide goods or services in sufficient quantities or at a cost acceptable to us.

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In addition, our supply base has experienced industry consolidation. Our suppliers may be acquired by our competitors, consolidate, decide to exit the industry, or redirect their investments and increase costs to us, each of which may have an adverse effect on our business and operations. In addition, some of our suppliers have experienced a decline in financial performance. Where we rely on a limited number of suppliers or a single supplier, the risk of supplier loss due to industry consolidation or a decline in financial performance is enhanced. Some of our suppliers may also be competitors in other areas of our business, which could lead to difficulties in price negotiations or meeting our supply requirements. Any disruption in our supply chain could reduce our revenue and adversely impact our financial results.

See the risk factors entitled “We rely substantially on our business ventures with Toshiba Memory Corporation (“TMC”) for the supply of flash-based memory and the development of flash-based technology, which subjects us to risks and uncertainties that could harm our business, financial condition and operating results” and “Our strategic relationships subject us to risks that could adversely affect our business, financial condition and results of operations” for additional risks related to our supply of flash memory and our strategic relationships.

Price volatility, shortages of critical materials or components, or use by other industries of materials and components used in the storage industry, or contractual commitments we enter into with suppliers to reduce the risk of component shortages, could increase our costs and may negatively impact our operating results.

Increases in the cost for certain critical materials and components and oil may increase our costs of manufacturing and transporting our products and key components and may result in lower operating margins if we are unable to pass these increased costs on to our customers. Shortages of critical components such as DRAM, flash-based memory and multi-layer ceramic capacitors (MLCC), or materials such as glass substrates, stainless steel, aluminum, nickel, neodymium, ruthenium, platinum or cerium, may increase our costs and may result in lower operating margins if we are unable to find ways to mitigate these increased costs. We or our suppliers acquire certain precious metals and rare earth metals like ruthenium, platinum, neodymium and cerium, which are critical to the manufacture of components in our products from a number of countries, including the People’s Republic of China. The government of China or any other nation may impose regulations (such as the recently announced trade and tariff actions), quotas or embargoes upon these metals that would restrict the worldwide supply of such metals or increase their cost, both of which could negatively impact our operating results until alternative suppliers are sourced. Furthermore, if other high volume industries increase their demand for materials or components used in our products, our costs may further increase, which could have an adverse effect on our operating margins. In addition, shortages in other components and materials used in our customers’ products could result in a decrease in demand for our products, which would negatively impact our operating results.

To reduce the risk of component shortages, we attempt to provide significant lead times when buying components, which may subject us to cancellation charges if we cancel orders as a result of technology transitions or changes in our component needs. In addition, we may from time to time enter into contractual commitments with component suppliers in an effort to increase and stabilize the supply of those components and enable us to purchase such components at favorable prices. Some of these commitments may require us to buy a substantial number of components from the supplier or make significant cash advances to the supplier; however, these commitments may not result in a satisfactory increase or stabilization of the supply of such components and may cause us to have inadequate or excess component inventory, which could increase our operating costs and adversely affect our operating results.

The loss of our key executive management, staff and skilled employees, the inability to hire and integrate new employees or decisions to realign our business could negatively impact our business prospects.

Our success depends upon the continued contributions of our key management, staff and skilled employees, many of whom would be extremely difficult to replace. Global competition for skilled employees in the data storage industry is intense and, as we attempt to move to a position of technology leadership in the storage industry, our business success becomes increasingly dependent on our ability to retain our key staff and skilled employees, to attract, integrate and retain new skilled employees, including employees from acquisitions, and to make decisions to realign our business to take advantage of efficiencies or reduce redundancies. Volatility or lack of positive performance in our stock price and the overall markets may adversely affect our ability to retain key staff or skilled employees who have received equity compensation. Additionally, because a substantial portion of our key employees' compensation is placed "at risk" and linked to the performance of our business, when our operating results are negatively impacted, we may be at a competitive disadvantage for retaining and hiring key management, staff and skilled employees versus other companies that may pay a relatively higher portion of fixed salary. If we lose our existing key management, staff or skilled employees, or are unable to hire and integrate new key management, staff or skilled employees, or if we fail to implement succession plans for our key management or staff, our operating results would likely be harmed. Furthermore, if we do not realize the anticipated benefits of our intended realignment after we make decisions regarding our personnel and implement our realignment plans, our operating results could be adversely affected.

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Our operations, and those of certain of our suppliers and customers, are concentrated in large, purpose-built facilities, subjecting us to substantial risk of damage or loss if operations at any of these facilities are disrupted.

As a result of our cost structure and strategy of vertical integration, we conduct our operations at large, high volume, purpose-built facilities in California and throughout Asia. The current concentration of Flash Ventures in Yokkaichi, Japan, magnifies the risks of supply disruption. The facilities of many of our customers, our suppliers and our customers' suppliers are also concentrated in certain geographic locations throughout Asia and elsewhere. A fire, flood, earthquake, tsunami or other natural disaster, condition or event such as a power outage, political instability, civil unrest, localized labor unrest or other employment issues, or a localized health risk that adversely affects any of these facilities or the employees or logistics operators at these facilities, would significantly affect our ability to manufacture or sell our products, which would result in a substantial loss of sales and revenue and a substantial harm to our operating results. In addition, the geographic concentration of our manufacturing sites could exacerbate the negative impacts resulting from any of these problems. A significant event that impacts any of our manufacturing sites, or the sites of our customers or suppliers, could adversely affect our ability to manufacture or sell our products, and our business, financial condition and results of operations could suffer.

We may incur losses beyond the limits of, or outside the scope of, the coverage of our insurance policies. There can be no assurance that in the future we will be able to maintain existing insurance coverage or that premiums will not increase substantially. Due to market availability, pricing or other reasons, we may elect not to purchase insurance coverage or to purchase only limited coverage. We maintain limited insurance coverage and, in some cases, no coverage at all, for natural disasters and environmental damages, as these types of insurance are sometimes not available or available only at a prohibitive cost. We depend upon TMC to obtain and maintain sufficient property, business interruption and other insurance for Flash Ventures. If TMC fails to do so, we could suffer significant unreimbursable losses, and such failure could also cause Flash Ventures to breach various financing covenants.

Manufacturing, marketing and selling our products globally subjects us to numerous risks.

Currently, a large portion of our revenue is derived from our international operations, and many of our products and components are produced overseas. Our revenue and future growth is significantly dependent on the growth of international markets, and we may face difficulties in entering or maintaining international sales markets. We are subject to risks associated with our global manufacturing operations and global marketing and sales efforts, as well as risks associated with our utilization of and reliance on contract manufacturers, including:

- obtaining requisite governmental permits and approvals, compliance with foreign laws and regulations, changes in foreign laws and regulations;

- the need to comply with regulations on international business, including the Foreign Corrupt Practices Act, the United Kingdom Bribery Act 2010, the anti-bribery laws of other countries and rules regarding conflict minerals;

- currency exchange rate fluctuations or restrictions;

- political and economic instability, civil unrest and natural disasters;

- limited transportation availability, delays, and extended time required for shipping, which risks may be compounded in periods of price declines;

- higher freight rates;

labor challenges, including difficulties finding and retaining talent or responding to labor disputes or disruptions;

trade restrictions, such as export bans, embargos, sanctions and license and certification requirements (including on encryption technology), new or increased tariffs and fees and complex customs regulations;

copyright levies or similar fees or taxes imposed in European and other countries;

exchange, currency and tax controls and reallocations;

increasing labor and overhead costs;

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- weaker protection of IP rights;
- difficulties in managing international operations, including appropriate internal controls; and
- loss or non-renewal of favorable tax treatment under agreements or treaties with foreign tax authorities.

As a result of these risks, our business, results of operations or financial condition could be adversely affected. Some of these risks, such as trade restrictions, higher tariffs and fees, import and export restrictions or loss of favorable tax treatment under agreements or treaties with foreign tax authorities, could increase as a result of changes to policies, rules and regulations. For example, beginning in early 2018, the U.S. commenced certain trade actions, including proposed new and increased tariffs on an evolving list of imported materials and products. Countries have responded to these actions in various ways, including proposed tariff increases on products imported from the U.S. We cannot predict whether, or to what extent, there may be changes to international trade agreements or whether tariffs or other restrictions may be changed or imposed on our products or our supply chain. Such tariffs, policy or regulatory changes or other trade restrictions could increase our cost of doing business, our ability to sell to certain customers, and our operating results and financial condition could be adversely affected.

We experience sales seasonality and cyclicity, which could cause our operating results to fluctuate.

Sales of computer systems, mobile devices, storage subsystems, gaming consoles and consumer electronics tend to be seasonal and cyclical, and therefore we expect to continue to experience seasonality and cyclicity in our business as we respond to variations in our customers' demand for our products. However, changes in seasonal and cyclical patterns have made it, and could continue to make it, more difficult for us to forecast demand, especially as a result of the current macroeconomic environment. Changes in the product or channel mix of our business can also impact seasonal and cyclical patterns, adding complexity in forecasting demand. Seasonality and cyclicity also may lead to higher volatility in our stock price. It is difficult for us to evaluate the degree to which seasonality and cyclicity may affect our stock price or business in future periods because of the rate and unpredictability of product transitions and new product introductions and macroeconomic conditions.

If we fail to identify, manage, complete and integrate acquisitions, investment opportunities or other significant transactions, which are a key part of our growth strategy, it may adversely affect our future results.

We seek to be an industry-leading developer, manufacturer and provider of innovative storage solutions, balancing our core hard drive and flash memory business with growing investments in newer areas that we believe will provide us with higher growth opportunities. Acquisitions of, investment opportunities in, or other significant transactions with companies that are complementary to our business are a key part of our overall business strategy. In order to pursue this part of our growth strategy successfully, we must continue to identify attractive acquisition or investment opportunities, successfully complete the transactions, some of which may be large and complex, and manage post-closing issues such as integration of the acquired company or employees. We may not be able to continue to identify or complete appealing acquisition or investment opportunities given the intense competition for these transactions. We are also subject to certain covenants in our debt agreements that place limits on our ability to complete acquisitions and investments. Even if we identify and complete suitable corporate transactions, we may not be able to successfully address any integration challenges in a timely manner, or at all. Failing to successfully integrate or realign our business to take advantage of efficiencies or reduce redundancies of an acquisition may result in not realizing all or any of the anticipated benefits of the acquisition. In addition, failing to achieve the financial model projections for an acquisition or changes in technology development and related roadmaps following an acquisition may result in the incurrence of impairment charges and other expenses, both of which could adversely impact our results of operations or financial condition. Acquisitions and investments may also result in the issuance of equity securities that may be dilutive to our shareholders and the issuance of additional indebtedness that would put

additional pressure on liquidity. Furthermore, we may agree to provide continuing service obligations or enter into other agreements in order to obtain certain regulatory approvals of our corporate transactions, and failure to satisfy these additional obligations could result in our failing to obtain regulatory approvals or the imposition of additional obligations on us, any of which could adversely affect our business, financial condition and results of operations. In addition, new legislation or additional regulations may affect or impair our ability to invest with or in certain other countries or require us to obtain regulatory approvals to do so, including investments in joint ventures, minority investments and outbound technology transfers to certain countries

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Any cost savings initiatives or restructurings that we undertake may not deliver the results we expect, which may adversely affect our business.

From time to time, we engage in cost savings initiatives and restructurings that may result in workforce reduction and consolidation of our manufacturing or other facilities. As a result of any cost savings initiatives or restructurings, we may experience a loss of continuity, loss of accumulated knowledge, disruptions to our operations and inefficiency during transitional periods. These actions could also impact employee retention. In addition, we cannot be sure that these actions will be as successful in reducing our overall expenses as we expect or that additional costs will not offset any such reductions or consolidations. If our operating costs are higher than we expect or if we do not maintain adequate control of our costs and expenses, our operating results could be adversely affected.

Changes in demand for our products, changes in product life cycles and the failure to qualify our products and achieve design wins with our customers could adversely affect our sales, margins, ASPs and our ability to recover the cost of product development.

Events or circumstances that impact demand in the markets for our products, or our inability to address that demand successfully, could materially adversely impact our operating results. For example, demand for our products may be affected by, among other factors, the following:

- inconsistent demand from customers whose sales are correlated to large projects and expansions which can be sporadic;

- internal customer development of storage solutions;

- developments in the regulation and enforcement of digital rights management;

- emergence of new technologies;

- volatility in demand due to differing patterns of technology adoption and innovation; or

- concerns about data protection by end users.

If we are not able to respond to these or other events or circumstances that impact demand for our products, it could lead to our customers' storage needs being satisfied by competing storage technologies, thereby decreasing our sales. As a result, even with increasing aggregate demand for digital storage, if we fail to anticipate or timely respond to the demand for storage, our sales, ASPs and gross margin could decline, which could adversely affect our operating results and financial condition.

Product life cycles may lengthen or shorten, both of which could adversely affect gross margins or our ability to recover the cost of product development.

We regularly engage in new product qualification with our customers, and the product qualification process may be lengthy for some customers. Once a product is accepted for qualification testing, failures or delays in the qualification process can result in delayed or reduced product sales, reduced product margins or lost sales to that customer until the next generation of products is introduced. Even if our products meet customer specifications, our sales to these customers are dependent upon the customers choosing our products over those of our competitors and purchasing our products in sufficient volume, our ability to supply our products in sufficient quantity and in a timely manner and, with respect to OEM partners, the OEMs' ability to create, market and successfully sell products containing our

solutions.

Our high level of debt may have an adverse impact on our liquidity, restrict our current and future operations, particularly our ability to respond to business opportunities, and increase our vulnerability to adverse economic and industry conditions.

As of June 29, 2018, our total indebtedness was \$11.38 billion in aggregate principal, and we had \$1.75 billion of additional borrowing availability under our revolving credit facility.

Our high level of debt could have significant consequences, which include, but are not limited to, the following:

- limiting our ability to obtain additional financing in the future for working capital, capital expenditures, acquisitions or other general corporate purposes;

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requiring a substantial portion of our cash flows to be dedicated to debt service payments instead of other purposes, thereby reducing the amount of cash flows available for working capital, capital expenditures, acquisitions, R&D and other general corporate purposes;

imposing financial and other restrictive covenants on our operations, including limiting our ability to (i) declare or pay dividends or repurchase shares of our common stock; (ii) purchase assets, make investments, complete acquisitions, consolidate or merge with or into, or sell all or substantially all of our assets to, another person; (iii) dispose of assets; (iv) incur liens; and (v) enter into transactions with affiliates;

placing us at a competitive disadvantage to competitors carrying less debt; and

making us more vulnerable to economic downturns and limiting our ability to withstand competitive pressures or take advantage of new opportunities to grow our business.

Our ability to meet the debt service obligations contained in our debt agreements will depend on our available cash and our future performance, which will be affected by financial, business, economic and other factors. Our bank debt also contains a variable interest rate component based on our corporate credit ratings, which could result in increased interest rates and debt service obligations if our ratings were to decline. If we are unable to meet our debt service obligations or should we fail to comply with our financial and other restrictive covenants contained in the agreements governing our indebtedness, causing an event of default under the applicable indebtedness, the debt holders could accelerate the related debt and that may result in the cross-acceleration or cross-default of other debt, leases or other obligations. If we are required to repay our indebtedness before the applicable due dates, we may not have sufficient funds available and we may be required to refinance all or part of our debt, sell important strategic assets at unfavorable prices, incur additional indebtedness or issue common stock or other equity securities, which we may be unable to do on terms acceptable to us, in amounts sufficient to meet our needs or at all. Our inability to service our debt obligations or refinance our debt could have a material adverse effect on our business, operating results and financial condition. Further, if we are unable to repay, refinance or restructure our secured indebtedness, the holder of such debt could proceed against the collateral securing that indebtedness. Refinancing our indebtedness may also require us to expense previous debt issuance costs or to incur new debt issuance costs.

In addition to our credit ratings impacting the interest rate on our current debt, our ratings impact the cost and availability of future borrowings and, accordingly, our cost of capital. Our ratings reflect the opinions of the ratings agencies of our financial strength, operating performance and ability to meet our debt obligations. There can be no assurance that we will achieve a particular rating or maintain a particular rating in the future.

We may from time to time seek to further refinance our substantial indebtedness by issuing additional shares of our common stock in one or more securities offerings. These securities offerings may dilute our existing shareholders, reduce the value of our common stock, or both. Because our decision to issue securities will depend on, among other things, market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing or nature of any future securities offerings. Thus, holders of our common stock bear the risk of our future offerings diluting and potentially reducing the value of our common stock.

Changes in tax laws could increase our worldwide tax rate and materially affect our financial position and results of operations.

On December 22, 2017, the President of the United States of America signed the Tax Cuts and Jobs Act (the “2017 Act”), which includes a broad range of tax reform proposals affecting businesses, including a reduction in the U.S. federal corporate tax rate from 35% to 21%, a one-time mandatory deemed repatriation tax on earnings of certain foreign subsidiaries that were previously tax deferred, and a new minimum tax on certain foreign earnings. The 2017

Act significantly impacts our effective tax rate for fiscal year 2018 as a result of the deemed repatriation tax and may impact several other elements of our operating model. In future years, certain additional provisions of the 2017 Act, such as the minimum tax on certain foreign earnings, will also apply to us and, as a result, we generally expect our effective tax rate to increase from the fiscal year 2018 rate (excluding the mandatory deemed repatriation tax and the re-measurement of deferred taxes). Taxes due over a period of time as a result of the 2017 Act could be accelerated upon certain triggering events, including failure to pay such taxes when due. The 2017 Act makes broad and complex changes to the U.S. tax code and we expect to see future regulatory, administrative or legislative guidance. We are analyzing the 2017 Act to determine the full impact of the new tax law, and to the extent any future guidance differs from our preliminary interpretation of the law, it could have a material effect on our financial position and results of operations.

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In addition, many countries in the European Union and around the globe have adopted and/or proposed changes to current tax laws. Further, organizations such as the Organization for Economic Cooperation and Development, have published action plans that, if adopted by countries where we do business, could increase our tax obligations in these countries. Due to the large scale of our U.S. and international business activities, many of these enacted and proposed changes to the taxation of our activities could increase our worldwide effective tax rate and harm our financial position and results of operations.

We are subject to risks associated with loss or non-renewal of favorable tax treatment under agreements or treaties with foreign tax authorities.

Portions of our operations are subject to a reduced tax rate or are free of tax under various tax holidays that expire in whole or in part from time to time, or may be terminated if certain conditions are not met. Although many of these holidays may be extended when certain conditions are met, we may not be able to meet such conditions. If the tax holidays are not extended, or if we fail to satisfy the conditions of the reduced tax rate, then our effective tax rate could increase in the future.

From time to time we may become subject to income tax examinations or similar proceedings, and as a result we may incur additional costs and expenses or owe additional taxes, interest and penalties that may negatively impact our operating results.

We are subject to income taxes in the U.S. and certain foreign jurisdictions, and our determination of our tax liability is subject to review by applicable domestic and foreign tax authorities. For example, as we have previously disclosed, we are under examination by the Internal Revenue Service for certain fiscal years and in connection with that examination, we received a statutory notice of deficiency seeking certain adjustments to income as disclosed in Part II, Item 8, Note 13, Income Tax Expense (Benefit), of the Notes to Consolidated Financial Statements included in this Annual Report on Form 10 K. Although we believe our tax positions are properly supported, the final timing and resolution of any tax examinations are subject to significant uncertainty and could result in our having to pay amounts to the applicable tax authority in order to resolve examination of our tax positions, which could result in an increase or decrease of our current estimate of unrecognized tax benefits and may negatively impact our financial position, results of operations or cash flows.

If our technology infrastructure, systems or products are compromised, damaged or interrupted by cyber attacks, data security breaches, other security problems, security vulnerabilities or design defects, or sustain system failures, our operating results and financial condition could be adversely affected.

We experience cyber attacks of varying degrees on our technology infrastructure and systems and, as a result, unauthorized parties have obtained in the past, and may in the future obtain, access to our computer systems and networks, including cloud-based platforms. The technology infrastructure and systems of our suppliers, vendors, service providers, cloud solution providers and partners may also experience such attacks. Cyber attacks can include computer viruses, computer denial-of-service attacks, worms, and other malicious software programs or other attacks, covert introduction of malware to computers and networks, impersonation of authorized users, and efforts to discover and exploit any design flaws, bugs, security vulnerabilities or security weaknesses, as well as intentional or unintentional acts by employees or other insiders with access privileges, intentional acts of vandalism by third parties and sabotage. In some instances, efforts to correct vulnerabilities or prevent attacks may reduce the performance of our computer systems and networks, which could negatively impact our business. We believe cyber attack attempts are increasing in number and that cyber attackers are developing increasingly sophisticated systems and means to not only attack systems, but also to evade detection or to obscure their activities. Our products are also targets for cyber attacks, including those products utilized in cloud-based environments as well as our cloud service offerings. While some of our products contain encryption or security algorithms to protect third-party content or user-generated data

stored on our products, these products could still be hacked or the encryption schemes could be compromised, breached, or circumvented by motivated and sophisticated attackers. We have agreed with certain customers and strategic partners, including TMC, to undertake certain commitments to promote information security, and we may be liable to TMC or such other parties if we fail to meet our cyber security commitments.

In addition, our technology infrastructure and systems are vulnerable to damage or interruption from natural disasters, power loss and telecommunications failures. Further, our products contain sophisticated hardware and operating system software and applications that may contain security problems, security vulnerabilities, or defects in design or manufacture, including “bugs” and other problems that could interfere with the intended operation of our products.

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If efforts to breach our infrastructure, systems or products are successful or we are unable to protect against these risks, we could suffer interruptions, delays, or cessation of operations of our systems, and loss or misuse of proprietary or confidential information, IP, or sensitive or personal information. Breaches of our infrastructure, systems or products could also cause our customers and other affected third parties to suffer loss or misuse of proprietary or confidential information, IP, or sensitive or personal information, and could harm our relationships with customers and other third parties. As a result, we could experience additional costs, indemnification claims, litigation, and damage to our brand and reputation. All of these consequences could harm our reputation and our business and materially and adversely affect our operating results and financial condition.

Sales in the distribution channel and to the retail market are important to our business, and if we fail to respond to demand changes within these markets, or maintain and grow our applicable market share, our operating results could suffer.

Our distribution customers typically sell to small computer manufacturers, dealers, systems integrators and other resellers. We face significant competition in this channel as a result of limited product qualification programs and a significant focus on price and availability of product. In addition, the PC market is experiencing a shift to notebook and other mobile devices and, as a result, more computing devices are being delivered to the market as complete systems, which could weaken the distribution market. If we fail to respond to changes in demand in the distribution market, our operating results could suffer. Additionally, if the distribution market weakens as a result of a slowing PC growth rate, technology transitions or a significant change in consumer buying preference, or if we experience significant price declines due to demand changes in the distribution channel, then our operating results would be adversely affected. Negative changes in the credit-worthiness or the ability to access credit, or the bankruptcy or shutdown of any of our significant retail or distribution partners would harm our revenue and our ability to collect outstanding receivable balances.

A significant portion of our sales is also made through retailers. Our success in the retail market depends in large part on our ability to maintain our brand image and corporate reputation and to expand into and gain market acceptance of our products in multiple retail market channels. Particularly in the retail market, adverse publicity, whether or not justified, or allegations of product or service quality issues, even if false or unfounded, could damage our reputation and cause our customers to choose products offered by our competitors. If customers no longer maintain a preference for our product brands or if our retailers are not successful in selling our products, our operating results may be adversely affected.

Loss of market share with or by a key customer, or consolidation among our customer base, could harm our operating results.

During the year ended June 29, 2018, 42% of our revenue came from sales to our top 10 customers. These customers have a variety of suppliers to choose from and therefore can make substantial demands on us, including demands on product pricing and on contractual terms, often resulting in the allocation of risk to us as the supplier. Our ability to maintain strong relationships with our principal customers is essential to our future performance. If we lose a key customer, if any of our key customers reduce their orders of our products or require us to reduce our prices before we are able to reduce costs, if a customer is acquired by one of our competitors or if a key customer suffers financial hardship, our operating results and financial condition would likely be harmed.

Additionally, if there is consolidation among our customer base, our customers may be able to command increased leverage in negotiating prices and other terms of sale, which could adversely affect our profitability. Consolidation among our customer base may also lead to reduced demand for our products, increased customer pressure on our prices, replacement of our products by the combined entity with those of our competitors and cancellations of orders, each of which could harm our operating results.

Also, the storage ecosystem is constantly evolving, and our traditional customer base is changing. Fewer companies now hold greater market share for certain applications and services, such as mobile, social media, shopping and streaming media. As a result, the competitive landscape is changing, giving these companies increased leverage in negotiating prices and other terms of sale, which could adversely affect our profitability. In addition, the changes in our evolving customer base create new selling and distribution patterns to which we must adapt. To remain competitive, we must respond to these changes by ensuring we have proper scale in this evolving market, as well as offer products that meet the technological requirements of this customer base at competitive pricing points. To the extent we are not successful in adequately responding to these changes, our operating results and financial condition could be harmed.

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We make significant investments in R&D to improve our technology and develop new technologies, and unsuccessful investments or investments that are not cost effective could materially adversely affect our business, financial condition and results of operations.

We make significant R&D investments to maintain our existing products and to lead innovation and development of new technologies. In addition, we may increase our capital expenditures and expenses above our historical run-rate model in order to remain competitive. The challenges of reducing operating costs could result in more costly capital expenditures that reduce the cost benefits of technology transitions and could limit our ability to keep pace with reductions in ASPs. Our R&D investments may not result in viable technologies or products, and even if they do result in viable technologies or products, they may not be profitable or accepted by the market. In addition, if we are not able to improve our technology or develop new technologies at the same rate as our competitors or at a rate that is expected by our customers, we may be required to incur additional costs to meet demand without corresponding incremental revenue, which could negatively impact our operating margins and make achieving historical levels of cost reduction difficult or unlikely. Significant investments in unsuccessful or cost-ineffective R&D efforts could materially adversely affect our business, financial condition and results of operations. In addition, increased investments in technology could cause our cost structure to fall out of alignment with demand for our products, which would have a negative impact on our financial results.

We are subject to risks related to product defects or the unintended use or security breaches of our products, which could result in product recalls or epidemic failures and could subject us to warranty claims in excess of our warranty provisions or which are greater than anticipated, litigation or indemnification claims.

We warrant the majority of our products for periods of one to five years. We test our products in our manufacturing facilities through a variety of means. However, our testing may fail to reveal defects in our products that may not become apparent until after the products have been sold into the market. In addition, our products may be used in a manner that is not intended or anticipated by us, resulting in potential liability. Accordingly, there is a risk that product defects will occur, which could require a product recall. Product recalls can be expensive to implement. As part of a product recall, we may be required or choose to replace the defective product. Moreover, there is a risk that product defects may trigger an epidemic failure clause in a customer agreement. If an epidemic failure occurs, we may be required to replace or refund the value of the defective product and to cover certain other costs associated with the consequences of the epidemic failure. In addition, product defects, product recalls or epidemic failures may cause damage to our reputation or customer relationships, lost revenue, indemnification for a recall of our customers' products, warranty claims, litigation or loss of market share with our customers, including our OEM and original design manufacturers ("ODM") customers. Our business liability insurance may be inadequate or future coverage may be unavailable on acceptable terms, which could adversely impact our operating results and financial condition.

Our standard warranties contain limits on damages and exclusions of liability for consequential damages and for misuse, improper installation, alteration, accident or mishandling while in the possession of someone other than us. We record an accrual for estimated warranty costs at the time revenue is recognized. We may incur additional expenses if our warranty provision do not reflect the actual cost of resolving issues related to defects in our products, whether as a result of a product recall, epidemic failure or otherwise. If these additional expenses are significant, it could adversely affect our business, financial condition and operating results.

Certain of our products contain encryption or security algorithms to protect third party content and user-generated data stored on our products. To the extent our products are hacked or the encryption schemes are compromised or breached, this could harm our business by hurting our reputation, requiring us to employ additional resources to fix the errors or defects and expose us to litigation and indemnification claims.

In addition, third-party components or applications that we incorporate or use in our products may contain defects in design or manufacturing that could unexpectedly result in epidemic failures, security vulnerabilities or performance issues and subject us to liability.

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We and certain of our officers are at times involved in litigation, investigations and governmental proceedings, which may be costly, may divert the efforts of our key personnel and could result in adverse court rulings, fines or penalties, which could materially harm our business.

We are involved in litigation, including cases involving our IP rights and those of others, antitrust and commercial matters, putative securities class action suits and other actions. We are the plaintiff in some of these actions and the defendant in others. Some of the actions seek injunctive relief, including injunctions against the sale of our products, and substantial monetary damages, which if granted or awarded, could materially harm our business, financial condition and operating results. From time to time, we may also be the subject of inquiries, requests for information, investigations and actions by government and regulatory agencies regarding our businesses. Any such matters could result in material adverse consequences to our results of operations, financial condition or ability to conduct our business, including fines, penalties or restrictions on our business activities.

Litigation is subject to inherent risks and uncertainties that may cause actual results to differ materially from our expectations. In the event of an adverse outcome in any litigation, investigation or governmental proceeding, we could be required to pay substantial damages, fines or penalties and cease certain practices or activities, including the manufacture, use and sale of products. With or without merit, such matters can be complex, can extend for a protracted period of time, can be very expensive and the expense can be unpredictable. Litigation initiated by us could also result in counter-claims against us, which could increase the costs associated with the litigation and result in our payment of damages or other judgments against us. In addition, litigation, investigations or governmental proceedings and any related publicity may divert the efforts and attention of some of our key personnel and may also harm the market prices of our securities.

We may be obligated to indemnify our current or former directors or employees, or former directors or employees of companies that we have acquired, in connection with litigation, investigations or governmental proceedings. These liabilities could be substantial and may include, among other things: the costs of defending lawsuits against these individuals; the cost of defending shareholder derivative suits; the cost of governmental, law enforcement or regulatory investigations or proceedings; civil or criminal fines and penalties; legal and other expenses; and expenses associated with the remedial measures, if any, which may be imposed.

We are subject to laws, rules, and regulations in the U.S. and other countries relating to the collection, use, sharing, and security of third-party data including personal data, and our failure to comply with these laws, rules and regulations could subject us to proceedings by governmental entities or others and cause us to incur penalties, significant legal liability, or loss of customers, loss of revenue, and reputational harm.

We are subject to laws, rules, and regulations in the U.S. and other countries relating to the collection, use, and security of third-party data including data that relates to or identifies an individual person. In many cases, these laws apply not only to third-party transactions, but also to transfers of information between us and our subsidiaries, and among us, our subsidiaries and other parties with which we have commercial relations. Our possession and use of third-party data, including personal data and employee data in conducting our business subjects us to legal and regulatory burdens that may require us to notify vendors, customers or employees or other parties with which we have commercial relations of a data security breach and to respond to regulatory inquiries and to enforcement proceedings. Global privacy and data protection legislation, enforcement, and policy activity in this area are rapidly expanding and evolving, and may be inconsistent from jurisdiction to jurisdiction. Compliance requirements and even our inadvertent failure to comply with applicable laws may cause us to incur substantial costs, subject us to proceedings by governmental entities or others, and cause us to incur penalties or other significant legal liability, or lead us to change our business practices.

The nature of our industry and its reliance on IP and other proprietary information subjects us and our suppliers, customers and partners to the risk of significant litigation.

The data storage industry has been characterized by significant litigation. This includes litigation relating to patent and other IP rights, product liability claims and other types of litigation. We have historically been involved in frequent disputes regarding patent and other IP rights, and we have in the past received, and we may in the future receive, communications from third parties asserting that certain of our products, processes or technologies infringe upon their patent rights, copyrights, trademark rights or other IP rights. We may also receive claims of potential infringement if we attempt to license IP to others. IP risks increase when we enter into new markets where we have little or no IP protection as a defense against litigation. The complexity of the technology involved and the uncertainty of IP litigation increase the IP risks we face. Litigation can be expensive, lengthy and disruptive to normal business operations. Moreover, the results of litigation are inherently uncertain and may result in adverse rulings or decisions. We may be subject to injunctions, enter into settlements or be subject to judgments that may, individually or in the aggregate, have a material adverse effect on our business, financial condition or operating results.

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If we incorporate third-party technology into our products or if claims or actions are asserted against us for alleged infringement of the IP of others, we may be required to obtain a license or cross-license, modify our existing technology or design a new non-infringing technology. Such licenses or design modifications can be extremely costly. We evaluate notices of alleged patent infringement and notices of patents from patent holders that we receive from time to time. We may decide to settle a claim or action against us, which settlement could be costly. We may also be liable for any past infringement. If there is an adverse ruling against us in an infringement lawsuit, an injunction could be issued barring production or sale of any infringing product. It could also result in a damage award equal to a reasonable royalty or lost profits or, if there is a finding of willful infringement, treble damages. Any of these results would increase our costs and harm our operating results. In addition, our suppliers, customers and partners are subject to similar risks of litigation, and a material, adverse ruling against a supplier, customer or partner could negatively impact our business.

Moreover, from time to time, we agree to indemnify certain of our suppliers and customers for alleged IP infringement. The scope of such indemnity varies but may include indemnification for direct and consequential damages and expenses, including attorneys' fees. We may be engaged in litigation as a result of these indemnification obligations. Third party claims for patent infringement are excluded from coverage under our insurance policies. A future obligation to indemnify our customers or suppliers may harm our business, financial condition and operating results.

Our reliance on IP and other proprietary information subjects us to the risk that these key ingredients of our business could be copied by competitors.

Our success depends, in significant part, on the proprietary nature of our technology, including non-patentable IP such as our process technology. We primarily rely on patent, copyright, trademark and trade secret laws, as well as nondisclosure agreements and other methods, to protect our proprietary technologies and processes. There can be no assurance that our existing patents will continue to be held valid, if challenged, or that they will have sufficient scope or strength to protect us. It is also possible that competitors or other unauthorized third parties may obtain, copy, use or disclose, illegally or otherwise, our proprietary technologies and processes, despite our efforts to protect our proprietary technologies and processes. If a competitor is able to reproduce or otherwise capitalize on our technology despite the safeguards we have in place, it may be difficult, expensive or impossible for us to obtain necessary legal protection. There are entities whom we believe may infringe our IP. Enforcement of our rights often requires litigation. If we bring a patent infringement action and are not successful, our competitors would be able to use similar technology to compete with us. Moreover, the defendant in such an action may successfully countersue us for infringement of their patents or assert a counterclaim that our patents are invalid or unenforceable. Also, the laws of some foreign countries may not protect our IP to the same extent as do U.S. laws. In addition to patent protection of IP rights, we consider elements of our product designs and processes to be proprietary and confidential. We rely upon employee, consultant and vendor non-disclosure agreements and contractual provisions and a system of internal safeguards to protect our proprietary information. However, any of our registered or unregistered IP rights may be challenged or exploited by others in the industry, which could harm our operating results.

The success of our branded products depends in part on the positive image that consumers have of our brands. We believe the popularity of our brands makes them a target of counterfeiting or imitation, with third parties attempting to pass off counterfeit products as our products. Any occurrence of counterfeiting, imitation or confusion with our brands could adversely affect our reputation and impair the value of our brands, which in turn could negatively impact sales of our branded products, our share and our gross margin, as well as increase our administrative costs related to brand protection and counterfeit detection and prosecution.

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The costs of compliance with state, federal and international legal and regulatory requirements, such as environmental, labor, trade, health, safety, data privacy, anti-corruption and tax regulations, customers' standards of corporate citizenship, and industry and coalition standards, such as those established by the Responsible Business Alliance ("RBA"), could cause an increase in our operating costs.

We are subject to, and may become subject to additional, state, federal and international laws and regulations governing our environmental, labor, trade, health, safety, data privacy, anti-corruption and tax practices. These laws and regulations, particularly those applicable to our international operations, are or may be complex, extensive and subject to change. We will need to ensure that we and our suppliers and partners timely comply with such laws and regulations, which may result in an increase in our operating costs. Legislation has been, and may in the future be, enacted in locations where we manufacture or sell our products. In addition, climate change and financial reform legislation is a significant topic of discussion and has generated and may continue to generate federal, international or other regulatory responses in the near future. If we or our suppliers or partners fail to timely comply with applicable legislation, our customers may refuse to purchase our products or we may face increased operating costs as a result of taxes, fines or penalties, or legal liability and reputational damage, which would have a materially adverse effect on our business, operating results and financial condition.

In connection with our compliance with environmental laws and regulations, as well as our compliance with industry and coalition environmental initiatives, such as those established by the RBA, the standards of business conduct required by some of our customers, and our commitment to sound corporate citizenship in all aspects of our business, we could incur substantial compliance and operating costs and be subject to disruptions to our operations and logistics. In addition, if we were found to be in violation of these laws or noncompliant with these initiatives or standards of conduct, we could be subject to governmental fines, liability to our customers and damage to our reputation and corporate brand which could cause our financial condition and operating results to suffer.

Violation of applicable laws, including labor or environmental laws, and certain other practices by our suppliers, customers or partners could harm our business.

We expect our suppliers, customers and partners to operate in compliance with applicable laws and regulations, including labor and environmental laws, and to otherwise meet our required standards of conduct. While our internal operating guidelines promote ethical business practices, we do not control our suppliers, customers, partners or their labor or environmental practices. The violation of labor, environmental or other laws by any of them, or divergence of their business practices from those generally accepted as ethical, could harm our business by interrupting or otherwise disrupting the shipment of our product components, damaging our reputation, forcing us to find alternate component sources, reducing demand for our products (for example, through a consumer boycott), or exposing us to potential liability for our suppliers', customers' or partners' wrongdoings.

Our failure to accurately forecast market and customer demand for our products, or to quickly adjust to forecast changes, could adversely affect our business and financial results or operating efficiencies.

The data storage industry faces difficulties in accurately forecasting market and customer demand for its products. The variety and volume of products we manufacture are based in part on these forecasts. Accurately forecasting demand has become increasingly difficult for us, our customers and our suppliers in light of the volatility in global economic conditions and industry consolidation, resulting in less availability of historical market data for certain product segments. Further, for many of our OEMs utilizing just-in-time inventory, we do not generally require firm order commitments and instead receive a periodic forecast of requirements, which may prove to be inaccurate. In addition, because our products are designed to be largely interchangeable with competitors' products, our demand forecasts may be impacted significantly by the strategic actions of our competitors. As forecasting demand becomes more difficult, the risk that our forecasts are not in line with demand increases. If our forecasts exceed actual market demand, then we

could experience periods of product oversupply, excess inventory, and price decreases, which could impact our sales, ASPs and gross margin, thereby adversely affecting our operating results and our financial condition. If market demand increases significantly beyond our forecasts or beyond our ability to add manufacturing capacity, then we may not be able to satisfy customer product needs, possibly resulting in a loss of market share if our competitors are able to meet customer demands. In addition, some of our components have long lead-times, requiring us to place orders several months in advance of anticipated demand. Such long lead-times increase the risk of excess inventory or loss of sales in the event our forecasts vary substantially from actual demand.

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Our vertical integration of some of our products makes us dependent on our ability to timely and cost-effectively develop products with leading technology and overall quality, increasing capital expenditure costs and asset utilization risks for our business.

We develop flash-based memory as well as other non-volatile memory technology through our partnership with TMC; we are also vertically integrated in a substantial portion of the recording heads and magnetic media used in the hard drive products we produce. Consequently, for some of our products, we are more dependent upon our own development and execution efforts and less able to take advantage of technologies developed by other manufacturers. Since we may not have access to alternative technologies that we do not develop internally, we may have to pay royalties in order to access those technologies.

In addition, we may be unsuccessful in timely and cost-effectively developing and manufacturing products using future technologies. We also may not effectively transition our design and technology to achieve acceptable manufacturing yields using the technologies necessary to satisfy our customers' product needs, or we may encounter quality problems with the products we manufacture. If we are unable to timely and cost-effectively develop products with leading technology and overall quality, continuing the cost reductions necessary to maintain adequate gross margin and our ability to sell our products may be significantly diminished, which could materially and adversely affect our business and financial results.

Further, as a result of our vertical integration of some of our products, we make more capital investments and carry a higher percentage of fixed costs than we would if we were not vertically integrated. If our overall level of production decreases for any reason, and we are unable to reduce our fixed costs to match sales, some of our assets may face underutilization that may impact our operating results. We are therefore subject to additional risks related to overall asset utilization, including the need to operate at high levels of utilization to drive competitive costs and the need for assured supply of components that we do not manufacture ourselves. In addition, as a result of adverse labor rates or availability, we may be required to increase investments in automation, which may cause our capital expenditures to increase. If we do not adequately address these challenges, our ongoing operations could be disrupted, resulting in a decrease in our revenue or profit margins and negatively impacting our operating results.

Terrorist attacks may adversely affect our business and operating results.

The continued threat of terrorist activity and other acts of war or hostility have created, and may continue to create, uncertainty in the financial and insurance markets and have significantly increased the political, economic and social instability in some of the geographic areas in which we, our suppliers or our customers operate. Additionally, it is uncertain what impact the reactions to such acts by various governmental agencies and security regulators worldwide will have on shipping costs. Future acts of terrorism, either domestically or abroad, could create further uncertainties and instability. To the extent this results in disruption or delays of our manufacturing capabilities, R&D activities (including our operations in Israel) or shipments of our products, our business, operating results and financial condition could be adversely affected. Any of these events could also increase volatility in the U.S. and world financial markets, which could have a negative effect on our stock price and may limit the capital resources available to us and our customers or suppliers, or adversely affect consumer confidence.

Sudden disruptions to the availability of air transportation, or ocean or land freight lanes, could have an impact on our operations.

We generally ship our products to our customers, and receive shipments from our suppliers, via air, ocean or land freight. The sudden unavailability or disruption of air transportation, cargo operations or ocean, rail or truck freight lanes caused by, among other things, labor difficulties or disputes, severe weather patterns or other natural disasters, or political instability or civil unrest, could impact our operating results by impairing our ability to timely and

efficiently receive shipments from our suppliers or deliver our products.

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Our license and royalty revenue may fluctuate or decline significantly in the future due to license agreement expirations or renewals, declines in sales of the products or use of technology underlying the license and royalty revenue by our licensees, or if licensees fail to perform on a portion or all of their contractual obligations.

If our existing licensees do not renew their licenses upon expiration, renew or sign new agreements on less favorable terms, exercise their option to terminate the license or fail to exercise their option to extend the licenses, or we are not successful in signing new licensees in the future, our license revenue, profitability and cash provided by operating activities would be harmed and we may incur significant patent litigation costs to enforce our patents against these licensees. As our older patents expire, and the coverage of our newer patents may be different, it may be more difficult to negotiate or renew favorable license agreement terms or a license agreement at all. Our agreements may require us in certain instances to recognize license revenue related to a particular licensee all in one period instead of over time, which could create additional volatility in our licensing revenue. A portion of our license and royalty revenue is based on sales of product categories as well as the underlying technology, and fluctuations in the sales of those products or technology adoption rates would also result in fluctuations in the license and royalty revenue due to us under our agreements. If our licensees or we fail to perform on contractual obligations, we may incur costs to enforce or defend the terms of our licenses and there can be no assurance that our enforcement, defense or collection efforts will be effective. If we license new IP from third parties or existing licensees, we may be required to pay license fees, royalty payments or offset existing license revenue. We may enter into agreements with customers, suppliers or partners that could limit our ability to monetize our IP or could result in us being required to provide IP indemnification to our customers, suppliers or partners. In addition, we may be subject to disputes, claims or other disagreements on the timing, amount or collection of royalties or license payments under our license agreements.

Flash Ventures' equipment lease agreements contain covenants and other cancellation events, and cancellation of the leases would harm our business, operating results and financial condition.

Flash Ventures sells to and leases back from a consortium of financial institutions ("lessors") a portion of its equipment and Flash Ventures has entered into equipment lease agreements, most of which we and TMC each guarantee half of the total outstanding obligations and some of which we guarantee in full for our share of the Flash Ventures investment. As of June 29, 2018, the portion of outstanding Flash Ventures' lease obligations covered by our guarantees totaled approximately \$1.22 billion, based upon the Japanese yen to U.S. dollar exchange rate at June 29, 2018. The equipment lease agreements contain covenants and cancellation events that are customary for Japanese lease facilities and that relate to Flash Ventures and each of the guarantors. Cancellation events relating to the guarantors include, among other things, an assignment of all or a substantial part of a guarantor's business, a bankruptcy event involving a guarantor and acceleration of other monetary debts of a guarantor above a specified threshold.

The breach of a covenant or the occurrence of another cancellation event could result in an acceleration of the Flash Ventures' lease obligations. If a cancellation event were to occur, Flash Ventures would be required to negotiate a resolution with the lessors, as well as other parties to the lease transactions, to avoid cancellation and acceleration of the lease obligations. Such resolution could include, among other things, supplementary security to be supplied by us, as guarantor, increased interest rates or waiver fees. If a cancellation event occurs and we fail to reach a resolution, we may be required to pay all or a portion of the outstanding lease obligations covered by our guarantees, which would significantly reduce our cash position and may force us to seek additional financing, which may not be available on terms acceptable to us, if at all.

Any decisions to reduce or discontinue paying cash dividends to our shareholders or to reduce or discontinue repurchases of shares of our common stock pursuant to our previously announced stock repurchase program could cause the market price for our common stock to decline.

We may modify, suspend or cancel our cash dividend policy in any manner and at any time. In addition, we may reduce or discontinue repurchases of shares of our common stock as we deem appropriate and as market conditions allow. Any reduction or discontinuance by us of the payment of quarterly cash dividends or the repurchases of our common stock pursuant to our stock repurchase program could cause the market price of our common stock to decline. Moreover, in the event our payment of quarterly cash dividends or repurchases of shares of our common stock are reduced or discontinued, our failure or inability to resume paying cash dividends or repurchasing shares of our common stock at historical levels could cause the market price of our common stock to decline.

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Fluctuations in currency exchange rates as a result of our international operations may negatively affect our operating results.

Because we manufacture and sell our products abroad, our revenue, cost of goods sold, margins, operating costs and cash flows are impacted by fluctuations in foreign currency exchange rates. If the U.S. dollar exhibits sustained weakness against most foreign currencies, the U.S. dollar equivalents of unhedged manufacturing costs could increase because a significant portion of our production costs are foreign-currency denominated. Conversely, there would not be an offsetting impact to revenues since revenues are substantially U.S. dollar denominated. Additionally, we negotiate and procure some of our component requirements in U.S. dollars from non-U.S. based vendors. If the U.S. dollar weakens against other foreign currencies, some of our component suppliers may increase the price they charge for their components in order to maintain an equivalent profit margin. In addition, our purchases of flash-based memory from Flash Ventures and our investment in Flash Ventures are denominated in Japanese yen. If the Japanese yen appreciates against the U.S. dollar, our cost of purchasing flash-based memory wafers and the cost to us of future capital funding of Flash Ventures would increase, which could negatively impact our operating results. If any of these events occur, they would have a negative impact on our operating results.

Prices for our products are substantially U.S. dollar denominated, even when sold to customers that are located outside the U.S. Therefore, as a substantial portion of our sales are from countries outside the U.S., fluctuations in currency exchanges rates, most notably the strengthening of the U.S. dollar against other foreign currencies, contribute to variations in sales of products in impacted jurisdictions and could adversely impact demand and revenue growth. In addition, currency variations can adversely affect margins on sales of our products in countries outside the U.S.

We attempt to manage the impact of foreign currency exchange rate changes by, among other things, entering into short-term, foreign exchange contracts. However, these contracts do not cover our full exposure, and can be canceled by the counterparty if currency controls are put in place. Thus, our decisions and hedging strategy with respect to currency risks may not be successful and harm our operating results. Further, the ability to enter into foreign exchange contracts with financial institutions is based upon our available credit from such institutions and compliance with covenants and other restrictions. Operating losses, third party downgrades of our credit rating or instability in the worldwide financial markets could impact our ability to effectively manage our foreign currency exchange rate risk. Hedging also exposes us to the credit risk of our counterparty financial institutions.

Increases in our customers' credit risk could result in credit losses and term extensions under existing contracts with customers with credit losses could result in an increase in our operating costs.

Some of our OEM customers have adopted a subcontractor model that requires us to contract directly with companies, such as ODMs, that provide manufacturing and fulfillment services to our OEM customers. Because these subcontractors are generally not as well capitalized as our direct OEM customers, this subcontractor model exposes us to increased credit risks. Our agreements with our OEM customers may not permit us to increase our product prices to alleviate this increased credit risk. Additionally, as we attempt to expand our OEM and distribution channel sales into emerging economies such as Brazil, Russia, India and China, the customers with the most success in these regions may have relatively short operating histories, making it more difficult for us to accurately assess the associated credit risks. Any credit losses we may suffer as a result of these increased risks, or as a result of credit losses from any significant customer, especially in situations where there are term extensions under existing contracts with such customers, would increase our operating costs, which may negatively impact our operating results.

Our operating results fluctuate, sometimes significantly, from period to period due to many factors, which may result in a significant decline in our stock price.

Our quarterly operating results may be subject to significant fluctuations as a result of a number of other factors including:

• weakness in demand for one or more product categories;

• the timing of orders from and shipment of products to major customers, loss of major customers;

• our product mix;

• reductions in the ASPs of our products and lower margins;

• excess output, capacity or inventory, resulting in lower ASPs, financial charges or impairments, or insufficient output, capacity or inventory, resulting in lost revenue opportunities;

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inability to successfully transition to 3D NAND or other technology developments, or other failure to reduce product costs to keep pace with reduction in ASPs;

manufacturing delays or interruptions;

delays in design wins or customer qualifications, acceptance by customers of competing products in lieu of our products;

success of our partnerships and joint ventures, in particular the volume, timing and cost of wafer production at Flash Ventures, and our success in managing the relationships with our strategic partners;

inability to realize the potential benefits of our acquisitions and the success of our integration efforts;

ability to penetrate new markets for our storage solutions;

variations in the cost of and lead times for components for our products, disruptions of our supply chain;

limited availability of components that we obtain from a single or a limited number of suppliers;

seasonal and other fluctuations in demand often due to technological advances;

increase in costs due to warranty claims;

higher costs as a result of currency exchange rate fluctuations; and

availability and rates of transportation.

We often ship a high percentage of our total quarterly sales in the third month of the quarter, which makes it difficult for us to forecast our financial results before the end of the quarter. As a result of the above or other factors, our forecast of operating results for the quarter may differ materially from our actual financial results. If our results of operations fail to meet the expectations of analysts or investors, it could cause an immediate and significant decline in our stock price.

We have made and continue to make a number of estimates and assumptions relating to our consolidated financial reporting, and actual results may differ significantly from our estimates and assumptions.

We have made and continue to make a number of estimates and assumptions relating to our consolidated financial reporting. The highly technical nature of our products and the rapidly changing market conditions with which we deal means that actual results may differ significantly from our estimates and assumptions. These changes have impacted our financial results in the past and may continue to do so in the future. Key estimates and assumptions for us include:

price protection adjustments and other sales promotions and allowances on products sold to retailers, resellers and distributors;

inventory adjustments for write-down of inventories to lower of cost or market value (net realizable value);

testing of goodwill and other long-lived assets for impairment;

accruals for product returns;

accruals for litigation and other contingencies

liabilities for unrecognized tax benefits; and

provisional estimates related to tax reform.

In addition, changes in existing accounting or taxation rules or practices, new accounting pronouncements or taxation rules, or varying interpretations of current accounting pronouncements or taxation practice could have an adverse effect on our results of operations and financial condition.

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The market price of our common stock is volatile.

The market price of our common stock has been, and may continue to be, volatile. Factors that may significantly affect the market price of our common stock include the following:

• actual or anticipated fluctuations in our operating results, including those resulting from the seasonality of our business;

• perceptions about our strategic relationships and joint ventures, access to supply of flash-based memory, new technologies and technology transitions;

• announcements of technological innovations by us or our competitors, which may decrease the volume and profitability of sales of our existing products and increase the risk of inventory obsolescence;

• new products introduced by us or our competitors;

• strategic actions by us or competitors, such as acquisitions and restructurings;

• periods of severe pricing pressures due to oversupply or price erosion resulting from competitive pressures or industry consolidation;

• developments with respect to patents or proprietary rights, and any litigation;

• proposed or adopted regulatory changes or developments or anticipated or pending investigations, proceedings or litigation that involve or affect us or our competitors;

• conditions and trends in the hard drive, solid-state storage, flash memory, computer, mobile, data and content management, storage and communication industries;

• contraction in our operating results or growth rates that are lower than our previous high growth-rate periods;

• failure to meet analysts' revenue or earnings estimates or changes in financial estimates or publication of research reports and recommendations by financial analysts relating specifically to us or the storage industry in general;

• announcements relating to dividends and share repurchases; and

• macroeconomic conditions that affect the market generally and, in particular, developments related to market conditions for our industry.

In addition, the sale of substantial amounts of shares of our common stock, or the perception that these sales may occur, could adversely affect the market price of our common stock. Further, the stock market is subject to fluctuations in the stock prices and trading volumes that affect the market prices of the stock of public companies, including us. These broad market fluctuations have adversely affected and may continue to adversely affect the market price of shares of our common stock. For example, expectations concerning general economic conditions may cause the stock market to experience extreme price and volume fluctuations from time to time that particularly affect the stock prices of many high technology companies. These fluctuations may be unrelated to the operating performance of the companies.

Securities class action lawsuits are often brought against companies after periods of volatility in the market price of their securities. A number of such suits have been filed against us in the past, and should any new lawsuits be filed, such matters could result in substantial costs and a diversion of resources and management's attention.

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Our cash balances and investment portfolio are subject to various risks, any of which could adversely impact our financial position.

Given the international footprint of our business, we have both domestic and international cash balances and investments. We maintain an investment portfolio of various holdings, security types, and maturities. These investments are subject to general credit, liquidity, market, political, sovereign and interest rate risks, which may be exacerbated by unusual events that affect global financial markets. A material part of our investment portfolio consists of investment grade corporate securities, bank deposits, asset backed securities and U.S. government and agency securities. If global credit and equity markets experience prolonged periods of decline, or if there is a downgrade of the U.S. government credit rating due to an actual or threatened default on government debt, our investment portfolio may be adversely impacted and we could determine that our investments may experience an other-than-temporary decline in fair value, requiring impairment charges that could adversely affect our financial results. A failure of any of these financial institutions in which deposits exceed Federal Deposit Insurance Corporation (FDIC) limits could also have an adverse impact on our financial position.

In addition, if we are unable to generate sufficient cash flows from operations to repay our indebtedness, fund acquisitions, pay dividends, or repurchase shares of our common stock, we may choose or be required to increase our borrowings, if available, or to repatriate funds to the U.S. at an additional tax cost. We must comply with regulations regarding the conversion and distribution of funds earned in the local currencies of various countries. If we cannot comply with these or other applicable regulations, we may face increased difficulties in using cash generated in these countries.

Item 1B. Unresolved Staff Comments

Not applicable.

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Item 2. Properties

Our principal executive offices are located in San Jose, California. Our leased facilities are occupied under leases that expire at various times through 2030. Our principal manufacturing, R&D, marketing and administrative facilities as of June 29, 2018 were as follows:

Location	Buildings Owned or Leased	Approximate Square Footage	Description
United States			
California			
Fremont	Owned	392,000	Manufacturing of head wafers and R&D
Irvine	Leased	490,000	R&D, administrative, marketing and sales
Milpitas	Owned	589,000	R&D, marketing and sales, and administrative
San Jose	Owned and Leased	2,750,000	Manufacturing of head wafers, head, media and product development, R&D, administrative, marketing and sales
Colorado			
Longmont	Leased	62,000	R&D
Minnesota			
Rochester	Leased	121,000	Product development
Asia			
China			
Shanghai	Owned	715,000	Assembly and test of SSDs
Shenzhen	Owned and Leased	535,000	Manufacturing of media
Japan			
Fujisawa	Owned	661,000	Product development
Malaysia			
Johor	Owned	271,000	Manufacturing of substrates
Kuala Lumpur ⁽¹⁾	Owned	1,074,000	Manufacturing of HDDs and R&D
Kuching	Owned	285,000	Manufacturing and development of substrates
Penang	Owned	1,552,000	Assembly and test of SSDs, manufacturing of media, and R&D
Philippines			
Laguna	Owned	621,000	Manufacturing of HGAs and slider fabrication
Thailand			
Bang Pa-In	Owned	1,665,000	Slider fabrication, manufacturing of hard drives and HGAs, and R&D
Navanakorn	Owned	290,000	Manufacturing of HGAs
Prachinburi	Owned	729,000	Manufacturing of HDDs
India			
Bangalore	Owned and Leased	460,000	R&D and marketing
Middle East			
Israel			
Kfar Saba	Owned	167,000	R&D and marketing
Tefen	Owned	64,000	R&D and marketing

In July 2018, we announced the closing of our manufacturing facility in Kuala Lumpur, Malaysia. We expect the closure to be substantially completed by the end of the calendar year 2019. For additional information, see Part II, Item 8, Note 15, Employee Termination, Asset Impairment and Other Charges, of the Notes to Consolidated Financial Statements included in this Annual Report on Form 10 K.

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We also lease office space in various other locations throughout the world primarily for R&D, sales, operations, administration and technical support. We believe our present facilities are adequate for our current needs, although we upgrade our facilities from time to time to meet anticipated future technological and market requirements. In general, new manufacturing facilities can be developed and become operational within approximately nine to eighteen months should we require such additional facilities.

Item 3. Legal Proceedings

For a description of our legal proceedings, see Part II, Item 8, Note 16, Legal Proceedings, of the Notes to Consolidated Financial Statements included in this Annual Report on Form 10 K, which is incorporated by reference in response to this item.

Item 4. Mine Safety Disclosures

Not applicable.

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PART II

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

Market Information for Common Stock

Our common stock is listed on the Nasdaq Global Select Market ("Nasdaq") under the symbol "WDC." The approximate number of holders of record of our common stock as of August 15, 2018 was 999.

The high and low sales prices of our common stock as reported by Nasdaq for each quarter of 2018 and 2017 were as follows:

Quarter Ended	High	Low
September 29, 2017	\$95.77	\$78.31
December 29, 2017	\$93.31	\$76.59
March 30, 2018	\$106.96	\$77.90
June 29, 2018	\$93.41	\$75.96

Quarter Ended	High	Low
September 30, 2016	\$59.86	\$43.09
December 30, 2016	\$72.01	\$52.10
March 31, 2017	\$84.28	\$68.58
June 30, 2017	\$95.00	\$80.51

Repurchases of Equity Securities

The following table provides information about repurchases by us of shares of our common stock during the quarter ended June 29, 2018:

(in millions, except average price paid per share)	Total Number of Shares Purchased	Average Price Paid per Share ⁽¹⁾	Total Number of Shares Purchased As Part of Publicly Announced Program ⁽²⁾	Maximum Value of Shares that May Yet be Purchased Under the Program ⁽²⁾
Mar. 31, 2018 - Apr. 27, 2018	—	\$ —	—	\$ 1,969
Apr. 28, 2018 - May 25, 2018	1.9	84.61	1.9	\$ 1,812
May 26, 2018 - Jun. 29, 2018	3.4	81.16	3.4	\$ 1,533
Total for the quarter ended Jun. 29, 2018	5.3	\$ 82.37	5.3	

⁽¹⁾ Includes commissions.

Our Board of Directors previously authorized \$5.00 billion for the repurchase of our common stock. In 2018, we repurchased 7.1 million shares for a total cost of \$591 million. Subsequent to June 29, 2018 and through July 25, 2018, we repurchased an additional 0.8 million shares for a total cost of \$61 million. On July 25, 2018, our Board of Directors authorized a new \$5.00 billion share repurchase program that is effective through July 25, 2023, replacing all prior programs. Repurchases under the stock repurchase program may be made in the open market or in privately negotiated transactions and may be made under a Rule 10b5-1 plan. We expect stock repurchases to be funded principally by operating cash flows. Subsequent to July 25, 2018 and through August 22, 2018, we repurchased an additional 5.9 million shares for a total cost of \$404 million under this new program.

Dividends to Shareholders

On September 13, 2012, we announced that our Board of Directors had authorized the adoption of a quarterly cash dividend policy. Under the cash dividend policy, holders of our common stock receive dividends when and as declared by our Board of Directors. In 2018, we declared aggregate cash dividends of \$2.00 per share of our common stock, totaling \$592 million.

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The following table provides information about the quarterly dividends our Board of Directors declared in the last two fiscal years:

Record Date	Payment Date	Dividend Per Share
September 30, 2016	October 17, 2016	\$0.50
December 30, 2016	January 17, 2017	\$0.50
March 31, 2017	April 17, 2017	\$0.50
June 30, 2017	July 17, 2017	\$0.50
September 29, 2017	October 16, 2017	\$0.50
December 29, 2017	January 16, 2018	\$0.50
March 30, 2018	April 16, 2018	\$0.50
June 29, 2018	July 16, 2018	\$0.50

In addition, on August 1, 2018, we declared a cash dividend of \$0.50 per share of our common stock to our shareholders of record as of September 28, 2018, which will be paid on October 15, 2018.

The amount of future dividends under our cash dividend policy, and the declaration and payment thereof, will be based upon all relevant factors, including our financial position, results of operations, cash flows, capital requirements and restrictions under our financing agreements, and shall be in compliance with applicable law. Our Board of Directors retains the power to modify, suspend or cancel the cash dividend policy in any manner and at any time as it may deem necessary or appropriate in the future.

Stock Performance Graph

The following graph compares the cumulative total stockholder return of our common stock with the cumulative total return of the S&P 500 Index and the Dow Jones U.S. Technology Hardware & Equipment Index for the five years ended June 29, 2018. The graph assumes that \$100 was invested in our common stock at the close of market on June 28, 2013 and that all dividends were reinvested. Stockholder returns over the indicated period should not be considered indicative of future stockholder returns.

TOTAL RETURN TO STOCKHOLDERS

(Assumes \$100 investment on June 28, 2013)

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Total Return Analysis

	June 28, 2013	June 27, 2014	July 3, 2015	July 1, 2016	June 30, 2017	June 29, 2018
Western Digital Corporation	\$100.00	\$151.92	\$134.87	\$80.35	\$157.42	\$140.87
S&P 500 Index	\$100.00	\$124.61	\$133.86	\$139.20	\$164.11	\$187.70
Dow Jones U.S. Technology Hardware & Equipment Index	\$100.00	\$142.33	\$161.24	\$148.84	\$210.22	\$273.85

The stock performance graph shall not be deemed soliciting material or to be filed with the SEC or subject to Regulation 14A or 14C under the Securities Exchange Act of 1934 or to the liabilities of Section 18 of the Securities Exchange Act of 1934, nor shall it be incorporated by reference into any past or future filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent we specifically request that it be treated as soliciting material or specifically incorporate it by reference into a filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.

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Item 6. Selected Financial Data

Financial Highlights

This selected consolidated financial data should be read together with the Consolidated Financial Statements and related Notes contained in this Annual Report on Form 10 K, as well as the section of this Annual Report on Form 10 K entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

	June 29, 2018	June 30, 2017	July 1, 2016	July 3, 2015	June 27, 2014
	(in millions, except per share and employee data)				
Revenue, net	\$20,647	\$19,093	\$12,994	\$14,572	\$15,130
Gross profit	7,705	6,072	3,435	4,221	4,360
Net income	675	397	242	1,465	1,617
Income per common share:					
Basic	\$2.27	\$1.38	\$1.01	\$6.31	\$6.88
Diluted	\$2.20	\$1.34	\$1.00	\$6.18	\$6.68
Cash dividends declared per common share	\$2.00	\$2.00	\$2.00	\$1.80	\$1.25
Working capital	\$6,182	\$6,712	\$5,635	\$5,275	\$4,875
Total assets	\$29,235	\$29,860	\$32,862	\$15,170	\$15,499
Long-term debt	\$10,993	\$12,918	\$13,660	\$2,149	\$2,313
Shareholders’ equity	\$11,531	\$11,418	\$11,145	\$9,219	\$8,842
Number of employees ⁽¹⁾	71,600	67,600	72,900	76,400	84,100

⁽¹⁾ Excludes temporary employees and contractors.

Results for Tegile Systems, Inc., Upthere, Inc., SanDisk Corporation, Amplidata NV, Virident Systems, Inc., sTec, Inc. and VeloBit, Inc., which were acquired on September 15, 2017, August 25, 2017, May 12, 2016, March 9, 2015, October 17, 2013, September 12, 2013 and July 9, 2013, respectively, are included in our operating results only after their respective dates of acquisition.

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Item 7. Management's Discussion and Analysis of Financial Conditions and Results of Operations

Our Company

We are a leading developer, manufacturer and provider of data storage devices and solutions that address the evolving needs of the information technology ("IT") industry and the infrastructure that enables the proliferation of data in virtually every other industry. Our broad portfolio of technology and products address the following key markets: Client Devices; Data Center Devices and Solutions; and Client Solutions. We also generate license and royalty revenue related to our intellectual property ("IP"), which is included in each of these three categories.

Key Developments

Debt Facilities

During the year ended June 29, 2018, we entered into new debt facilities, amended our existing credit agreement, increased our revolving credit facility, and repaid higher rate debt. These actions, along with scheduled principal payments, reduced the aggregate principal amount of our debt by \$1.98 billion since the beginning of the fiscal year and reduced our overall interest cost, extended the tenor of our debt and provided additional flexible capacity to meet our financing needs. The financing arrangement activities were as follows in the year ended June 29, 2018:

In November 2017, we settled our then-existing U.S. dollar-denominated term B-2 loans ("U.S. Term Loan B-2") with the proceeds of a new issuance of a \$2.96 billion U.S. dollar-denominated term loan ("U.S. Term Loan B-3") at an interest rate lower than our U.S. Term Loan B-2 tranche. In February 2018, we made a voluntary partial prepayment of \$500 million of the U.S. Term Loan B-3 using drawings from the Revolving Facility (as defined below), and in May 2018, we settled our then-existing U.S. dollar-denominated term B-3 loans with the proceeds of a new issuance of a \$2.46 billion U.S. dollar-denominated term loan ("U.S. Term Loan B-4") at an interest rate lower than our U.S. Term Loan B-3 tranche.

In November 2017, we made a voluntary prepayment of the full principal amounts of our Euro-denominated term B-2 loans ("Euro Term Loan B-2") using cash on hand.

In February 2018, we issued \$2.3 billion aggregate principal amount of 4.750% senior unsecured notes due 2026 (the "2026 Senior Unsecured Notes").

In February 2018, we issued a \$1.1 billion aggregate principal amount of 1.50% convertible senior notes due 2024 (the "2024 Convertible Notes").

In February 2018, we entered into an amendment to the credit agreement entered into on April 29, 2016 to provide for, among other things, (i) the issuance of a new \$5.02 billion of term loan A-1 due 2023 (the "Term Loan A-1"), (ii) a new \$2.25 billion revolving credit facility maturing in 2023 (the "Revolving Facility"), which replaced our prior \$1.50 billion revolving credit facility maturing in 2021, (iii) modifications to the restrictive and financial maintenance covenants, to provide more flexibility and increased incremental debt capacity, (iv) amendments of the applicable varying interest rate margins to be based on our corporate credit ratings, and (v) upon the occurrence of certain circumstances, a release of the security and guarantees as well as further covenant flexibility and increased incremental debt capacity. We used a portion of the proceeds of the Term Loan A-1 to repay in full our previous variable interest rate Term Loan A maturing 2021 in the principal amount of \$4.02 billion.

In February and March 2018, we completed the redemption of all of our outstanding 7.375% senior secured notes due 2023 in the aggregate principal amount of \$1.875 billion (the "2023 Notes") and the tender offer and redemption and

settlement of all of our outstanding 10.500% senior unsecured notes due 2024 in the aggregate principal amount of \$3.350 billion (the “2024 Notes” and collectively with the 2023 Notes, the “Redeemed Notes”).

In connection with the settlements of the various debt instruments described above during 2018, we incurred aggregate losses on extinguishment of debt of \$899 million for the year ended June 29, 2018, consisting of \$720 million of “make-whole” premiums and \$179 million of unamortized issuance costs.

For additional information regarding our debt facilities, see Part II, Item 8, Note 6, Debt, of the Notes to Consolidated Financial Statements included in this Annual Report on Form 10 K.

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Tax Reform

On December 22, 2017, the President of the United States of America signed the Tax Cuts and Jobs Act (the “2017 Act”), which includes a broad range of tax reform proposals affecting businesses, including a reduction in the U.S. federal corporate tax rate from 35% to 21% and a one-time mandatory deemed repatriation tax on earnings of certain foreign subsidiaries that were previously tax deferred, and creates new taxes on certain foreign earnings. As a result of the 2017 Act, we have made a reasonable estimate of the effects on our existing deferred tax balances and the one-time mandatory deemed repatriation tax required by the 2017 Act and have recognized a provisional income tax expense of \$1.57 billion for the one-time mandatory deemed repatriation tax and a provisional income tax benefit of \$65 million related to the re-measurement of deferred tax assets and liabilities for the year ended June 29, 2018. For additional information regarding the 2017 Act, see Part II, Item 8, Note 13, Income Tax Expense (Benefit), of the Notes to Consolidated Financial Statements included in this Annual Report on Form 10 K. See also the discussion in “Results of Operations - Income Tax Expense” and “Liquidity and Capital Resources” below for information regarding the impact of the 2017 Act on our financial condition, results of operations and cash flows.

Closure of Foreign Manufacturing Facility

In July 2018, we announced the closing of our manufacturing facility in Kuala Lumpur, Malaysia, in order to reduce manufacturing costs and consolidate hard disk drive (“HDD”) operations into Thailand. We expect the closure to be substantially completed by the end of the calendar year 2019 and to result in total pre-tax charges of approximately \$160 million. These charges are expected to consist of approximately \$85 million in employee termination benefits and \$75 million in asset-related, contract termination and other charges. During the year ended June 29, 2018, we recognized \$56 million in employee termination benefits within Employee termination, asset impairment and other charges in the Consolidated Statements of Operations. For additional information, see Part II, Item 8, Note 15, Employee Termination, Asset Impairment and Other Charges, of the Notes to Consolidated Financial Statements included in this Annual Report on Form 10 K.

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Results of Operations

Summary Comparison of 2018, 2017 and 2016

The following table sets forth, for the periods presented, selected summary information from our Consolidated Statements of Operations by dollars and percentage of net revenue⁽¹⁾:

	2018		2017		2016	
	(in millions, except percentages)					
Revenue, net	\$20,647	100.0 %	\$19,093	100.0 %	\$12,994	100.0 %
Cost of revenue	12,942	62.7	13,021	68.2	9,559	73.6
Gross profit	7,705	37.3	6,072	31.8	3,435	26.4
Operating Expenses:						
Research and development	2,400	11.6	2,441	12.8	1,627	12.5
Selling, general and administrative	1,473	7.1	1,445	7.6	997	7.7
Employee termination, asset impairment, and other charges	215	1.0	232	1.2	345	2.7
Total operating expenses	4,088	19.8	4,118	21.6	2,969	22.8
Operating income	3,617	17.5	1,954	10.2	466	3.6
Interest and other income (expense):						
Interest income	60	0.3	26	0.1	26	0.2
Interest expense	(676)	(3.3)	(847)	(4.4)	(266)	(2.0)
Other expense, net	(916)	(4.4)	(364)	(1.9)	(73)	(0.6)
Total interest and other expense, net	(1,532)	(7.4)	(1,185)	(6.2)	(313)	(2.4)
Income before taxes	2,085	10.1	769	4.0	153	1.2
Income tax expense (benefit)	1,410	6.8	372			