

NetApp, Inc.  
Form 10-K  
June 19, 2018

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 April 27, 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 000-27130

NetApp, Inc.

(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization) 77-0307520  
(I.R.S. Employer  
Identification No.)

1395 Crossman Avenue,

Sunnyvale, California 94089

(Address of principal executive offices, including zip code)

(408) 822-6000

(Registrant's telephone number, including area code)

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





DOCUMENTS INCORPORATED BY REFERENCE

The information called for by Part III of this Form 10-K is hereby incorporated by reference from the definitive Proxy Statement for our annual meeting of stockholders, which will be filed with the Securities and Exchange Commission not later than 120 days after April 27, 2018.

---

## TABLE OF CONTENTS

## PART I

Item 1	<u>Business</u>	6
Item 1A	<u>Risk Factors</u>	15
Item 1B	<u>Unresolved Staff Comments</u>	26
Item 2	<u>Properties</u>	26
Item 3	<u>Legal Proceedings</u>	26
Item 4	<u>Mine Safety Disclosures</u>	26

## PART II

Item 5	<u>Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	27
Item 6	<u>Selected Financial Data</u>	30
Item 7	<u>Management’s Discussion and Analysis of Financial Condition and Results of Operations</u>	31
Item 7A	<u>Quantitative and Qualitative Disclosures About Market Risk</u>	51
Item 8	<u>Financial Statements and Supplementary Data</u>	53
Item 9	<u>Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u>	90
Item 9A	<u>Controls and Procedures</u>	90
Item 9B	<u>Other Information</u>	90

## PART III

Item 10	<u>Directors, Executive Officers and Corporate Governance</u>	91
Item 11	<u>Executive Compensation</u>	91
Item 12	<u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	91
Item 13	<u>Certain Relationships and Related Transactions, and Director Independence</u>	91
Item 14	<u>Principal Accounting Fees and Services</u>	91

## PART IV

Item 15	<u>Exhibits, Financial Statement Schedules</u>	91
	<u>Signatures</u>	96

## Cautionary Note on Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act). Forward-looking statements are all statements (and their underlying assumptions) included in this document that refer, directly or indirectly, to future events or outcomes and, as such, are inherently not factual, but rather reflect only our current projections for the future. Consequently, forward-looking statements usually include words such as “estimate,” “intend,” “plan,” “predict,” “seek,” “may,” “will,” “should,” “would,” “could,” “anticipate,” “expect” similar words, in each case, intended to refer to future events or circumstances. A non-comprehensive list of the topics including forward-looking statements in this document includes:

- our future financial and operating results;
- our strategy;
- our beliefs and objectives for future operations, research and development;
- expectations regarding future product releases, growth and performance;
- political, economic and industry trends;
- expected timing of, customer acceptance of and benefits from, product introductions, developments and enhancements;
- expected benefits from acquisitions, including our acquisition of SolidFire, Inc. and joint ventures, growth opportunities and investments;
  - expected outcomes from legal, regulatory and administrative proceedings;
- our competitive position;
- our short-term and long-term cash requirements, including, without limitation, anticipated capital expenditures;
- our anticipated tax rate;
- the repayment of our indebtedness; and
- future uses of our cash, including, without limitation, the continuation of our stock repurchase and cash dividend programs.

All forward-looking statements included in this document are inherently uncertain as they are based on management’s current expectations and assumptions concerning future events, and are subject to numerous known and unknown risks and uncertainties. Therefore, actual events and results may differ materially from these forward-looking statements. Factors that could cause actual results to differ materially from those described herein include, but are not limited to:

- the overall growth, structure and changes in the networked storage hardware market;
- our ability to expand our total available market and grow our portfolio of products;
- our ability to introduce new and differentiated products and services without disruption;
- our ability to successfully execute new business models;
- general global political, macroeconomic and market conditions;
- our ability to accurately forecast demand for our products and services, and future financial performance;
- our ability to successfully manage our backlog;
- our ability to successfully execute on our Data Fabric strategy to generate profitable growth and stockholder return;
- disruptions in our supply chain, which could limit our ability to ship products to our customers in the amounts and at the prices forecasted;
- our ability to maintain our customer, partner, supplier and contract manufacturer relationships on favorable terms and conditions;
- our ability to maintain our gross profit margins;
- our ability to timely and successfully introduce and increase volumes of new products and services and to forecast demand and pricing for the same;

changes in U.S. government spending;

4

---

the actions of our competitors including, without limitation, their ability to introduce competitive products and to acquire businesses and technologies that negatively impact our strategy, operations or customer demand for our products;

the impact of industry consolidation affecting our suppliers, competitors, partners and customers;

our ability to grow direct and indirect sales and to efficiently provide global service and support;

our ability to design, manufacture and market products meeting global environmental standards;

failure of our products and services to meet our customers' quality requirements, including, without limitation, any epidemic failure event relating to our systems installed by our customers in their IT infrastructures;

our ability to resolve ongoing litigation, tax audits, government audits, inquiries and investigations in line with our expectations;

the availability of acceptable financing to support our future cash requirements;

our ability to effectively integrate acquired businesses, products and technologies;

valuation and liquidity of our investment portfolio;

foreign exchange rate impacts;

our ability to successfully recruit and retain critical employees and to manage our investment in people, process and systems;

our ability to anticipate techniques used to obtain unauthorized access or to sabotage systems and to implement adequate preventative measures against cybersecurity and other security breaches; and

those factors discussed under the heading "Risk Factors" elsewhere in this Annual Report on Form 10-K.

Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this document and are based upon information available to us at this time. These statements are not guarantees of future performance. Except as required by law, we disclaim any obligation to update information in any forward-looking statement. Actual results could vary from our forward-looking statements due to the foregoing factors as well as other important factors.



## PART I

### Item 1. Business

#### Overview

NetApp, Inc. (NetApp, we, or us) is the data authority for the hybrid cloud. We provide a full range of hybrid cloud data services that simplify management of applications and data across cloud and on-premises environments. Together with our partners, we empower global organizations to unleash the full potential of their data. We were incorporated in 1992 and are headquartered in Sunnyvale, California.

#### Customer Business and IT Needs

In a world where technology is changing our everyday lives, digital transformation remains top of mind for executives. When successful in their digital transformation, organizations use technology to create new customer touchpoints, reinventing customer experiences and relationships through business-oriented approaches to data. Additionally, organizations are able to create innovative business opportunities, taking advantage of emerging market opportunities by rapidly deploying new technologies, and to optimize operations, adopting an operating model that provides efficiencies and funds new innovation.

In order to successfully digitally transform, data must become the lifeblood of an organization and be used as a business accelerator. Data-driven digital transformations accelerate business outcomes.

Leaders are under enormous pressure to harness today's volume of data and apply it to create new value across the entire organization, all with limited time, skills, and budget. Building a data-driven organization is challenging. Data is becoming increasingly:

- Distributed. Generated and consumed from multiple clouds and on-premises, from organic and partner sources
  - Dynamic. Constantly changing and increasingly cloud-streamed from multiple clouds
  - Diverse. Including analytics, artificial intelligence (AI), and machine learning capabilities from multiple clouds and on-premises
- Thriving in this environment requires a holistic approach to data insight, access and control that is secure, efficient, and future-proof and provides freedom of choice.

To help our customers and partners manage and share their data across on-premises, and private and public clouds, we are:

- Focusing on the customer by delivering an exceptional customer experience and becoming their preferred data partner, and
- Extending our cloud integration and hybrid cloud leadership through the NetApp Data Fabric and expanding our consumption model offerings to match customer needs across cloud and on-premises offerings.

#### The NetApp Data Fabric

NetApp delivers a Data Fabric built for the data-driven world. Our Data Fabric simplifies and integrates data management across clouds and on-premises to accelerate digital transformation, enabling our customers to manage, secure, and protect their data at the scale needed to accommodate the exponential data growth of the digital world. The Data Fabric delivers integrated data management services and applications for data visibility and insights, data access and control, and data protection and security.

The NetApp Data Fabric gives customers freedom of choice, enabling the movement of data between clouds and on-premises as business conditions dictate. Customers can easily incorporate new capabilities—AI, machine learning, blockchain, Internet of Things—from any cloud provider to speed innovation and achieve higher levels of operational efficiency to shift resources from maintenance to digital transformation. Secure by design, the Data Fabric helps customers realize new business opportunities while minimizing risk.

Built for the challenges and opportunities of the data-driven world, NetApp products and solutions are designed for simplicity and optimized to manage, protect and secure data. Because the Data Fabric is open by design, we can constantly fuel innovation and flexibility.

Our products, solutions, and services portfolio focuses on customers' top IT imperatives as they undertake digital transformations. NetApp's unique approach to managing data holistically enables organizations to inspire innovation with the cloud, build clouds to accelerate new services, and modernize IT architecture with cloud-connected flash.

#### Product, Solutions and Services Portfolio

#### Cloud Data Services

NetApp believes that the hybrid cloud will be the dominant model for enterprise IT. Customers are attracted by the speed and scale benefits of the public cloud but need new data management capabilities to keep control of data as it moves beyond the walls of the enterprise. The NetApp Data Fabric enables our customers to manage, secure, and protect their data from on-premises to public to

hybrid clouds, all at the scale needed to accommodate the exponential data growth of the digital world. The NetApp Cloud Data Services portfolio is focused on helping customers inspire innovation with public and multicloud solutions, enabling modern data management applications and services.

#### NetApp Cloud Volumes ONTAP

The Cloud Volumes ONTAP storage data management service is based on the familiar and reliable ONTAP data management software, bringing data protection and storage efficiency features to cloud-based storage. Cloud Volumes ONTAP allows customers to build an enterprise storage service on Amazon Web Services (AWS) or Microsoft Azure with the flexibility to pay for only what a customer needs, when it needs it. Whether customers want to move traditional database applications or legacy NAS applications to the cloud, Cloud Volumes ONTAP provides the data access, insights, and control along the way.

#### NetApp Cloud Sync Data Synchronization

NetApp Cloud Sync Data Synchronization provides secure, fast, and automated data synchronization. Whether organizations need to transfer files between on-premises NFS or CIFS file shares, Amazon S3 object format, another cloud provider object store, or NetApp StorageGRID® Webscale appliances, Cloud Sync Data Synchronization moves the files where they are needed quickly and securely.

#### NetApp SaaS Backup for Microsoft Office 365

SaaS Backup for Microsoft Office 365 service is a complete software-as-a-service (SaaS) offering that enables organizations to protect Office 365 data in the event of accidental deletion, data corruption, or malicious intent. Using SaaS Backup for Microsoft Office 365, customers can back up, find, and recover email, calendars, contacts, tasks, site collections, sites, lists, and file data.

#### NetApp Cloud Backup

Cloud Backup is NetApp's solution for backing up and archiving data to the public or private cloud of the customer's choice. Based on NetApp AltaVault™ technology, Cloud Backup streamlines backups while reducing cloud storage costs. Supporting backup and archive to AWS, Microsoft Azure Blob Storage, Google Cloud Platform, StorageGRID Webscale, or another cloud, Cloud Backup protects data quickly and securely. Cloud Backup ingests data from the customer's backup software, deduplicates and compresses the data to save on transmission and cloud storage costs, caches the most recent backups for fast recoveries, and vaults all of the data to the cloud quickly and efficiently.

#### OnCommand Management Software and Management Integration Tools

The NetApp OnCommand® storage management software portfolio incorporates a broad range of data management tools for NetApp and multivendor storage. These products enable customers to maintain control of their data regardless of where it resides in a hybrid cloud environment, to drive efficiency using software management tools designed to work together, and to gain flexibility.

NetApp OnCommand Insight management software delivers consistent insight across the data center, so organizations can monitor, manage, and optimize hybrid IT multivendor storage, compute, and switching infrastructures.

#### NetApp Private Storage for Cloud

NetApp Private Storage for Cloud is a family of enterprise storage solutions that lets customers use multiple industry-leading clouds and maintain complete control over their data on dedicated storage systems from NetApp while achieving the flexibility of the cloud for application and compute resources. In this approach, customer data resides on NetApp storage “next to” rather than “in” the cloud provider’s environment. The customer-owned NetApp system is co-located in data centers managed by our partner Equinix, which has data centers located next to major networks and in close proximity to major cloud providers, including AWS, Microsoft Azure, and IBM SoftLayer.

#### Cloud Infrastructure

NetApp Cloud Infrastructure is a portfolio of offerings that helps customers build cloud-architected data centers to deliver cloud services for innovative applications in either private or service provider models. To accelerate digital transformations, customers are building clouds to accelerate new services and developing innovative, cloud-architected infrastructures that manage data and services as one integrated resource, supporting both public and private clouds.

#### FlexPod

Backed by one of the most successful alliances in the industry, FlexPod® has become the converged infrastructure of choice for many of the largest enterprises around the globe. FlexPod is a portfolio of pre-validated designs and integration that combine the

Cisco Unified Computing System integrated infrastructure and NetApp storage components to reduce risk and accelerate the deployment of data center infrastructure. Today, customers and partners can choose from more than 100 validated application and infrastructure designs. The portfolio is validated with leading hypervisors, operating systems, systems management tools, and cloud management platforms for major enterprise workloads such as Oracle, SAP, Microsoft, Openstack, and Docker.

#### NetApp Converged Systems Advisor

NetApp Converged Systems Advisor (CSA) targets key challenges in the data center operations lifecycle. An on-premises agent combines with cloud analytics to validate, monitor, and optimize the deployment of FlexPod infrastructure. This tool simplifies key tasks for administrative support with an automated review of over 100 best practices, component support updates, and resilient design requirements. With continual remote monitoring and notifications, NetApp CSA helps administrators prevent gaps in system supportability and more easily protect their investment in mission-critical data center infrastructure. These capabilities simplify lifecycle management, improve productivity with infrastructure support, and facilitate the management of infrastructure.

#### NetApp HCI

The NetApp HCI enterprise-scale hyper converged cloud infrastructure is the cornerstone of a private cloud strategy solution capable of transforming and empowering organizations so they can move faster, drive operational efficiency, and reduce costs. It can easily run multiple applications with the predictable performance demanded by enterprise customers. Compute and storage resources scale independently to avoid overprovisioning and can be deployed in minutes with a turnkey cloud infrastructure that eliminates the complex management of traditional three-tier architectures.

#### NetApp StorageGRID Webscale Object Storage Software

NetApp StorageGRID Webscale is a software-defined object-based storage solution that provides intelligent policy-driven data management. StorageGRID Webscale provides Amazon S3 API compatibility and acts as the foundation for global data availability anytime, anywhere to facilitate nonstop operations. Configurations can be designed for resilience to one or multiple simultaneous failures and even for resilience to entire site losses and regional disasters. StorageGRID Webscale is suitable for single data centers or multi-data center deployments with many sites across the globe.

#### Storage Systems and Software

Our storage systems and software portfolio enables customers to modernize their IT architectures with cloud-connected flash to free the resources necessary to fund transformation by deploying highly efficient flash storage that scales from the edge to the core to the cloud.

#### All-Flash Arrays

Flash plays a key role in customers' digital transformation efforts as they seek to gain advantage through greater speed, responsiveness, and value from key business applications, all while lowering total cost of ownership. All-flash array technology is the de facto choice as customers seek performance and economic benefits from replacing hard disk installations. With a highly differentiated and broad portfolio of all-flash and hybrid array offerings, NetApp is well positioned to enable customers to accomplish this transition.

NetApp All Flash FAS (AFF) systems address enterprise storage requirements with high performance, superior flexibility, and best-in-class data management. Built on ONTAP data management software, AFF systems speed up business without compromising on the efficiency, reliability, or flexibility of IT operations. As an enterprise-grade all-flash array, it accelerates, manages, and protects business-critical data and enables an easy and risk-free transition to flash. Designed specifically for flash, the AFF A-Series all-flash systems deliver industry-leading performance, capacity density, scalability, security, and network connectivity in dense form factors. With the addition of a new entry-level system, the new AFF A-Series family extends enterprise-grade flash to midsize businesses and to fit any budget.

SolidFire® all-flash arrays are architected from the ground up to be the storage foundation of next-generation data centers with scale-out highly available, easy-to-control all-flash storage with guaranteed performance. NetApp SolidFire enables customers to reduce cost and complexity by safely consolidating mission-critical applications onto a single storage platform, increase productivity with deep infrastructure integrations, and dynamically scale storage resources to meet business demands.

NetApp EF-Series all-flash arrays deliver fast, consistent response times to accelerate high-performance databases and data analytics. Designed specifically for mixed-workload environments, including big data analytics, technical computing, video surveillance, and backup and recovery, the EF-Series provides leading price/performance, configuration flexibility, and simplicity in a compact package to help organizations make decisions faster, more actionable, and more secure.

With our all-flash array portfolio, NetApp is enabling customers to modernize IT architecture with cloud-connected flash and free the resources necessary to fund transformation by deploying the industry's leading flash storage solution, which scales from the edge to the core to the cloud.

#### Hybrid Flash Arrays

NetApp hybrid flash storage serves customers who want the option to deploy the speed of flash storage where they need it while using more affordable hard disk drives (HDDs) to address capacity requirements. NetApp FAS hybrid flash arrays are created for shared, consolidated environments running SAN and NAS workloads that require rich data management, enterprise-grade capabilities, and easy cloud connection. NetApp E-Series hybrid flash arrays are built for dedicated, high-bandwidth applications such as data analytics, video surveillance, and disk-based backup that need simple, fast, reliable SAN storage.

#### NetApp ONTAP Storage Operating System

ONTAP 9 is the next generation of the industry's leading enterprise data management software. It combines new levels of simplicity and flexibility with powerful data management capabilities and storage efficiencies. With ONTAP 9, customers can build a hybrid cloud that is the foundation of a Data Fabric. ONTAP 9 provides flexibility to design and deploy a storage environment across the widest range of architectures—engineered systems, software-defined storage (SDS), and the cloud—spanning flash and disk infrastructures. AFF systems running ONTAP 9 are optimized specifically for flash. ONTAP 9 also enables FAS hybrid storage systems to deliver flash-accelerated performance that is balanced with HDD economies.

#### NetApp ONTAP Select

NetApp ONTAP Select offers robust enterprise storage services that are deployed on the customer's choice of commodity hardware. It combines the best of the cloud, in terms of agility and granular capacity scaling, with the flexibility, resilience, and locality of on-premises storage.

#### NetApp FlexArray Storage Virtualization Software

NetApp FlexArray® virtualization software enables FAS8000 systems to virtualize existing Dell/EMC, HP, Hitachi, and NetApp E-Series arrays, creating a single storage management architecture that overcomes the limitations of existing arrays, expands the capabilities of customers' IT infrastructures, and delivers the benefits of software-defined storage.

#### NetApp SnapCenter Backup Management Software

NetApp SnapCenter® software is a unified, scalable platform for application-consistent data protection and clone management. This software simplifies backup, restore, and clone lifecycle management with application-integrated workflows. Leveraging storage-based data management, SnapCenter enables increased performance and availability and reduced testing and development times.

#### NetApp SnapMirror Data Replication Software

NetApp SnapMirror® software is a cost-effective, easy-to-use unified replication solution across the Data Fabric, replicating data at high speeds over LAN or WAN. SnapMirror delivers powerful data management capabilities for virtualization, protecting critical data while providing the flexibility to move data between locations and storage tiers, including cloud service providers.

#### NetApp MetroCluster Business Continuity Software

NetApp MetroCluster™ software is a solution that combines array-based clustering with synchronous replication to deliver continuous availability and zero data loss. MetroCluster enhances the built-in high availability and nondisruptive operations of NetApp hardware and ONTAP storage software, providing an additional layer of protection for the entire storage and host environment.

#### NetApp SnapLock Data Compliance Software

NetApp SnapLock® software delivers high-performance disk-based data permanence for HDD and solid-state disk (SSD) deployments. Part of our proven NetApp ONTAP storage software, SnapLock helps provide data integrity and retention, enabling electronic records to be both unalterable and rapidly accessible.

#### SANtricity Storage Operating System

The SANtricity® operating system performs management tasks while the storage remains online, with complete read and write data access. This capability enables storage administrators to make configuration changes, perform maintenance, or expand storage capacity without disrupting I/O to attached hosts. For application environments, including backup and recovery, technical computing, video surveillance, and big data analytics, NetApp E-Series and EF-Series storage arrays with SANtricity software offer industry-leading performance, reliability, and ease of use.



## NetApp SolidFire Element Operating System

NetApp SolidFire Element® OS is the storage operating system for the next-generation data center, providing all the features demanded from primary storage, including enterprise-grade reliability, all-flash performance, and secure multitenancy, in an innovative, automated architecture that delivers on-demand scalability, with guaranteed predictable storage performance. With Element OS, SolidFire systems can host a broad range of performance-sensitive and business-critical applications.

## Professional and Support Services

NetApp and our ecosystem of partners deliver a full portfolio of professional and technical services that enable customers to gain the end-to-end expertise and insight needed to succeed and accelerate digital transformations. Our services experts help organizations create a Data Fabric strategy, aligned to their business strategy, to drive innovation and deliver improved business results across cloud and on-premises environments. We collaborate with our customers to accelerate digital transformation with the right expertise to envision, deploy, and operate NetApp data management solutions. NetApp Services experts deliver proactive and predictive intelligence for optimizing the way organizations manage their solutions throughout the data lifecycle.

Our professional services team and certified services partners deliver the expertise needed to accelerate transformations and realize greater business value from technology investments. NetApp professionals and partners help to determine the right technology roadmap to meet business requirements, so customers can respond rapidly to changing business demands. Our proven methodologies, validated designs, and best practices are geared to ensure desired outcomes.

Operational Support Services ensure our products operate efficiently and benefit from the most up-to-date software to help customers minimize downtime for systems running business-critical applications. Our services organization also delivers actionable intelligence for managing and optimizing data management solutions with proactive and predictive technology.

Active IQ® builds on NetApp AutoSupport® with powerful machine-learning capabilities, artificial intelligence, and more deployment options. Cloud-based analytics provide predictions and recommendations based on peer comparisons and community learning. Active IQ simplifies and automates operations with predictive, self-healing care.

## Sales, Principal Markets, and Distribution Channels

We market and sell our products in numerous countries throughout the world. To increase visibility of NetApp in the broader IT segment, we continue to make investments in our multi-year branding and awareness campaigns.

Our diversified customer base spans industry segments and vertical markets such as energy, financial services, government, high technology, internet, life sciences, healthcare services, manufacturing, media, entertainment, animation, video postproduction and telecommunications. NetApp focuses primarily on the data management and storage markets. We design our products to meet the needs of our broad customer base – from large enterprises to midsize customers.

NetApp uses a multichannel distribution strategy. We sell our products and services to end-user business customers and service providers through a direct sales force and an ecosystem of partners. We work with a wide range of

partners for our customers, including technology partners, value-added resellers, system integrators, OEMs, service providers and distributors. During fiscal 2018, sales through our indirect channels represented 79% of our net revenues. Our global partner ecosystem is critical to NetApp's growth and success. We are continually strengthening existing partnerships and investing in new ones to ensure we are meeting the evolving needs of our customers.

As of April 27, 2018, our worldwide sales and marketing functions consisted of approximately 5,100 managers, sales representatives and technical support personnel. We have field sales offices in approximately 47 countries. Sales to customers Arrow Electronics, Inc. and Tech Data Corporation, which are distributors, each accounted for 17% of our net revenues in fiscal 2018. Information about sales to and accounts receivables from our major customers, segment disclosures, foreign operations and net sales attributable to our geographic regions is included in Note 16 – Segment, Geographic, and Significant Customer Information of the Notes to Consolidated Financial Statements

#### Seasonality

We have historically experienced a decline in revenues in the first quarter of our fiscal year, as the sales organization spends time developing new business after higher close rates in the fourth quarter, and because sales to European customers are historically weaker during the summer months. During the second quarter of our fiscal year, we have historically experienced increased sales, driven by the government sector, concurrent with the end of the U.S. federal government's fiscal year in September, as well as an increase in business from European markets. We derive a majority of our revenue in any given quarter from orders booked in the same quarter. Bookings and revenues typically follow intra-quarter seasonality patterns weighted toward the back end of the quarter.

## Backlog

We manufacture products based on a combination of specific order requirements and forecasts of our customers' demand. Orders are generally placed by customers on an as-needed basis. A substantial portion of our products is sold on the basis of standard purchase orders that are cancelable prior to shipment without penalty. In certain circumstances, purchase orders are subject to change with respect to quantity of product or timing of delivery resulting from changes in customer requirements. Our business is characterized by seasonal and intra-quarter variability in demand, as well as short lead times and product delivery schedules. Accordingly, backlog at any given time might not be a meaningful indicator of future revenue.

## Manufacturing and Supply Chain

We have outsourced manufacturing operations to third parties located in Memphis, Tennessee; San Jose, California; San Antonio, Texas; Guadalajara, Mexico; Schiphol Airport, The Netherlands; Komarom and Tiszaujvaros, Hungary; Wuxi and Tianjin, China; Taoyuan City, Taiwan; and Singapore. These operations include materials procurement, commodity management, component engineering, test engineering, manufacturing engineering, product assembly, product assurance, quality control, final test, and global logistics. We rely on a limited number of suppliers for materials, as well as several key subcontractors for the production of certain subassemblies and finished systems. We use multiple vendors and have our products manufactured in a number of locations wherever possible to mitigate our supply chain risk. Our strategy has been to develop close relationships with our suppliers, maximizing the exchange of critical information and facilitating implementation of joint quality programs. We use contract manufacturers for the production of major subassemblies and final system configuration. This manufacturing strategy minimizes capital investments and overhead expenditures while creating flexibility for rapid expansion.

We are certified to the International Organization for Standardization (ISO) 9001:2008 and ISO 14001:2004 certification standards.

## Research and Development

We conduct research and development activities in various locations throughout the world. Total research and development expenses were \$783 million, \$779 million and \$861 million in fiscal 2018, 2017 and 2016, respectively. These costs consist primarily of personnel and related costs incurred to conduct product development activities. Although we develop many of our products internally, we may acquire technology through business combinations or through licensing from third parties when appropriate. We believe that technical leadership is essential to our success, and we expect to continue to commit substantial resources to research and development.

## Competition

We compete with many companies in the markets we serve, including established public companies, newly public companies with a strong flash focus, and new market entrants addressing the growing opportunity for hyper converged systems. Some offer a broad spectrum of IT products and services (full-stack vendors) and others offer a more limited set of storage and data management products or services.

Technology trends – for example, the emergence of hosted (or cloud) storage, SaaS and flash storage – are driving significant changes in storage architectures and solution requirements. Cloud service providers provide customers storage as an operating expense, rather than storage systems capital expenditures, for the customers' data centers, which competes with more traditional storage offerings. While the short- and long-term impact of these evolving trends cannot be predicted, NetApp is confident that our customers recognize the value in our cloud and Data Fabric strategy. Our strategy includes integrating and building relationships with these new classes of providers, and to date, we have established relationships with more than 300 cloud service providers and hyperscaler providers, including AWS, Google, IBM SoftLayer and Microsoft Azure.

We compete against Dell Technologies/EMC Corporation, Hewlett Packard Enterprise Company, Hitachi Vantara, and International Business Machines Corporation, as well as Pure Storage, Nutanix, and other smaller players. Our current and potential competitors may establish cooperative relationships among themselves or with third parties, including some of our partners. It is possible that new competitors or alliances among competitors might emerge and rapidly acquire significant market share.

We consider innovation, cloud integration, and our technology partnerships key to our competitive differentiation. We believe our competitive advantage also includes the nature of the relationships we form with our customers and partners worldwide. We strive to deliver an outstanding experience in every interaction we have with our customers and partners through our product, service, and support offerings, which enable us to provide our customers with a full range of expertise before, during and after their purchase.

#### Proprietary Rights

NetApp generally relies on patent, copyright, trademark, trade secret and contract laws to establish and maintain our proprietary rights in our technology and products. While our intellectual property rights are important to our success, we believe that our business is not materially dependent on any particular patent, trademark, copyright, license or other intellectual property right. We have been granted or own by assignment well over a thousand U.S. patents, hundreds of pending U.S. patent applications, and many

corresponding patents and patent applications in other countries. Our primary trademarks are NetApp and the NetApp design logo, which are registered trademarks in the U.S. and in many other countries. In addition, we have numerous trademarks and trademark registrations in the U.S. and other countries covering our various product names.

We generally enter into confidentiality agreements with our employees, resellers, customers, and suppliers. In addition, through various licensing arrangements, we receive certain rights to intellectual property of others. We expect to maintain current licensing arrangements and to secure licensing arrangements in the future, as needed and to the extent available on reasonable terms and conditions, to support continued development and sales of our products and services. Some of these licensing arrangements require or might require royalty payments and other licensing fees. The amount of these payments and fees might depend on various factors, including but not limited to the structure of royalty payments; offsetting considerations, if any; and the degree of use of the licensed technology.

The industry in which we compete is characterized by rapidly changing technology, a large number of patents, and frequent claims and related litigation regarding intellectual property rights, and we may be exposed to various risks related to such claims or legal proceedings. If we are unable to protect our intellectual property, we might be subject to increased competition that could materially and adversely affect our operating results.

#### Environmental Disclosure

We are committed to the success of our customers and partners, to delivering value to our stockholders, and to positively affecting the communities where our employees work and live. We firmly believe that we can accomplish these objectives concurrently with our commitment to sustainability. We are committed to the prevention of pollution; efficient use of natural resources; and minimizing, relative to the growth of the company, the environmental impacts from our operations, products, and services, as well as complying with laws and regulations related to these areas. Our environmental management system provides the framework for setting, monitoring, and continuously improving our environmental goals and objectives.

We are voluntarily measuring, monitoring, and publicly reporting our scope 1 and scope 2 greenhouse gas emissions and participate in the CDP, which is a global standardized mechanism by which companies report their greenhouse gas emissions to institutional investors. We promote alternative transportation programs through education and awareness campaigns, and we continuously seek to optimize the energy efficiency of our buildings, labs, and data centers. At both the global and regional/state levels, various laws and regulations have been implemented or are under consideration to mitigate the effects of climate change caused by greenhouse gas emissions. Environmental laws are complex, change frequently, and have tended to become more stringent over time. It is often difficult to estimate the future impact of environmental matters. Based on current information, we believe that our primary risk related to climate change is the risk of increased energy costs. We are not subject to a cap and trade system or any other mitigation measures that could be material to our operations in the near future. Additionally, we have implemented disaster recovery and business resiliency measures to mitigate the physical risks our facilities, business, and supply chain might face as a consequence of severe weather-/climate-related phenomena such as earthquakes, floods, droughts, and other such natural occurrences.

We are also subject to other federal, state, and local regulations regarding workplace safety and protection of the environment. Various international, federal, state, and local provisions regulate the use and discharge of certain hazardous materials used in the manufacture of our products. Failure to comply with environmental regulations in the future could cause us to incur substantial costs or subject us to business interruptions. We believe we are substantially compliant with all applicable environmental laws. All of our products meet the requirements of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH); Waste Electrical and Electronic Equipment (WEEE); Restriction of Hazardous Substances (RoHS); and China RoHS directives. We have maintained an environmental management system since December 2004. As part of ISO 14001 requirements, we set local environmental performance goals such as reducing energy use per square foot and minimizing waste generated on site, that are aligned with our overall corporate strategy. We also conduct periodic reviews and are subject to third-party

audits of our operations, and we monitor environmental legislation and requirements to help make sure we are taking necessary measures to remain in compliance with applicable laws, not only in our operations but also for our products.

#### Employees

As of April 27, 2018, we had approximately 10,300 employees worldwide. None of our employees are represented by a labor union and we consider relations with our employees to be good. Competition for technical personnel in the industry in which we compete is intense. We believe that our future success depends in part on our continued ability to hire, assimilate, and retain qualified personnel. To date, we believe that we have been successful in recruiting qualified employees, but there is no assurance that we will continue to be successful in the future.

## Executive Officers

Our executive officers and their ages as of June 1, 2018, are as follows:

Name	Age	Position
George Kurian	51	Chief Executive Officer and President
Ronald J. Pasek	57	Executive Vice President and Chief Financial Officer
Henri Richard	60	Executive Vice President, Worldwide Field and Customer Operations
Joel D. Reich	59	Executive Vice President and General Manager, NetApp Storage Systems and Software Business Unit
Matthew K. Fawcett	50	Senior Vice President, General Counsel and Secretary

George Kurian was appointed chief executive officer on June 1, 2015 and president on May 20, 2016. He joined our board of directors in June 2015. From September 2013 to May 2015, he was executive vice president of product operations, overseeing all aspects of technology strategy, product and solutions development across our product portfolio. Mr. Kurian joined NetApp in April 2011 as the senior vice president of the storage solutions group and was appointed to senior vice president of the Data ONTAP group in December 2011. Prior to NetApp, from 2002 to 2011, Mr. Kurian held several positions at Cisco Systems, including most recently vice president and general manager of the application networking and switching technology group. From 1999 to 2002, Mr. Kurian was the vice president of product management and strategy at Akamai Technologies. Prior to that, he was a management consultant with McKinsey and Company, and led software engineering and product management teams at Oracle Corporation. Mr. Kurian holds a BS degree in electrical engineering from Princeton University and an MBA degree from Stanford University.

Ronald J. Pasek joined NetApp in April 2016 as executive vice president and chief financial officer, overseeing the finance, customer leasing, workplace resources, internal audit, and IT functions. Mr. Pasek served as senior vice president, finance and chief financial officer of Altera Corporation, a worldwide provider of programmable logic devices, from December 2009 until its acquisition by Intel in December 2015. Mr. Pasek was previously employed by Sun Microsystems, where he most recently served as vice president and corporate treasurer. In his 19 years at Sun Microsystems, he also held a variety of other positions in finance, including vice president of worldwide field finance, worldwide manufacturing, and U.S. field finance. Mr. Pasek is the chairman of the board of directors of Spectra7 Microsystems Inc., a Canadian publicly traded consumer connectivity company. Mr. Pasek holds a BS degree from San Jose State University and an MBA degree from Santa Clara University.

Henri Richard joined NetApp in May 2016 as executive vice president of worldwide field and customer operations, leading NetApp's global field and customer success operations, which support the company's ecosystem of channel, alliance, and service partners and perform customer-facing functions. Before joining NetApp, from April 2013 to May 2016, he was senior vice president of worldwide sales and support at SanDisk Corporation. Prior to SanDisk, Mr. Richard served as senior vice president of worldwide sales and marketing at Freescale Semiconductor from September 2007 to April 2013. Mr. Richard brings 30-years of experience serving in global executive roles at companies including Seagate, IBM, WebGain and AMD. He started his career in IT with Informatique Haute Performance in Paris, France, a company he founded. Mr. Richard was a member of the board of directors of Ultratech Inc., a formerly publicly traded advance packaging and laser processing company, until its acquisition by Veeco Instruments, Inc. in May 2017. Mr. Richard holds a bachelor of science degree from the Ecole Nationale de Radiotechnique et d'Electronique Appliquee in Asnieres, France.

Joel D. Reich joined NetApp in 2002 and was appointed executive vice president of product operations in June 2015. He is currently executive vice president and general manager of the NetApp Storage Systems and Software business unit. He is responsible for overseeing the strategy and development of the NetApp product and solutions portfolio. He

is responsible for overseeing the strategy, development and manufacturing operations of the NetApp product and solutions portfolio. From April 2011 to June 2015, Mr. Reich served as NetApp's senior vice president of the Hyperscale Storage Group. Before that time, he served in various NetApp Data ONTAP engineering leadership roles. Before joining NetApp, he was vice president of marketing and product operations for HighGround Systems, Inc. He also held the position of director of product management at Data General Corporation and EMC Corporation and was director of sales and marketing for Conner Peripherals Storage Systems Group. Mr. Reich holds a bachelor's degree from Lehigh University.

Matthew K. Fawcett joined the company in September 2010 as senior vice president, general counsel, and secretary. Prior to joining NetApp, from 1999 to August 2010, Mr. Fawcett served in various legal positions at JDS Uniphase Corporation, an optical components company, including as senior vice president, general counsel, and corporate secretary. Prior to joining JDSU, Mr. Fawcett was counsel at Fujitsu and worked in private practice at Morrison & Foerster LLP. Mr. Fawcett is a member of the boards of the Association of Corporate Counsel and the Law Foundation of Silicon Valley. Mr. Fawcett holds a BA degree from the University of California at Berkeley and a JD degree from the University of California at Los Angeles.



Additional Information

Our internet address is [www.netapp.com](http://www.netapp.com). We make available through our internet website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, amendments to those reports and other documents filed or furnished pursuant to the Exchange Act of 1934, as soon as reasonably practicable after we electronically file such materials with, or furnish them to, the SEC.

The SEC maintains an internet site ([www.sec.gov](http://www.sec.gov)) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The public also may read and copy these filings at the SEC's Public Reference Room at 100 F Street N.E., Washington, DC 20549. Information about this Public Reference Room is available by calling (800) SEC-0330.

#### Item 1A. Risk Factors

The information included elsewhere in this Annual Report on Form 10-K should be considered and understood in the context of the following risk factors, which describe circumstances that may materially harm our future business, operating results or financial condition. The following discussion reflects our current judgment regarding the most significant risks we face. These risks can and will change in the future.

Our business may be harmed by trends in the networked storage hardware market or if we are unable to keep pace with rapid industry, technological and market changes.

Our industry and the markets in which we compete have historically experienced significant growth due to the increase in the demand for storage and data management solutions by consumers, enterprises and government bodies around the world, and the resultant purchases of storage and data management solutions to address this demand. However, despite continued data growth, the networked storage hardware market experienced a decline in each of the last three calendar years due to a combination of customers delaying purchases in the face of technology transitions, increasing adoption of Cloud environments built on commodity hardware, increased storage efficiency, and changing economic and business environments. While customers are navigating through their IT transformations, which leverage modern architectures and hybrid cloud environments, they are also reducing IT budgets, looking for simpler solutions, and rethinking how they consume IT. This evolution is diverting spending towards transformational projects and architectures like flash, hybrid cloud, IT as a service, converged infrastructure, and software defined storage. Our business may be adversely impacted if we are unable to keep pace with rapid industry, technological or market changes or if our Data Fabric strategy is not accepted in the marketplace. As a result of these and other factors discussed in the report, our revenue may decline as it did in fiscal years 2015, 2016 and 2017, on a year-over year basis. The future impact of these trends on both short-term and long-term growth patterns is uncertain. If the general historical rate of industry growth declines, if the growth rates of the specific markets in which we compete decline, and/or if the consumption model of storage changes and our new and existing products, services and solutions do not receive customer acceptance, our business, operating results and financial condition could suffer.

If we are unable to develop, introduce and gain market acceptance for new products while managing the transition from older products, or if we cannot provide the expected level of quality, service and support for our new products, our business, operating results and financial condition could be harmed.

Our future growth depends upon the successful development and introduction of new hardware and software products and related services. Due to the complexity of storage software, subsystems and appliances and the difficulty in gauging the engineering effort required to produce new products and services, such products and services are subject to significant technical and quality control risks.

If we are unable, for technological, customer reluctance or other reasons, to develop, introduce and gain market acceptance for new products and services, as and when required by the market and our customers, our business, operating results and financial condition could be materially and adversely affected.

New or additional product introductions, including new hardware and software offerings, such as NetApp HCI, Cloud Volumes ONTAP, and new all flash storage products, subject us to additional financial and operational risks, including our ability to forecast customer preferences and/or demand, our ability to successfully manage the transition from older products and solutions, our ability to forecast the impact of customers' demand for new products and solutions or the products being replaced, and our ability to manage production capacity to meet the demand for new products. In addition, as new or enhanced products are introduced, we must also avoid excessive levels of older product inventories and related components and ensure that enough supplies of new products can be delivered to meet customers' demands. Further risks inherent in new product and solutions introductions include the uncertainty of price-performance relative to products of competitors, competitors' responses to the introductions, delays in sales caused by the desire of customers to evaluate new products for extended periods of time and our partners' investment in selling our new products and solutions. If these risks are not managed effectively, we could experience material

risks to our operations, financial condition and business model.

As we enter new or emerging markets, we will likely increase demands on our service and support operations and may be exposed to additional competition. We may not be able to provide products, service and support to effectively compete for these market opportunities.

Our new consumption based business models may adversely affect our revenues and profitability.

We offer customers a full range of consumption models, including the deployment of our software through our subscription and cloud-based Software as a Service (SaaS), and utility pricing and managed services offerings for our hardware and software systems. These business models continue to evolve, and we may not be able to compete effectively, generate significant revenues or maintain the profitability of our consumption based offerings.

Additionally, the increasing prevalence of cloud and SaaS delivery models offered by us and our competitors may unfavorably impact the pricing of our on-premise hardware and software offerings and could have a dampening impact on overall demand for our on-premise hardware and software product and service offerings, which could

reduce our revenues and profitability, at least in the near term. If we do not successfully execute our consumption model strategy or anticipate the needs of our customers, our revenues and profitability could decline.

As customer demand for our consumption model offerings increases, we could experience volatility in our reported revenues and operating results due to differences in the timing of revenue recognition between our traditional hardware and software license arrangements, (for which revenue is generally recognized in full at the time of delivery), relative to our consumption model offerings, (for which revenue is generally recognized ratably over the term of the arrangement). We incur certain expenses associated with the infrastructure and marketing of our consumption model offerings in advance of our ability to recognize the revenues associated with these offerings.

Our sales and distribution structure makes forecasting revenues difficult and, if disrupted, could harm our operating results.

Our business and sales models make revenues difficult to forecast. We sell to a variety of customers directly and through various channels, with a corresponding variety of sales cycles, and we recently reorganized our sales resources to improve the alignment of those resources with customer and market opportunities. The reorganization of our sales resources could result in short or long-term disruption of our sales cycles and harm our operating results. The majority of our sales are made and/or fulfilled indirectly through channel partners, including value-added resellers, systems integrators, distributors, original equipment manufacturers (OEMs) and strategic business partners, which now include hyperscalers. This structure significantly complicates our ability to forecast future revenue, especially within any particular fiscal quarter or year. Moreover, our relationships with our indirect channel partners and strategic business partners are critical to our success. The loss of one or more of our key indirect channel partners in a given geographic area or the failure of our channel or strategic partners to promote our products could harm our operating results. Qualifying and developing new indirect channel partners typically require a significant investment of time and resources before acceptable levels of productivity are met. If we fail to maintain our relationships with our indirect channel partners and strategic partners, if their financial condition, business or customer relationships were to weaken, if they fail to comply with legal or regulatory requirements, or if we were to cease to do business with them for these or other reasons, our business, operating results and financial condition could be harmed.

Increasing competition and industry consolidation could harm our business and operating results.

The storage and data management markets are intensely competitive and are characterized by rapidly changing technology and fragmentation. We compete with many companies in the markets we serve, including established public companies, newly public companies with a strong flash focus, and new market entrants addressing the growing opportunity for hyper-converged systems. Some offer a broad spectrum of IT products and services (full-stack vendors) and others offer a more limited set of storage and data management products or services. Technology trends, such as the emergence of hosted or public cloud storage, SaaS and flash storage are driving significant changes in storage architectures and solution requirements. Cloud service providers provide customers storage for their data centers on demand, without requiring a capital expenditure, which meets rapidly evolving business needs and has changed the competitive landscape.

Competitors may develop new technologies or products in advance of us or establish business models or technologies disruptive to us. By extending our flash, converged infrastructure and cloud storage offerings, we are competing in new segments with both traditional competitors and new competitors, particularly smaller emerging storage vendors. The longer-term potential and competitiveness of these emerging vendors remains to be determined. In cloud and converged infrastructure, we also compete with large well-established competitors.

For additional information regarding our competitors, see the section entitled "Competition" contained in Item 1 – Business of Part I of this Form 10-K. It is possible that new competitors or alliances among competitors might emerge and rapidly acquire significant market share or buying power. An increase in industry consolidation might result in stronger competitors that are better able to compete as full stack vendors for customers and achieve increased

economies of scale in the supply chain. For example, in October 2016, Dell Inc. and EMC Corp. consummated their agreement to merge. Also in April 2017, HP Enterprise completed their acquisition of Nimble Storage. In addition, current and potential competitors have established or might establish cooperative relationships among themselves or with third parties, including some of our partners or suppliers.

Continuing uncertain economic and political conditions restrict our visibility and may harm our operating results, including our revenue growth and profitability.

Continuing global economic uncertainty, political conditions and fiscal challenges in the United States (U.S.) and abroad have, among other things, limited our ability to forecast future demand for our products, contributed to increased periodic volatility in the computer, storage and networking industries at large, as well as the information technology (IT) market, and could constrain future access to capital for our suppliers, customers and partners. The impacts of these circumstances are global and pervasive, and the timing and nature of any ultimate resolution of these matters remain highly uncertain. Consequently, we expect these concerns to challenge our business for the foreseeable future, which could cause harm to our operating results. Such conditions have resulted, and may in the future again result, in failure to meet our forecasted financial expectations and to achieve historical levels of revenue growth.

Our quarterly operating results may fluctuate materially, which could harm our common stock price.

Our operating results have fluctuated in the past and will continue to do so, sometimes materially. All of the matters discussed in this Risk Factors section could impact our operating results in any fiscal quarter or year. In addition to those matters, we face the following issues, which could impact our quarterly results:

Seasonality, such as our historical seasonal decline in revenues in the first quarter of our fiscal year and seasonal increase in revenues in the second quarter of our fiscal year, with the latter due in part to the impact of the U.S. federal government's September 30 fiscal year end on the timing of its orders; and

Linearity, such as our historical intra-quarter bookings and revenue pattern in which a disproportionate percentage of each quarter's total bookings and related revenue occur in the last month of the quarter.

If our operating results fall below our forecasts and the expectations of public market analysts and investors, the trading price of our common stock may decline.

Our gross margins vary.

Our gross margins reflect a variety of factors, including competitive pricing, component and product design, the volume and relative mix of product, software maintenance, hardware maintenance and other services revenues. Increased component costs, increased pricing and discounting pressures, the relative and varying rates of increases or decreases in component costs and product prices, changes in product, software maintenance, hardware maintenance and other services revenue mix or decreased volume could harm our revenues, gross margins or earnings. Our gross margins are also impacted by the cost of any materials that are of poor quality and our sales and distribution activities, including, without limitation, pricing actions, rebates, sales initiatives and discount levels, and the timing of service contract renewals.

The costs of third-party components comprise a significant portion of our product costs. While we generally have been able to manage our component and product design costs, we may have difficulty managing these costs if supplies of certain components become limited or component prices increase. Any such limitation could result in an increase in our product costs. An increase in component or design costs relative to our product prices could harm our gross margins and earnings.

We often incur expenses before we receive related benefits, and expenses may be difficult to reduce quickly if demand declines.

We base our expense levels in part on future revenue expectations and a significant percentage of our expenses is fixed. It is difficult to reduce our fixed costs quickly, and if revenue levels are below our expectations, operating results could be adversely impacted. During periods of uneven growth or decline, we may incur costs before we realize the anticipated related benefits, which could also harm our operating results. We have made, and will continue to make, significant investments in engineering, sales, service and support, marketing and other functions to support and grow our business. We are likely to recognize the costs associated with these investments earlier than some of the related anticipated benefits, such as revenue growth, and the return on these investments may be lower, or may develop more slowly, than we expect, which could harm our business, operating results and financial condition.

If we are unable to maintain and develop relationships with strategic partners, our revenues may be harmed.

Our growth strategy includes developing and maintaining strategic partnerships with major third-party software and hardware vendors to integrate our products into their products and also co-market our products with them. A number

of our strategic partners are industry leaders that offer us expanded access to segments of the storage and data management markets. In particular, strategic partnerships with hyperscalers and cloud service vendors are critical to the success of our cloud-based business. However, there is intense competition for attractive strategic partners, and these relationships may not be exclusive, may not generate significant revenues and may be terminated on short notice. For instance, some of our partners are also partnering with our competitors, which may increase the availability of competing solutions and harm our ability to grow our relationships with those partners. Moreover, some of our partners, particularly large, more diversified technology companies, are also competitors, thereby complicating our relationships. If we are unable to establish new partnerships or maintain existing partnerships, if our strategic partners favor their relationships with other vendors in the storage industry or if our strategic partners increasingly compete with us, we could experience lower than expected revenues, suffer delays in product development, or experience other harm to our business, operating results and financial condition.

If we do not achieve forecasted bookings in any quarter, our financial results could be harmed.

We derive a majority of our revenues in any given quarter from orders booked in the same quarter. Bookings typically follow intra-quarter seasonality patterns weighted toward the back end of the quarter. If we do not achieve the level, timing and mix of bookings consistent with our quarterly targets and historical patterns, or if we experience cancellations of significant orders, our financial results could be harmed.

A portion of our revenues is generated by large, recurring purchases from various customers, resellers and distributors. A loss, cancellation or delay in purchases by any of these parties has negatively affected us in the past, and in the future could, negatively affect our revenues.

A significant portion of our net revenues are generated through sales to a limited number of distributors. We generally do not enter into binding purchase commitments with our customers, resellers and distributors for extended periods of time, and thus there is no guarantee we will continue to receive large, recurring orders from these customers, resellers or distributors. For example, our reseller agreements generally do not require minimum purchases, and our customers, resellers and distributors can stop purchasing and marketing our products at any time. In addition, unfavorable economic conditions may negatively impact the solvency of our customers, resellers and distributors or the ability of such customers, resellers and distributors to obtain credit to finance purchases of our products. If any of our key customers, resellers or distributors changes its pricing practices, reduces the size or frequency of its orders for our products, or stops purchasing our products altogether, our operating results and financial condition could be materially adversely impacted.

We rely on a limited number of suppliers for critical product components.

We rely on a limited number of suppliers for drives and other components utilized in the assembly of our products, including certain single source suppliers, which has subjected us, and could in the future subject us to price rigidity, periodic supply constraints, and the inability to produce our products with the quality and in the quantities demanded. Consolidation among suppliers, particularly within the semiconductor and disk drive industries, has contributed to price rigidity and may in the future create supply constraints. When industry supply is constrained, our suppliers may allocate volumes away from us and to our competitors, all of which rely on many of the same suppliers as we do. Accordingly, our operating results may be harmed.

Any disruption to our supply chain could materially harm our business, operating results and financial condition.

We do not manufacture our products or their components. Instead, we rely on third parties to make our products and critical components, such as disk drives, as well as for associated logistics. Our lack of direct responsibility for, and control over, these elements of our business, as well as the diverse international geographic locations of our manufacturing partners and suppliers, creates significant risks for us, including, among other things:

- Limited ability to control the quality, quantity and cost of our products or of their components;
- The potential for binding price or purchase commitments with our suppliers that are higher than market rates;
- Limited ability to adjust production volumes in response to our customers' demand fluctuations;
- Labor and political unrest at facilities we do not operate or own;
- Geopolitical disputes disrupting our supply chain;



Business, legal compliance, litigation and financial concerns affecting our suppliers or their ability to manufacture and ship our products in the quantities, quality and manner we require; and

Disruptions due to floods, earthquakes, storms and other natural disasters, particularly in countries with limited infrastructure and disaster recovery resources.

Such risks have in the past and could again in the future subject us to supply constraints, price increases and minimum purchase requirements and our business, operating results and financial condition could be harmed. The risks associated with our out-sourced manufacturing model are particularly acute when we transition products to new facilities or manufacturers, introduce and increase volumes of new products or qualify new contract manufacturers or suppliers, at which times our ability to manage the relationships among us, our manufacturing partners and our component suppliers, becomes critical. New manufacturers, products, components or facilities create increased costs and risk that we will fail to deliver high quality products in the required volumes to our customers. Any failure of a manufacturer or component supplier to meet our quality, quantity or delivery requirements in a cost-effective manner will harm our business, operating results and customer relationships.

Due to the global nature of our business, risks inherent in our international operations could materially harm our business.

A significant portion of our operations is located, and a significant portion of our revenues is derived, outside of the U.S. In addition, most of our products are manufactured outside of the U.S., and we have research and development, sales and service centers overseas. Accordingly, our business and our future operating results could be adversely impacted by factors affecting our international operations including, among other things, local political or economic conditions, trade protection and export and import requirements, tariffs, local labor conditions, transportation costs, government spending patterns, acts of terrorism, international conflicts and natural

disasters in areas with limited infrastructure. In particular, the current trade tensions with China could impact our business and operating results. In addition, due to the global nature of our business, we are subject to complex legal and regulatory requirements in the U.S. and the foreign jurisdictions in which we operate and sell our products, including antitrust and anti-competition laws, rules and regulations, and regulations related to data privacy. We are also subject to the potential loss of proprietary information due to piracy, misappropriation, or laws that may be less protective of our intellectual property rights than U.S. laws. Such factors could have an adverse impact on our business, operating results and financial condition.

We face exposure to adverse movements in foreign currency exchange rates as a result of our international operations. These exposures may change over time as business practices evolve, and they could have a material adverse impact on our financial results and cash flows. We utilize forward and option contracts in an attempt to reduce the adverse earnings impact from the effect of exchange rate fluctuations on certain assets and liabilities. Our hedging strategies may not be successful, and currency exchange rate fluctuations could have a material adverse effect on our operating results and cash flows. In addition, our foreign currency exposure on assets, liabilities and cash flows that we do not hedge could have a material impact on our financial results in periods when the U.S. dollar significantly fluctuates in relation to foreign currencies.

Additional risks inherent in our international business activities generally include, among others, longer accounts receivable payment cycles and difficulties in managing international operations.

Moreover, in many foreign countries, particularly in those with developing economies, it is common to engage in business practices that are prohibited by our internal policies and procedures, or U.S. laws and regulations applicable to us, such as the Foreign Corrupt Practices Act. There can be no assurance that all our employees, contractors and agents, as well as those companies to which we outsource certain of our business operations, will comply with these policies, procedures, laws and/or regulations. Any such violation could subject us to fines and other penalties, which could have a material adverse effect on our business, operating results and financial condition.

We could be subject to additional income tax liabilities.

Our effective tax rate is influenced by a variety of factors, many of which are outside of our control. These factors include among other things, fluctuations in our earnings and financial results in the various countries and states in which we do business, the outcome of income tax audits and changes to the tax laws in such jurisdictions. Changes to any of these factors could materially impact our operating results.

We receive significant tax benefits from sales to our non-U.S. customers. These benefits are contingent upon existing tax laws and regulations in the U.S. and in the countries in which our international operations are located. Future changes in domestic or international tax laws and regulations or a change in how we manage our international operations could adversely affect our ability to continue realizing these tax benefits.

Many countries around the world are beginning to implement legislation and other guidance to align their international tax rules with the Organisation for Economic Co-operation's Base Erosion and Profit Shifting recommendations and related action plans that aim to standardize and modernize global corporate tax policy, including changes to cross-border tax, transfer-pricing documentation rules and nexus-based tax incentive practices. As a result, many of these changes, if enacted, could increase our worldwide effective tax rate and harm our financial position and results of operations.

We are routinely subject to income tax audits in the U.S. and several foreign tax jurisdictions. If the ultimate determination of income taxes or at-source withholding taxes assessed under these audits results in amounts in excess of the tax provision we have recorded or reserved for, our operating results, cash flows and financial condition could be adversely affected.

Our effective tax rate could also be adversely affected by different and evolving interpretations of existing law or regulations, which in turn would negatively impact our operating and financial results as a whole. Additionally, our effective tax rate could also be adversely affected if there is a change in international operations, our tax structure and how our operations are managed and structured, and as a result, we could experience harm to our operating results and financial condition. The recent U.S. tax law changes enacted through the Tax Cuts and Jobs Act are subject to further interpretations from the U.S. federal and state governments and regulatory organizations, such as the Treasury Department and/or IRS. Changes to interpretations of the law could change the provisional tax expense or accounting treatment of the \$732 million expense we have recorded in relation to the transition tax. We have elected to pay the transition tax over a period of eight years. As result, our cash flows from operating activities will be adversely impacted until the additional tax provisions are paid in full.

Our success depends upon our ability to effectively plan and manage our resources and restructure our business in response to changing market conditions and market demand for our products, and such actions may have an adverse effect on our financial and operating results.

Our ability to successfully offer our products and services in a rapidly evolving market requires an effective planning, forecasting, and management process to enable us to effectively scale and adjust our business in response to fluctuating market opportunities and conditions.

In response to changes in market conditions and market demand for our products, we have in the past undertaken cost savings initiatives. For example, in May 2015, March 2016 and November 2016 we executed restructuring events designed to streamline our business, reduce our cost structure and focus our resources on key strategic opportunities. As a result, we have recognized substantial restructuring charges. In fiscal 2018, we created the Storage Systems and Software, Cloud Data Services, and Cloud Infrastructure business units to enable us to develop the organization and systems to successfully execute a multi-product business. We also reorganized our sales resources to improve the alignment of those resources with customer and market opportunities. We may in the future undertake initiatives that could include reorganizing our workforce, restructuring, disposing of, and/or otherwise discontinuing certain products, or a combination of these actions. Rapid changes in the size, alignment or organization of our workforce, including our new business unit structure and sales account coverage, could adversely affect our ability to develop, sell and deliver products and services as planned or impair our ability to realize our current or future business and financial objectives. Any decision to take these actions may result in charges to earnings associated with, among other things, inventory or other fixed, intangible or goodwill asset reductions (including, without limitation, impairment charges), workforce and facility reductions and penalties and claims from third party resellers or users of discontinued products. Charges associated with these activities would harm our operating results. In addition to the costs associated with these activities, we may not realize any of the anticipated benefits of the underlying restructuring activities.

If our products are defective, or are perceived to be defective as a result of improper use or maintenance, our gross margins, operating results and customer relationships may be harmed.

Our hardware and software products are complex. We have experienced in the past, and expect to experience in the future, quality issues. Such quality issues may be due to, for example, our own designs or processes, the designs or processes of our suppliers, and/or flaws in third party software used in our products. Quality risk is most acute when we are introducing new products. We have also increased the cadence of our product release cycle, which could impact product and service quality. Quality issues have and could again in the future cause customers to experience outages or disruptions in service, data loss or data corruption. If we fail to remedy a product defect, we may experience a failure of a product line, temporary or permanent withdrawal from a product or market, damage to our reputation, loss of revenue, inventory costs or product reengineering expenses and higher ongoing warranty and service costs, and these occurrences could have a material impact on our gross margins, business and operating results. In addition, we exercise little control over how our customers use or maintain our products, and in some cases improper usage or maintenance could impair the performance of our products, which could lead to a perception of a quality issue. Customers and we may experience losses that may result from or are alleged to result from defects in our products, which could subject us to claims for damages, including consequential damages.

If a data center or other third-party who relies on our products experiences a disruption in service or a loss of data, such disruption could be attributed to the quality of our products, thereby causing financial or reputational harm to our business.

Our clients, including data centers, SaaS, cloud computing and internet infrastructure and bandwidth providers, rely on our products for their data storage needs. Our clients may authorize third-party technology providers to access their data on our systems. Because we do not control the transmissions between our clients, their customers, and third-party technology providers, or the processing of such data by third-party technology providers, we cannot ensure the complete integrity or security of such transmissions or processing. Errors or wrongdoing by clients, their customers, or third-party technology providers resulting in security breaches may be attributed to us.

A failure or inability to meet our clients' expectations with respect to security and confidentiality through a disruption in the services provided by these third-party vendors, or the loss of data stored by such vendors, could result in financial or reputational harm to our business to the extent that such disruption or loss is caused by, or perceived by our customers to have been caused by, defects in our products. Moreover, the risk of reputational harm may be magnified and/or distorted through the rapid dissemination of information over the internet, including through news articles, blogs, chat rooms, and social media sites. This may affect our ability to retain clients and attract new

business.

If a cybersecurity or other security breach occurs on our systems or on our end user customer systems, or if stored data is improperly accessed, customers may reduce or cease using our solutions, our reputation may be harmed and we may incur significant liabilities.

We store and transmit personal, sensitive and proprietary data related to our products, our employees, customers, clients and partners (including third-party vendors such as data centers and providers of SaaS, cloud computing, and internet infrastructure and bandwidth), and their respective customers, including intellectual property, books of record and personal information. It is critical to our business strategy that our infrastructure, products and services remain secure and are perceived by customers, clients and partners to be secure. There are numerous and evolving risks to cybersecurity and privacy, including criminal hackers, state-sponsored intrusions, industrial espionage, human error and technological vulnerabilities. Cybersecurity incidents or other security breaches could result in (1) unauthorized access to, or loss or unauthorized disclosure of, such information; (2) litigation, indemnity obligations, government investigations and other possible liabilities; (3) negative publicity; and (4) disruptions to our internal and external operations. Any of these could damage our reputation and public perception of the security and reliability of our products, as well as harm our business and cause us to incur significant liabilities. In addition, a cybersecurity incident or other security breach could result

20

---

in other negative consequences, including remediation costs, disruption of internal operations, increased cybersecurity protection costs and lost revenues.

Our clients and customers use our platforms for the transmission and storage of sensitive data. We do not review the information or content that our clients and their customers upload and store, and, therefore, we have no direct control over the substance of the information or content stored within our platforms. If our employees, or our clients, partners or their respective customers use our platforms for the transmission or storage of personal or other sensitive information and our security measures are breached as a result of third-party action, employee error, malfeasance, stolen or fraudulently obtained log-in credentials or otherwise, our reputation could be damaged, our business may be harmed and we could incur significant liabilities.

High-profile cyber-attacks and security breaches have increased in recent years, and security industry experts and government officials have warned about the risks of hackers and cyberattacks targeting information technology products and businesses. Because techniques used to obtain unauthorized access or to sabotage systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures. As we continue to increase our client base and expand our brand, we may become more of a target for third parties seeking to compromise our security systems and we anticipate that hacking attempts and cyberattacks will increase in the future. We cannot give assurance that we will always be successful in preventing or repelling unauthorized access to our systems.

Many jurisdictions have enacted or are enacting laws requiring companies to notify regulators or individuals of data security incidents involving certain types of personal data. These mandatory disclosures regarding security incidents often lead to widespread negative publicity. Moreover, the risk of reputational harm may be magnified and/or distorted through the rapid dissemination of information over the internet, including through news articles, blogs, chat rooms, and social media sites. Any security incident, whether actual or perceived, could harm our reputation, erode customer confidence in the effectiveness of our data security measures, negatively impact our ability to attract new customers, cause existing customers to elect not to renew their support contracts or their SaaS subscriptions, or subject us to third-party lawsuits, regulatory fines or other action or liability, which could materially and adversely affect our business and operating results. In addition, a security incident or loss of personal information could result in other negative consequences, including remediation costs, disruption of internal operations, increased cybersecurity protection costs and lost revenues. Our business could be subject to stricter obligations and greater fines under the enactment of new data privacy laws, including the European Union General Data Protection Regulation enacted on May 25, 2018.

There can be no assurance that the limitations of liability in our contracts would be enforceable or adequate or would otherwise protect us from any such liabilities or damages with respect to any particular claim. Our existing general liability insurance coverage and coverage for errors and omissions may not continue to be available on acceptable terms or may not be available in sufficient amounts to cover one or more large claims, or our insurers may deny coverage as to any future claim. The successful assertion of one or more large claims against us that exceeds available insurance coverage, or the occurrence of changes in our insurance policies, including premium increases or the imposition of large deductible or co-insurance requirements, could have a material adverse effect on our business, operating results and financial condition.

If we are unable to attract and retain qualified personnel, our business, operating results and financial condition could be harmed.

Our continued success depends, in part, on our ability to hire and retain qualified personnel and to preserve the key aspects of our corporate culture. Because our future success is dependent on our ability to continue to enhance and introduce new products, we are particularly dependent on our ability to hire and retain qualified engineers, including in emerging areas of technology such as artificial intelligence and machine learning. In addition, to increase revenues, we will be required to increase the productivity of our sales force and support infrastructure to achieve adequate

customer coverage. Competition for qualified employees, particularly in Silicon Valley, is intense. We have periodically reduced our workforce, including an 11% reduction announced in March 2016 and a 6% reduction announced in November 2016, and these actions may make it more difficult to attract and retain qualified employees. Our inability to hire and retain qualified management and skilled personnel, particularly engineers, salespeople and key executive management, could be disruptive to our development efforts, sales results, business relationships and/or our ability to execute our business plan and strategy on a timely basis and could materially and adversely affect our operating results.

Equity grants are a critical component of our current compensation programs. If we reduce, modify or eliminate our equity programs, we may have difficulty attracting and retaining critical employees.

In addition, because of the structure of our cash and equity incentive compensation plans, we may be at increased risk of losing employees at certain times. For example, the retention value of our compensation plans decreases after the payment of annual bonuses or the vesting of equity awards.

We are continually seeking ways to make our cost structure, business processes and systems more efficient, including by moving activities from higher-cost to lower-cost locations, outsourcing certain business processes and functions, and implementing new business information systems. Problems with the execution of these activities could have an adverse effect on our business, operating results and financial condition. In addition, we may not achieve the expected benefits of these initiatives.

We continuously seek to make our cost structure and business processes more efficient, including by moving our business activities from higher-cost to lower-cost locations, outsourcing certain business processes and functions, and implementing changes to our business information systems. These efforts involve a significant investment of financial and human resources and significant changes to our current operating processes. In addition, as we move operations into lower-cost jurisdictions and outsource certain business processes, we become subject to new regulatory regimes and lose control of certain aspects of our operations and, as a consequence, become more dependent upon the systems and business processes of third-parties. If we are unable to move our operations, outsource business processes and implement new business information systems in a manner that complies with local law and maintains adequate standards, controls and procedures, the quality of our products and services may suffer and we may be subject to increased litigation risk, either of which could have an adverse effect on our business, operating results and financial condition. Additionally, we may not achieve the expected benefits of these and other transformational initiatives, which could harm our business, operating results and financial condition.

Our acquisitions may not achieve expected benefits, and may increase our liabilities, disrupt our existing business and harm our operating results.

As part of our strategy, we seek to acquire other businesses and technologies to complement our current products, expand the breadth of our markets, or enhance our technical capabilities. For example, in fiscal 2018 we acquired two privately held companies, and in fiscal 2016 we acquired SolidFire, Inc. The benefits we have received, and expect to receive, from these and other acquisitions depend on our ability to successfully conduct due diligence, negotiate the terms of the acquisition and integrate the acquired business into our systems, procedures and organizational structure. Any inaccuracy in our acquisition assumptions or any failure to uncover liabilities or risks associated with the acquisition, make the acquisition on favorable terms, integrate the acquired business or assets as and when expected or retain key employees of the acquired company may reduce or eliminate the expected benefits of the acquisition to us, increase our costs, disrupt our operations, result in additional liabilities, investigations and litigation, and may also harm our strategy, our business and our operating results. The failure to achieve expected acquisition benefits may also result in impairment charges for goodwill and purchased intangible assets.

Reduced U.S. government demand could materially harm our business and operating results. In addition, we could be harmed by claims that we have or a channel partner has failed to comply with regulatory and contractual requirements applicable to sales to the U.S. government.

The U.S. government is an important customer for us. However, government demand is uncertain, as it is subject to political and budgetary fluctuations and constraints. Events such as the U.S. federal government shutdown in October 2013 and continued uncertainty regarding the U.S. budget and debt levels, have increased demand uncertainty for our products, and in our fiscal 2016 resulted in lower sales to these customers. In addition, like other customers, the U.S. government may evaluate competing products and delay purchasing in the face of the technology transitions taking place in the storage industry. If the U.S. government or an individual agency or multiple agencies within the U.S. government continue to reduce or shift their IT spending patterns, our revenues and operating results may be harmed.

Selling our products to the U.S. government, whether directly or through channel partners, also subjects us to certain regulatory and contractual requirements. Failure to comply with these requirements by either us or our channel partners could subject us to investigations, fines, and other penalties, which could materially harm our operating results and financial condition. As an example, the United States Department of Justice (DOJ) and the General Services Administration (GSA) have in the past pursued claims against and financial settlements with IT vendors, including us and several of our competitors and channel partners, under the False Claims Act and other statutes related to pricing and discount practices and compliance with certain provisions of GSA contracts for sales to the federal government. Although the DOJ and GSA currently have no claims pending against us, we could face claims in the future. Violations of certain regulatory and contractual requirements, including with respect to data security, could also result in us being suspended or debarred from future government contracting. Any of these outcomes could have a material adverse effect on our business, operating results and financial condition.



We are exposed to credit risks and fluctuations in the market values of our investment portfolio.

We maintain an investment portfolio of various holdings, types, and maturities. Credit ratings and pricing of our investments can be negatively affected by liquidity, credit deterioration, financial results, economic risk, political risk, sovereign risk or other factors. As a result, the value and liquidity of our investments may fluctuate substantially. Therefore, although we have not recently realized any significant losses on our investments, future fluctuations in their value could result in a significant realized loss.

There are risks associated with our outstanding and future indebtedness.

As of April 27, 2018, we had \$1.6 billion aggregate principal amount of outstanding indebtedness for our senior notes that mature at specific dates in calendar years 2019, 2021, 2022 and 2024, and we had an aggregate of \$385 million of commercial paper notes outstanding with maturities ranging from 19 to 32 days. We may incur additional indebtedness in the future under existing credit facilities and/or entering into new financing arrangements. We may fail to pay these or additional future obligations, as and when required. Specifically, if we are unable to generate sufficient cash flows from operations or to borrow sufficient funds in the future to

service or refinance our debt, our business, operating results and financial condition will be harmed. Any downgrades from credit rating agencies such as Moody's Investors Service or Standard & Poor's Rating Services may adversely impact our ability to obtain additional financing or the terms of such financing and reduce the market capacity for our commercial paper. Furthermore, if prevailing interest rates or other factors result in higher interest upon any potential future financing, then interest expense related to the refinance indebtedness would increase.

In addition, all our debt and credit facility arrangements subject us to continued compliance with restrictive and financial covenants. If we do not comply with these covenants or otherwise default under the arrangements, we may be required to repay any outstanding amounts borrowed under these agreements. Moreover, compliance with these covenants may restrict our strategic or operational flexibility in the future, which could harm our business, operating results and financial condition.

We are exposed to the credit and non-payment risk of our customers, resellers and distributors, especially during times of economic uncertainty and tight credit markets, which could result in material losses.

Most of our sales to customers are on an open credit basis, with typical payment terms of 30 days. We may experience losses due to a customer's inability to pay. Beyond our open credit arrangements, some of our customers have entered into recourse and non-recourse financing leasing arrangements using third-party leasing companies. Under the terms of recourse leases, which are generally three years or less, we remain liable for the aggregate unpaid remaining lease payments to the third-party leasing companies in the event of end-user customer default. During periods of economic uncertainty, our exposure to credit risks from our customers increases. In addition, our exposure to credit risks of our customers may increase further if our customers and their customers or their lease financing sources are adversely affected by global economic conditions.

Our failure to adjust to emerging standards in the storage and data management industry may harm our business.

Emerging standards in the storage and data management markets may adversely affect the UNIX®, Windows® and the World Wide Web server markets upon which we depend. For example, we provide our open access data retention solutions to customers within the financial services, healthcare, pharmaceutical and government market segments, industries that are subject to various evolving governmental regulations with respect to data access, reliability and permanence in the U.S. and in the other countries in which we operate. If our products do not meet and continue to comply with these evolving governmental regulations in this regard, customers in these market and geographical segments will not purchase our products, and we may not be able to expand our product offerings in these market and geographical segments at the rates which we have forecasted.

Some of our products are subject to U.S. export control laws and other laws affecting the countries in which our products and services may be sold, distributed, or delivered; any violation of these laws could have a material and adverse effect on our business, operating results and financial condition.

Due to the global nature of our business, we are subject to import and export restrictions and regulations, including the Export Administration Regulations administered by the Commerce Department's Bureau of Industry and Security (BIS) and the trade and economic sanctions regulations administered by the Treasury Department's Office of Foreign Assets Control (OFAC). The U.S., through the BIS and OFAC, places restrictions on the sale or export of certain products and services to certain countries and persons. Violators of these export control and sanctions laws may be subject to significant penalties, which may include significant monetary fines, criminal proceedings against them and their officers and employees, a denial of export privileges, and suspension or debarment from selling products to the federal government. Our products could be shipped to those targets by third parties, including potentially our channel partners, despite our precautions.

If we were ever found to have violated U.S. export control laws, we may be subject to various penalties available under the laws, any of which could have a material and adverse impact on our business, operating results and financial

condition. Even if we were not found to have violated such laws, the political and media scrutiny surrounding any governmental investigation of us could cause us significant expense and reputational harm. Such collateral consequences could have a material adverse impact on our business, operating results and financial condition.

Changes in regulations relating to our products or their components, or the manufacture, sourcing, distribution or use thereof, may harm our business and operating results.

The laws and regulations governing the manufacturing, sourcing, distribution and use of our products have become more complex and stringent over time. For example, in addition to various environmental laws relating to carbon emissions and the use and discharge of hazardous materials, the SEC adopted regulations concerning the supply of certain minerals originating from the conflict zones of the Democratic Republic of Congo or adjoining countries. We incur costs to comply with the disclosure requirements of this law and may realize other costs relating to the sourcing and availability of minerals used in our products. Further, since our supply chain is complex, we may face reputational harm if our customers or other stakeholders conclude that we are unable to verify sufficiently the origins of the minerals used in the products we sell. As the laws and regulations governing our products continue to expand and change, our costs are likely to rise, and the failure to comply with any such laws and regulations could subject us to business interruptions, litigation risks and reputational harm.

Our failure to protect our intellectual property could harm our business, operating results and financial condition.

Our success depends significantly upon developing, maintaining and protecting our proprietary technology. We rely on a combination of patents, copyrights, trademarks, trade secrets, confidentiality procedures and contractual provisions with employees, resellers, strategic partners and customers, to protect our proprietary rights. We currently have multiple U.S. and international patent applications pending and multiple U.S. and international patents issued. The pending applications may not be approved, and our existing and future patents may be challenged. If such challenges are brought, the patents may be invalidated. We may not be able to develop proprietary products or technologies that are patentable, and patents issued to us may not provide us with any competitive advantages and may be challenged by third parties. Further, the patents of others may materially and adversely affect our ability to do business. In addition, a failure to obtain and defend our trademark registrations may impede our marketing and branding efforts and competitive condition. Litigation may be necessary to protect our proprietary technology. Any such litigation may be time-consuming and costly. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our products or obtain and use information that we regard as proprietary. In addition, the laws of some foreign countries do not protect proprietary rights to as great an extent as do the laws of the U.S. Our means of protecting our proprietary rights may not be adequate or our competitors may independently develop similar technology, duplicate our products, or design around patents issued to us or other intellectual property rights of ours. In addition, while we train employees in confidentiality practices and include terms in our employee and consultant agreements to protect our intellectual property, there is persistent risk that some individuals will improperly take our intellectual property after terminating their employment or other engagements with us, which could lead to intellectual property leakage to competitors and a loss of our competitive advantages.

We may be found to infringe on intellectual property rights of others.

We compete in markets in which intellectual property infringement claims arise in the normal course of business. Third parties have, from time to time, asserted intellectual property-related claims against us, including claims for alleged patent infringement brought by non-practicing entities. Such claims may be made against our products and services, our customers' use of our products and services, or a combination of our products and third-party products. We also may be subject to claims and indemnification obligations from customers and resellers with respect to third-party intellectual property rights pursuant to our agreements with them. If we refuse to indemnify or defend such claims, even in situations in which the third party's allegations are meritless, then customers and resellers may refuse to do business with us.

Patent litigation is particularly common in our industry. We have been, and continue to be, in active patent litigations with non-practicing entities. While we vigorously defend our ability to compete in the marketplace, there is no guarantee that, in patent or other types of intellectual property litigation, we will prevail at trial or be able to settle at a reasonable cost. If a judge or jury were to find that our products infringe, we could be required to pay significant monetary damages and be subject to an injunction that could cause product shipment delays, require us to redesign our products, affect our ability to supply or service our customer, and/or require us to enter into compulsory royalty or licensing agreements.

We expect that companies in the network storage and data management markets will increasingly be subject to infringement claims as the number of products and competitors in our industry segment grows and the functionality of products in different industry segments overlaps. Any such claims, and any such infringement claims discussed above, could be time consuming, result in costly litigation, cause product shipment delays, require us to redesign our products, or require us to enter into royalty or licensing agreements, any of which could materially and adversely affect our operating results. Such royalty or licensing agreements, if required, may not be available on terms acceptable to us or at all.

We rely on software from third parties, and a failure to properly manage our use of third-party software could result in increased costs or loss of revenue.

Many of our products are designed to include software licensed from third parties. Such third-party software includes software licensed from commercial suppliers and software licensed under public open source licenses. We have internal processes to manage our use of such third-party software. However, if we fail to adequately manage our use of third party software, then we may be subject to copyright infringement or other third-party claims. If we are non-compliant with a license for commercial software, then we may be required to pay penalties or undergo costly audits pursuant to the license agreement. In the case of open-source software licensed under certain “copyleft” licenses, the license itself may require, or a court-imposed remedy for non-compliant use of the open source software may require, that proprietary portions of our own software be publicly-disclosed or licensed. This could result in a loss of intellectual property rights, increased costs, damage to our reputation and/or a loss of revenue.

Our business could be materially and adversely affected as a result of natural disasters, terrorist acts or other catastrophic events.

We depend on the ability of our personnel, inventories, equipment and products to move reasonably unimpeded around the world. Any political, military, terrorism, global trade, world health or other issue that hinders this movement or restricts the import or export of materials could lead to significant business disruptions. Furthermore, any economic failure or other material disruption caused by natural disasters, including fires, floods, hurricanes, earthquakes, and volcanoes; power loss or shortages; environmental disasters; telecommunications or business information systems failures or break-ins and similar events could also adversely affect our ability to

conduct business. If such disruptions result in cancellations of customer orders or contribute to a general decrease in economic activity or corporate spending on IT, or directly impact our marketing, manufacturing, financial and logistics functions, or impair our ability to meet our customer demands, our operating results and financial condition could be materially adversely affected. In addition, our headquarters is located in Northern California, an area susceptible to earthquakes. If any significant disaster were to occur, our ability to operate our business and our financial condition could be impaired.

Our stock price is subject to volatility.

Our stock price is subject to changes in recommendations or earnings estimates by financial analysts, changes in investors' or analysts' valuation measures for our stock, changes in our capital structure, including issuance of additional debt, changes in our credit ratings, our ability to pay dividends and to continue to execute our stock repurchase program as planned and market trends unrelated to our performance.

Our ability to pay quarterly dividends and to continue to execute our stock repurchase program as planned will be subject to, among other things, our financial condition and operating results, available cash and cash flows in the U.S., capital requirements, and other factors. Future dividends are subject to declaration by our Board of Directors, and our stock repurchase program does not obligate us to acquire any specific number of shares. If we fail to meet any expectations related to dividends and/or stock repurchases, the market price of our stock could decline significantly, and could have a material adverse impact on investor confidence. Additionally, price volatility of our stock over a given period may cause the average price at which we repurchase our own stock to exceed the stock's market price at a given point in time.

Furthermore, speculation in the press or investment community about our strategic position, financial condition, results of operations or business can cause changes in our stock price. These factors, as well as general economic and political conditions and the timing of announcements in the public market regarding new products or services, product enhancements or technological advances by our competitors or us, and any announcements by us of acquisitions, major transactions, or management changes may adversely affect our stock price.

Item 1B. Unresolved Staff Comments

Not applicable.

Item 2. Properties

We own approximately 0.7 million square feet of facilities at our Sunnyvale, California headquarters. The Sunnyvale site supports research and development, corporate general administration, sales and marketing, global services and operations.

We own approximately 0.8 million square feet of facilities in Research Triangle Park (RTP), North Carolina. In addition, we own 65 acres of undeveloped land. The RTP site supports research and development, global services and sales and marketing.

We own forty acres of land and approximately 0.3 million square feet of facilities in Wichita, Kansas. This site supports sales and marketing, research and development, and global services.

We own approximately 0.7 million square feet of facilities in Bangalore, India. The Bangalore site supports research and development, marketing and global services.

We lease other sales offices and research and development facilities throughout the U.S. and internationally. We expect that our existing facilities and those being developed worldwide are suitable and adequate for our requirements over at least the next two years and that additional space will be available as needed.

Item 3. Legal Proceedings

For a discussion of legal proceedings, see Note 18 – Commitments and Contingencies of the Notes to Consolidated Financial Statements.

Item 4. Mine Safety Disclosures

Not applicable.

## PART II

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

The Company's common stock is traded on the NASDAQ Stock Market LLC ("NASDAQ") under the symbol NTAP.

## Price Range of Common Stock

The price range per share of common stock presented below represents the highest and lowest intraday sales prices for the Company's common stock on the NASDAQ during each quarter of our two most recent fiscal years.

	Fiscal 2018		Fiscal 2017	
	High	Low	High	Low
First Quarter	\$45.24	\$37.43	\$26.95	\$22.50
Second Quarter	\$45.14	\$37.55	\$36.10	\$25.82
Third Quarter	\$64.06	\$43.24	\$39.00	\$30.36
Fourth Quarter	\$69.75	\$52.00	\$43.14	\$37.48

## Holders

As of June 8, 2018 there were 431 holders of record of our common stock.

## Dividends

The Company paid cash dividends of \$0.20 per outstanding common share in each quarter of fiscal 2018 for an aggregate of \$214 million, \$0.19 per outstanding common share in each quarter of fiscal 2017 for an aggregate of \$208 million, and \$0.18 per outstanding common share in each quarter of fiscal 2016 for an aggregate of \$210 million. In the first quarter of fiscal 2019, the Company declared a cash dividend of \$0.40 per share of common stock, payable on July 25, 2018 to shareholders of record as of the close of business on July 6, 2018.



## Performance Graph

The following graph shows a comparison of cumulative total shareholder return, calculated on a dividend reinvested basis, of an investment of \$100 for the Company, the S&P 500 Index, the S&P Information Technology Index and the S&P 1500 Technology Hardware & Equipment Index for the five years ended April 27, 2018. The comparisons in the graphs below are based upon historical data and are not indicative of, nor intended to forecast, future performance of our common stock. The graph and related information shall not be deemed “soliciting material” or be deemed to be “filed” with the SEC, nor shall such information be incorporated by reference into any past or future filing with the SEC, except to the extent that such filing specifically states that such graph and related information are incorporated by reference into such filing.

## COMPARISON OF FIVE YEAR CUMULATIVE TOTAL RETURN

Among NetApp, Inc., the S&P 500 Index, the S&P Information Technology Index and the S&P 1500 Technology Hardware & Equipment Index\*

\*\$100 invested on April 26, 2013 in stock or index, including reinvestment of dividends. Data points are the last day of each fiscal year for the Company’s common stock and each of the indexes.

	April 2013	April 2014	April 2015	April 2016	April 2017	April 2018
NetApp, Inc.	\$100.00	\$101.92	\$107.07	\$71.89	\$123.99	\$213.12
S&P 500 Index	\$100.00	\$120.27	\$139.48	\$139.05	\$163.96	\$187.24
S&P 500 Information Technology Index	\$100.00	\$125.84	\$157.09	\$154.56	\$209.21	\$262.10
S&P 1500 Technology Hardware & Equipment Index	\$100.00	\$134.47	\$175.66	\$141.56	\$209.67	\$244.12

We believe that a number of factors may cause the market price of our common stock to fluctuate significantly. See Item 1A. – Risk Factors.

## Purchases of Equity Securities by the Issuer and Affiliated Purchasers

The following table provides information with respect to the shares of common stock repurchased by us during the three months ended April 27, 2018:

Period	Total Number of Shares Purchased (Shares in thousands)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Program (Shares in thousands)	Approximate Dollar Value of Shares That May Yet Be Purchased Under The Repurchase Program (Dollars in millions)
January 27, 2018 - February 23, 2018	1,752	\$ 58.13	280,330	\$ 242
February 24, 2018 - March 23, 2018	3,765	\$ 61.52	284,095	\$ 10
March 24, 2018 - April 27, 2018	173	\$ 60.38	284,268	\$ 4,000
Total	5,690	\$ 60.44		

In May 2003, our Board of Directors approved a stock repurchase program. As of April 27, 2018, our Board of Directors has authorized the repurchase of up to \$13.6 billion of our common stock, including a \$4.0 billion increase approved by our Board of Directors in April 2018. Since inception of the program through April 27, 2018, we repurchased a total of 284 million shares of our common stock for an aggregate purchase price of \$9.6 billion. Under this program, we may purchase shares of our outstanding common stock through solicited or unsolicited transactions in the open market, in privately negotiated transactions, through accelerated share repurchase programs, pursuant to a Rule 10b5-1 plan or in such other manner as deemed appropriate by our management. The stock repurchase program may be suspended or discontinued at any time.

## Item 6. Selected Financial Data

The following selected consolidated financial data set forth below was derived from our historical audited consolidated financial statements and should be read in conjunction with Item 7 – Management’s Discussion and Analysis of Financial Condition and Results of Operations and Item 8 – Financial Statements and Supplementary Data, and other financial data included elsewhere in this Annual Report on Form 10-K. Our historical results of operations are not indicative of our future results of operations.

	Fiscal Year Ended				
	April 27, 2018	April 28, 2017	April 29, 2016	April 24, 2015	April 25, 2014
	(In millions, except per share amounts)				
Net revenues	\$5,911	\$5,519	\$5,546	\$ 6,123	\$ 6,325
Gross profit	\$3,699	\$3,390	\$3,373	\$ 3,833	\$ 3,919
Provision for income taxes <sup>(1)</sup>	\$1,090	\$156	\$116	\$ 153	\$ 103
Net income	\$76	\$509	\$229	\$ 560	\$ 638
Net income per share, basic	\$0.28	\$1.85	\$0.78	\$ 1.77	\$ 1.87
Net income per share, diluted	\$0.28	\$1.81	\$0.77	\$ 1.75	\$ 1.83
Shares used in basic computation	268	275	294	316	340
Shares used in diluted computation	276	281	297	321	348
Cash dividends declared per share	\$0.80	\$0.76	\$0.72	\$ 0.66	\$ 0.60

  

	April				
	April 27, 2018	April 28, 2017	April 29, 2016	April 24, 2015	April 25, 2014
	(In millions)				
Cash, cash equivalents and short-term investments	\$5,391	\$4,921	\$5,303	\$ 5,326	\$ 5,003
Working capital	\$3,233	\$2,076	\$2,786	\$ 4,064	\$ 3,776
Total assets	\$9,865	\$9,493	\$10,037	\$ 9,401	\$ 9,214
Total debt	\$1,926	\$1,993	\$2,339	\$ 1,487	\$ 990
Total deferred revenue and financed unearned services revenue	\$3,477	\$3,342	\$3,385	\$ 3,197	\$ 3,100
Total stockholders' equity	\$2,067	\$2,780	\$2,881	\$ 3,414	\$ 3,787

(1) In fiscal 2018, our provision for income taxes included significant charges attributable to United States tax reform.

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

The following discussion of our financial condition and results of operations should be read together with the financial statements and the accompanying notes set forth under Item 8. – Financial Statements and Supplementary Data. The following discussion also contains trend information and other forward-looking statements that involve a number of risks and uncertainties. The Risk Factors set forth in Item 1A. – Risk Factors are hereby incorporated into the discussion by reference.

### Executive Overview

#### Our Company

We are the data authority for the hybrid cloud. Digital transformation remains top of mind for executives. In order to successfully digitally transform, data must become the lifeblood of an organization and be used as a business accelerator. Data-driven digital transformations accelerate business outcomes. Together with our partners, we empower global organizations to unleash the full potential of their data to enable new customer touchpoints, create innovative business opportunities and optimize operations.

NetApp delivers a Data Fabric built for the data-driven world. Our Data Fabric simplifies and integrates data management across clouds and on-premises to accelerate digital transformation, enabling our customers to manage, secure and protect their data at the scale needed to accommodate the exponential data growth of the digital world. It delivers integrated data management services and applications for data visibility and insights, data access and control, and data protection and security.

We focus on delivering an exceptional customer experience to become our customers' preferred data partner. NetApp's unique approach to managing data holistically enables organizations to inspire innovation with the cloud, build clouds to accelerate new services, and modernize IT architecture with cloud-connected flash.

With NetApp products and solutions, customers can:

- Continually fuel business growth by delivering data-rich customer experiences through new application deployments that easily use data and services regardless of where they reside or in what form.
- Accelerate digital transformation by developing a next-generation, cloud-architected infrastructure that manages data and services as one integrated resource supporting both public and private clouds.
- Free the resources necessary to fund transformation by deploying the industry's leading flash storage solution, which is highly efficient and scales from the edge to the core to the cloud.

Customers are attracted by the speed and scale benefits of the public cloud but need new data management capabilities to keep control of data as it moves beyond the walls of the enterprise. NetApp believes the hybrid cloud is fast becoming the dominant model for enterprise IT. Whether an organization is targeting an all-cloud, hybrid cloud, or multi-cloud strategy, NetApp Cloud Data Services accelerate the time it takes to deploy or develop an application by making the data requirements seamless to the application layer.

Budget constraints and skill imbalances lead our customers to seek help in integrating, deploying and managing the solutions they need to stay competitive. This drives demand for converged and hyper-converged infrastructure solutions. FlexPod is the converged infrastructure of choice for many of the largest enterprises around the globe. Customers can break free from the limits of first-generation HCI with NetApp HCI and attain guaranteed performance with high levels flexibility, scale, automation, and integration with the Data Fabric.

Flash plays a key role in customers' digital transformation efforts as they seek to gain advantage through greater speed, responsiveness and value from key business applications - all while lowering total cost of ownership. All-flash array technology is the de facto choice for primary application workloads as customers seek performance and economic benefits from replacing hard disk installations. With a highly differentiated and broad portfolio of all-flash and hybrid

array offerings, NetApp is well positioned to enable customers to accomplish this transition.

To provide visibility into our transition from older products to our newer, higher growth products and clarity into the dynamics of our product revenue, we group our products by “Strategic” and “Mature” solutions. Strategic solutions include Clustered ONTAP, branded E-Series, SolidFire, converged and hyper-converged infrastructure, and optional add-on software products. Mature solutions include 7-mode ONTAP, add-on hardware and related operating system (OS) software and original equipment manufacturers (OEM) products. Both our Mature and Strategic product lines include a mix of disk, hybrid and all flash storage media.

Additionally, we provide a variety of services including software maintenance, hardware maintenance and other services including professional services, global support solutions, and customer education and training to help customers most effectively manage their data. Revenues generated by our Cloud Data Services offerings are included in software maintenance revenues.

## Financial Results and Key Performance Metrics Overview

The following table provides an overview of some of our key financial metrics for each of the last three fiscal years (in millions, except per share amounts, percentages and cash conversion cycle):

	Year Ended		
	April 27, 2018	April 28, 2017	April 29, 2016
Net revenues	\$5,911	\$5,519	\$5,546
Gross profit	\$3,699	\$3,390	\$3,373
Gross profit margin percentage	63 %	61 %	61 %
Income from operations	\$1,125	\$665	\$348
Income from operations as a percentage of net revenues	19 %	12 %	6 %
Provision for income taxes	\$1,090	\$156	\$116
Net income	\$76	\$509	\$229
Diluted net income per share	\$0.28	\$1.81	\$0.77
Operating cash flows	\$1,478	\$986	\$974

	April 27, 2018	April 28, 2017
Deferred revenue and financed unearned services revenue	\$3,477	\$3,342
Cash conversion cycle	(15 )	15

**Net revenues:** Our net revenues increased 7% in fiscal 2018 compared to fiscal 2017. This was primarily due to an increase of 15% in product revenues, partially offset by a 3% decrease in software and hardware maintenance and other services revenues.

**Gross profit margin percentage:** Our gross profit margin as a percentage of net revenues increased by one percentage point in fiscal 2018 compared to fiscal 2017, reflecting an increase in gross profit margin on product revenues, and, to a lesser extent, an increase in gross profit margin on hardware maintenance and other services revenues.

- **Income from operations as a percentage of net revenues:** Our income from operations as a percentage of net revenues increased in fiscal 2018 compared to fiscal 2017 primarily due to higher product gross margin and lower operating expenses as a result of a gain on sale of certain of our properties.

**Provision for income taxes:** Our provision for income taxes increased significantly in fiscal 2018 compared to fiscal 2017 as a result of significant charges recorded in connection with U.S. tax reform enacted in fiscal 2018.

**Net income and Diluted income per share:** The 85% decrease in both net income and diluted net income per share in fiscal 2018 compared to fiscal 2017 reflect the factors discussed above. Diluted net income per share was favorably impacted by a 2% decrease in the annual weighted average number of dilutive shares, primarily due to share repurchases.

**Operating cash flows:** Operating cash flows increased by 50% in fiscal 2018 compared to fiscal 2017, reflecting changes in operating assets and liabilities, partially offset by lower net income.

**Deferred revenue and financed unearned services revenue:** Total deferred revenue and financed unearned services revenue increased \$135 million, or 4%, as of fiscal 2018 year end compared to fiscal 2017 year end primarily due to increases in the installed base and aggregate contract values under software and hardware maintenance contracts.

•

Cash Conversion Cycle: Our cash conversion cycle was (15) days in the fourth quarter of fiscal 2018, compared to 15 days in the corresponding period of fiscal 2017, reflecting higher Days Payables Outstanding and lower Days Inventory Outstanding, partially offset by higher Days Sales Outstanding.

#### Stock Repurchase Program and Dividend Activity

During fiscal 2018, we repurchased 15 million shares of our common stock at an average price of \$51.57 per share, for an aggregate purchase price of \$794 million. We also declared cash dividends of an aggregate of \$0.80 per share in fiscal 2018, for which we paid an aggregate of \$214 million.

#### Senior Notes Issuance and Redemption

In September 2017, we issued \$400 million aggregate principal amount of 2.00% Senior Notes due on September 27, 2019 and \$400 million aggregate principal amount of 3.30% Senior Notes due on September 29, 2024, for which we received total proceeds of approximately \$795 million, net of discount and issuance costs. On November 3, 2017, we extinguished our 2.00% Senior Notes due December 2017 for an aggregate redemption price of \$751 million, plus accrued and unpaid interest.

## Real Estate Transactions

On September 8, 2017, we entered into an agreement to sell certain land and buildings for a total of \$306 million, through two separate and independent closings. On December 7, 2017, the first closing date, we consummated the sale of properties with a net book value of \$66 million for cash proceeds of \$210 million, resulting in a gain, net of direct selling costs, of \$142 million.

In fiscal 2016, we entered into a sale-leaseback arrangement of certain of our land and buildings. The arrangement did not qualify for sale-leaseback accounting and instead was accounted for as a financing transaction. In December 2017, we terminated the leases and recorded a non-cash sale of properties with a net book value of \$54 million, the extinguishment of \$130 million in financing obligations, and a gain of \$76 million.

## Tax Reform

On December 22, 2017, the 2017 Tax Reform Reconciliation Act, originally referred to as the Tax Cuts and Jobs Act (TCJA), was enacted into law. This tax reform legislation contains several key tax provisions that affected us, including a one-time mandatory transition tax on accumulated foreign earnings and a reduction of the U.S. corporate income tax rate to 21% effective January 1, 2018, among others. Our net income in fiscal 2018 includes a one-time tax reform-related provisional charge of \$858 million.

## Critical Accounting Policies and Estimates

Our consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America (GAAP), which require management to make judgments, estimates and assumptions that affect the reported amounts of assets, liabilities, net revenues and expenses, and the disclosure of contingent assets and liabilities. Our estimates are based on historical experience and various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. We believe that the accounting estimates employed and the resulting balances are reasonable; however, actual results may differ from these estimates and such differences may be material.

The summary of significant accounting policies is included in Note 1 – Description of Business and Significant Accounting Policies of the Notes to Consolidated Financial Statements. An accounting policy is deemed to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made, if different estimates reasonably could have been used, or if changes in the estimate that are reasonably possible could materially impact the financial statements. The accounting policies described below reflect the significant judgments, estimates and assumptions used in the preparation of the consolidated financial statements.

## Revenue Recognition, Reserves and Allowances

We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred, the fee is fixed or determinable and collection is reasonably assured. Revenue from the sale of hardware systems and software components essential to the functionality of the hardware systems is recognized in accordance with general revenue recognition accounting guidance. Our product revenues also include revenues from the sale of non-essential software products, which generally includes a perpetual license to our software. Non-essential software sales are subject to industry specific software revenue recognition accounting guidance. Software maintenance and hardware maintenance services revenues are recognized ratably over their contractual terms, generally from one to five years.

For multiple element arrangements, we allocate revenue to the software deliverables and the non-software deliverables as a group based on the relative selling prices of all of the deliverables in the arrangement. For our non-software



deliverables, we allocate the arrangement consideration based on the relative selling price of the deliverables using estimated selling price (ESP). For our software maintenance services, we generally use vendor-specific objective evidence of selling price (VSOE). When we are unable to establish VSOE for our software maintenance services, we use ESP in our allocation of arrangement consideration.

The selling price for each element is based upon the following selling price hierarchy: VSOE if available, third party evidence (TPE) if VSOE is not available, or ESP if neither VSOE nor TPE are available. Generally, we are not able to determine TPE because our go-to-market strategy differs from that of our peers and our offerings contain a significant level of differentiation such that the comparable pricing of products with similar functionality cannot be obtained.

We record reductions to revenue for estimated sales returns at the time of shipment. We also maintain a separate allowance for doubtful accounts for estimated losses based on our assessment of the collectability of specific customer accounts.

The following are the key estimates and assumptions and corresponding uncertainties for recognizing revenue:

Key Estimates and Assumptions    Key Uncertainties

- We establish VSOE of selling price using the price charged for a deliverable when sold separately and generally evidenced by a substantial majority of historical stand-alone transactions falling within a reasonably narrow range. In addition, we consider major service type, customer type, and other variables in determining VSOE. Our revenue estimates and assumptions are based on our ability to assert and maintain VSOE.
- As our business and offerings evolve over time, modifications to our pricing and discounting methodologies, changes in the scope and nature of service offerings and/or changes in customer segmentation may result in a lack of consistency required to establish and/or maintain key revenue estimates and assumptions. Additionally, technological changes resulting in variability in product costs and gross margins may require changes to certain estimates and assumptions. Such changes may result in a different allocation of revenue to the deliverables in multiple-element arrangements. These factors, among others, may adversely impact the amount of revenue and gross margin we report in a particular period.

ESP is generally evidenced by a majority of historical transactions falling within a reasonable price range. We also consider multiple factors, including, but not limited to, cost of products, gross margin objectives, historical pricing practices, customer type and distribution channels. Our revenue estimates and assumptions are based on our ability to maintain consistent ESP.

- Sales returns are estimated based on historical sales returns, current trends and our expectations regarding future experience. Additionally, distributors and partners participate in various marketing and other programs, and we maintain estimated accruals and allowances for these programs based on contractual terms and historical experience.
- If there is insufficient relevant historical data for determining our sales returns estimates, or if we experience changes in practices related to sales returns or changes in market or competitive conditions resulting in higher than expected return rates, or if actual credits received by our distributors and partners deviate significantly from our estimates, our revenues may be adversely impacted.

#### Inventory Valuation and Purchase Order Accruals

Inventories consist primarily of purchased components and finished goods and are stated at the lower of cost or net realizable value, which approximates actual cost on a first-in, first-out basis. A provision is recorded when inventory is determined to be in excess of anticipated demand or obsolete in order to adjust inventory to its estimated realizable value. The following are the key estimates and assumptions and corresponding uncertainties for estimating the value of our inventories:

#### Key Estimates and Assumptions

- We periodically perform an excess and obsolete analysis of our inventory. Inventories are written down based on excess and obsolete reserves determined primarily on assumptions about future demand forecasts and market conditions. At the point of the loss recognition, a new, lower cost basis for that inventory is established, and subsequent changes in facts and circumstances do not result in the restoration or increase in that

#### Key Uncertainties

- Although we use our best estimates to forecast future product demand, any significant unanticipated changes in demand or obsolescence related to technological developments, new product introductions, customer requirements, competition or other factors could have a significant impact on the valuation of our inventory. If actual market conditions are less favorable than those projected, additional write-downs and other charges against earnings that adversely impact gross margins may be required. If actual market conditions are more favorable, we may

newly established cost basis.

realize higher gross profits in the period when the written-down inventory is sold.

We are subject to a variety of environmental laws relating to the manufacture of our products. If there are changes to the current regulations, we may be required to make product design changes which may result in excess or obsolete inventory, which could adversely impact our operating results.

- We make commitments to our third-party contract manufacturers and other suppliers to manage lead times and meet product forecasts and to other parties to purchase various key components used in the manufacture of our products. We establish accruals for estimated losses on non-cancelable purchase commitments when we believe it is probable that the components will not be utilized in future operations.
- If the actual materials demand is significantly lower than our forecast, we may be required to increase our recorded liabilities for estimated losses on non-cancelable purchase commitments which would adversely impact our operating results.

#### Goodwill and Purchased Intangible Assets

We allocate the purchase price of acquisitions to identifiable assets acquired and liabilities assumed at their acquisition date fair

values based on established valuation techniques. Goodwill represents the residual value as of the acquisition date, which in most cases is measured as the excess of the purchase consideration transferred over the net of the acquisition date fair values of the assets acquired and liabilities assumed.

The carrying values of purchased intangible assets are reviewed whenever events and circumstances indicate that the net book value of an asset may not be recovered through expected future cash flows from its use and eventual disposition. We periodically review the estimated remaining useful lives of our intangible assets. This review may result in impairment charges or shortened useful lives, resulting in charges to our consolidated statements of operations.

We review goodwill for impairment annually and whenever events or changes in circumstances indicate the carrying amount of our reporting unit may exceed its fair value. The provisions of the accounting standard for goodwill allow us to first assess qualitative factors to determine whether it is necessary to perform the quantitative goodwill impairment test. For our annual goodwill impairment test in the fourth quarter of fiscal 2018, we performed a quantitative test and determined the fair value of our reporting unit substantially exceeded its carrying amount, therefore, found no impairment of goodwill.

The following are the key estimates and assumptions and corresponding uncertainties for estimating the value of our goodwill and purchased intangible assets:

Key Estimates and Assumptions

- The assessment of fair value for goodwill and purchased intangible assets is based on factors that market participants would use in an orderly transaction in accordance with the accounting guidance for the fair value measurement of nonfinancial assets.

The valuation of purchased intangible assets is principally based on estimates of the future performance and cash flows expected to be generated by the acquired assets from the acquired business.

- Evaluations of possible goodwill and purchased intangible assets impairment require us to make judgments and assumptions related to the allocation of our balance sheet and income statement amounts and estimate future cash flows and fair market values of our reporting unit and assets.

Key Uncertainties

- While we employ experts to determine the acquisition date fair value of acquired intangibles, the fair values of assets acquired and liabilities assumed are based on significant management assumptions and estimates, which are inherently uncertain and highly subjective and as a result, actual results may differ from estimates. If different assumptions were to be used, it could materially impact the purchase price allocation.

- In response to changes in industry and market conditions, we could be required to strategically realign our resources and consider restructuring, disposing of, or otherwise exiting businesses, which could result in an impairment of goodwill or purchased intangible assets.

Assumptions and estimates about expected future cash flows and the fair values of our reporting unit and purchased intangible assets are complex and subjective. They can be affected by a variety of factors, including external factors such as the adverse impact of unanticipated changes in macroeconomic conditions and technological changes or new product introductions from competitors. They can also be affected by internal factors such as changes in business strategy or in forecasted product life cycles and

roadmaps. Our ongoing consideration of these and other factors could result in future impairment charges or accelerated amortization expense, which could adversely affect our operating results.

#### Product Warranties

Estimated future hardware and software warranty costs are recorded as a cost of product revenues at the time of product shipment. We assess the adequacy of our warranty accrual each quarter and adjust the amount as considered necessary.

35

---

The following are the key estimates and assumptions and corresponding uncertainties for product warranties:

#### Key Estimates and Assumptions

- Estimated future software and hardware warranty costs are based on historical and projected warranty claim rates, product failure rates, historical and projected materials and logistics costs, distribution and labor costs and knowledge of specific product failures that are outside of our typical experience. We also evaluate our estimates to assess the adequacy of our warranty liability considering the size of the installed base of products subject to warranty protection and adjust the estimates as necessary.

#### Valuation of Investment Securities

Our investments in debt securities are reported at fair value and are subject to periodic impairment review. Unrealized gains and losses related to changes in the fair value of these securities are recognized in accumulated other comprehensive income, net of tax, unless they are determined to be other-than-temporary impairments. The ultimate value realized on these securities is subject to market price volatility until they are sold.

The following are the key estimates and assumptions and corresponding uncertainties for the valuation of our investment securities:

#### Key Estimates and Assumptions

- The estimated fair value of our debt securities, and the associated accounting for unrealized losses is based on an evaluation of current economic and market conditions, the credit rating of the security's issuer, the length of time and extent the security's fair value has been below its amortized cost and our ability and intent to hold the security for a period of time sufficient to allow for anticipated recovery in value. If we determine that an investment has an other-than-temporary decline in fair value, we recognize the investment loss in earnings.

36

#### Key Uncertainties

- Although we engage in product quality programs and processes, if we experience unexpected quality issues resulting in higher failure rates or experience increases in costs to remediate product failures, additional warranty costs may be incurred. Additionally, for new products our warranty liability is based on limited historical experience. If our projections differ from such limited experience, our warranty costs may increase, which could adversely impact our gross margins.

#### Key Uncertainties

- The fair value of our investments in debt securities could decrease significantly from uncertainties in the credit and capital markets, credit rating downgrades and/or solvency of the issuer, decreases in the marketability of the securities. If the fair value of our investments decreases significantly and, if because of changes in our ability and intent to continue to hold the securities or other factors, it is determined to be other-than-temporary, we may incur impairment charges that could adversely affect our results of operations.

## Income Taxes

We are subject to income taxes in the United States and numerous foreign jurisdictions. We compute our provision for income taxes using the asset and liability method, under which deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial reporting and tax bases of assets and liabilities, and for operating losses and tax credit carryforwards. Deferred tax assets and liabilities are measured using the currently enacted tax rates that apply to taxable income in effect for the years in which those tax assets are expected to be realized or settled. The Company records a valuation allowance to reduce deferred tax assets to the amount that is believed more likely than not to be realized.

The following are the key estimates and assumptions and corresponding uncertainties for our income taxes:

Key Estimates and Assumptions	Key Uncertainties
<ul style="list-style-type: none"> <li>•Our income tax provision is based on existing tax law and advanced pricing agreements or letter rulings we have with various tax authorities.</li> </ul>	<ul style="list-style-type: none"> <li>•Our provision for income taxes is subject to volatility and could be adversely impacted by future changes in existing tax laws, such as a change in tax rate, possible U.S. changes to the taxation of earnings of our foreign subsidiaries, and uncertainties as to future renewals of favorable tax agreements and rulings.</li> </ul>
<ul style="list-style-type: none"> <li>•The determination of whether we should record or adjust a valuation allowance against our deferred tax assets is based on assumptions regarding our future profitability.</li> </ul>	<ul style="list-style-type: none"> <li>•Our future profits could differ from current expectations resulting in a change to our determination as to the amount of deferred tax assets that are more likely than not to be realized. We could adjust our valuation allowance with a corresponding impact to the tax provision in the period in which such determination is made.</li> </ul>
<ul style="list-style-type: none"> <li>•The estimates for our uncertain tax positions are based primarily on company specific circumstances, applicable tax laws, tax opinions from outside firms and past results from examinations of our income tax returns.</li> </ul>	<ul style="list-style-type: none"> <li>•Significant judgment is required in evaluating our uncertain tax positions. Although we believe our reserves are reasonable, no assurance can be given that the final tax outcome or tax court rulings of these matters will not be different from that which is reflected in our historical tax provisions and accruals.</li> </ul>

### New Accounting Standards

See Note 2 – Recent Accounting Standards Not Yet Effective of the Notes to Consolidated Financial Statements for a full description of new accounting pronouncements, including the respective expected dates of adoption and effects on our financial statements.

## Results of Operations

Our fiscal year is reported on a 52- or 53-week year that ends on the last Friday in April. An additional week is included in the first fiscal quarter approximately every six years to realign fiscal months with calendar months. Fiscal year 2018, which ended on April 27, 2018, and fiscal year 2017, which ended on April 28, 2017, were each 52-week years. Fiscal year 2016, which ended on April 29, 2016, was a 53-week year. Unless otherwise stated, references to particular years, quarters, months and periods refer to our fiscal years ended in April and the associated quarters, months and periods of those fiscal years.

The following table sets forth certain Consolidated Statements of Operations data as a percentage of net revenues for the periods indicated:

	Fiscal Year		
	2018	2017	2016
<b>Revenues:</b>			
Product	59	% 54	% 54
Software maintenance	16	17	17
Hardware maintenance and other services	25	28	29
Net revenues	100	100	100
<b>Cost of revenues:</b>			
Cost of product	29	29	28
Cost of software maintenance	—	1	1
Cost of hardware maintenance and other services	8	9	10
Gross profit	63	61	61
<b>Operating expenses:</b>			
Sales and marketing	29	30	32
Research and development	13	14	16
General and administrative	5	5	6
Restructuring charges	—	1	2
Acquisition-related expense	—	—	—
Gain on sale of properties	(4 )	—	(1 )
Total operating expenses	44	49	55
Income from operations	19	12	6
Other income (expense), net	1	—	—
Income before income taxes	20	12	6
Provision for income taxes	18	3	2
Net income	1	% 9	% 4

Percentages may not add due to rounding

## Discussion and Analysis of Results of Operations

Overview — Net revenues for fiscal 2018 were \$5,911 million, an increase of \$392 million, or 7% compared to fiscal 2017, reflecting higher product revenues, partially offset by slightly lower hardware maintenance and other services revenues. Net revenues for fiscal 2017 were \$5,519 million, a decrease of \$27 million, relatively flat compared to fiscal 2016, reflecting lower hardware maintenance and other services revenues, partially offset by higher product revenues and software maintenance revenues.



Gross profit as a percentage of net revenues for fiscal 2018 increased one percentage point compared to fiscal 2017, reflecting higher margins on product revenues and slightly higher margins on hardware maintenance and other services revenues. Gross profit margins on product revenues in fiscal 2018 increased three and a half percentage points compared to fiscal 2017, primarily due to higher average selling prices (ASPs), and, to a lesser extent, the favorable impact of foreign exchange rate fluctuations. Gross profit as a percentage of net revenues for fiscal 2017 was relatively flat compared to fiscal 2016, reflecting lower margins on product revenues, mostly offset by higher margins on hardware maintenance and other services revenues.

Sales and marketing, research and development, and general and administrative expenses for fiscal 2018 totaled \$2,792 million, or 47% of net revenues, representing a decrease of one and a half percentage points compared to fiscal 2017, primarily due to higher net revenues in the current year, coupled with relatively consistent average headcount in both fiscal years. Sales and marketing, research and development, and general and administrative expenses for fiscal 2017 totaled \$2,683 million, or 49% of net revenues, representing a decrease of 5 percentage points compared to fiscal 2016, primarily due to a lower average headcount as a result of our restructuring plans as well as other cost reduction initiatives, partially offset by additional operating expenses related to our acquisition of SolidFire, Inc. (SolidFire).

Net Revenues (in millions, except percentages):

	Fiscal Year				
	2018	2017	% Change	2016	% Change
Net revenues	\$5,911	\$5,519	7	% \$5,546	—%

The increase in net revenues for fiscal 2018 compared to fiscal 2017 was primarily due to an increase of \$455 million in product revenues, partially offset by a decrease of \$56 million in hardware maintenance and other services revenues, while software maintenance revenues were relatively flat. Product revenues as a percent of net revenues increased four percentage points in fiscal 2018 compared to fiscal 2017.

The decrease in net revenues for fiscal 2017 compared to fiscal 2016 was primarily due to a decrease of \$63 million in hardware maintenance and other services revenues, partially offset by an increase of \$20 million in product revenues and an increase of \$16 million in software maintenance revenues. Product revenues as a percent of net revenues increased one percentage point in fiscal 2017 compared to fiscal 2016.

Sales through our indirect channels represented 79%, 78% and 77% of net revenues in fiscal 2018, 2017 and 2016, respectively.

The following customers, each of which is a distributor, accounted for 10% or more of net revenues:

	Fiscal Year		
	2018	2017	2016
Arrow Electronics, Inc.	23%		