

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 February 1, 2019

OR

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

For the transition period from _____ to _____

Commission File Number 001-33622

VMWARE, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

94-3292913
(I.R.S. Employer
Identification Number)

3401 Hillview Avenue
Palo Alto, CA
(Address of principal executive offices)

94304
(Zip Code)

(650) 427-5000
(Registrant's telephone number, including area code)

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

Title of each class	Name of each exchange on which registered
Class A Common Stock, par value \$0.01	New York Stock Exchange

Securities registered pursuant to section 12(g) of the Act:
None

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

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

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

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

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

At August 3, 2018, the aggregate market value of the registrant's Class A common stock held by non-affiliates of the registrant (based upon the closing sale price of such shares on the New York Stock Exchange on August 3, 2018) was approximately \$11,457,619,520. Shares of the registrant's Class A common stock and Class B common stock held by each executive officer and director and by each entity or person, other than investment companies, that, to the registrant's knowledge, owned 5% or more of the registrant's outstanding Class A common stock as of August 3, 2018 have been excluded in that such persons may be deemed to be affiliates of the registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 19, 2019, the number of shares of common stock, par value \$0.01 per share, of the registrant outstanding was 410,440,998, of which 110,440,998 shares were Class A common stock and 300,000,000 were Class B common stock.

DOCUMENTS INCORPORATED BY REFERENCE

Information required in response to Part III of Form 10-K (Items 10, 11, 12, 13 and 14) is hereby incorporated by reference to portions of the registrant's Proxy Statement for the Annual Meeting of Stockholders to be held in 2019. The Proxy Statement will be filed by the registrant with the Securities and Exchange Commission no later than 120 days after the end of the registrant's fiscal year ended February 1, 2019.

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VMware, vSphere, VMware vSAN, vRealize, VMware Cloud, NSX, Heptio, CloudHealth, VeloCloud, Wavefront, vCloud, vCloud Air, Horizon, Horizon Suite, AirWatch, Workspace ONE, VxRail, vCenter, vCenter Site Recovery Manager, AppDefense, and VMworld are registered trademarks or trademarks of VMware or its subsidiaries in the United States and other jurisdictions. All other marks and names mentioned herein may be trademarks of their respective companies.

Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements. All statements other than statements of historical fact could be deemed forward-looking statements, and words such as “expect,” “anticipate,” “target,” “goal,” “project,” “intent,” “plan,” “believe,” “momentum,” “seek,” “estimate,” “continue,” “potential,” “future,” “endeavor,” “will,” “may,” “should,” “could,” “depend,” “predict,” and variations or the negative expression of such words and similar expressions are intended to identify forward-looking statements. Forward-looking statements in this report include statements relating to expected industry trends and conditions; future financial performance, trends or plans; anticipated impacts of developments in accounting rules and tax laws and rates; VMware’s expectations regarding the timing of tax payments; plans for and anticipated benefits of VMware products, services and solutions and partner and alliance relationships; plans for and anticipated benefits of corporate transactions, acquisitions, stock repurchases and investment activities; the outcome or impact of pending litigation, claims or disputes; and any statements of assumptions underlying any of the foregoing. These statements are based on current expectations about the industries in which VMware operates and the beliefs and assumptions of management. These forward-looking statements involve risks and uncertainties and the cautionary statements set forth above and those contained in the section of this report entitled “Risk Factors” identify important factors that could cause actual results to differ materially from those predicted in any such forward-looking statements. All forward-looking statements in this document are made as of the date hereof, based on information available to us as of the date hereof. We assume no obligation to, and do not currently intend to, update these forward-looking statements.

PART I

ITEM 1. BUSINESS

Overview

VMware, Inc. (“VMware”) originally pioneered the development and application of virtualization technologies with x86 server-based computing, separating application software from the underlying hardware. Information technology (“IT”) driven innovation continues to disrupt markets and industries. Technologies emerge faster than organizations can absorb, creating increasingly complex environments. IT is working at an accelerated pace to harness new technologies, platforms and cloud models, ultimately guiding their business through a digital transformation. To take on these challenges, we are working with customers in the areas of hybrid cloud, multi-cloud, modern applications, networking and security, and digital workspaces. Our software provides a flexible digital foundation to help enable customers in their digital transformation.

We help customers manage their IT resources across private clouds and complex multi-cloud, multi-device environments by offering solutions across three categories: Software-Defined Data Center (“SDDC”), Hybrid Cloud Computing and End-User Computing (“EUC”). This portfolio supports and addresses the key IT priorities of our customers: accelerating their cloud journey, empowering digital workspaces and transforming networking and security. These VMware solutions enable the digital transformation our customers need as they ready their applications, infrastructure and devices for their future business needs.

We incorporated in Delaware in 1998, were acquired by EMC Corporation (“EMC”) in 2004 and conducted our initial public offering of our Class A common stock in August 2007. Effective September 7, 2016, Dell Technologies Inc. (“Dell”) acquired EMC. As a result, EMC became a wholly-owned subsidiary of Dell, and we became an indirectly-held, majority-owned subsidiary of Dell. We are considered a “controlled company” under the rules of the New York Stock Exchange. As of February 1, 2019, Dell controlled approximately 80.5% of our outstanding common stock, including 31 million shares of our Class A common stock and all of our Class B common stock.

Effective January 1, 2017, our fiscal year changed from a fiscal year ending on December 31 of each calendar year to a fiscal year consisting of a 52- or 53-week period ending on the Friday nearest to January 31 of each year. The period that began on January 1, 2017 and ended on February 3, 2017 is reflected as a transition period (the “Transition Period”). Our first full fiscal year under the revised fiscal calendar began on February 4, 2017 and ended on February 2, 2018. We refer to our fiscal years ended January 31, 2020, February 1, 2019 and February 2, 2018 as “fiscal 2020,” “fiscal 2019” and “fiscal 2018,” respectively.

Total revenue in fiscal 2019 increased 14% to \$8,974 million. Total revenue is comprised of license revenue of \$3,788 million and services revenue of \$5,186 million. While sales of our VMware vSphere (“vSphere”) product have remained strong, the majority of our license sales originate from solutions across our broad portfolio beyond our compute products.

Our corporate headquarters are located at 3401 Hillview Avenue, Palo Alto, California, and we have 125 offices worldwide.

Products and Technology Solutions

Software-Defined Data Center

We were the first company to articulate a vision for SDDC, whereby infrastructure is increasingly virtualized and delivered as a service, enabling data center management to be entirely automated by software, from one unified platform. Traditional data centers are collections of technology silos where each application type has its own vertical stack consisting of a CPU and operating system, storage pool, networking and security, and management systems. Over time, costs to maintain data center infrastructure have increased as the data center environment has become more heterogeneous and complex, which requires greater resources to manage and maintain IT infrastructures. SDDC is designed to transform and modernize the data center into an on-demand service that addresses application requirements by abstracting, pooling and automating the services that are required from the underlying hardware. SDDC dramatically simplifies data center operations and lowers costs.

Our SDDC architecture consists of four main product categories, which are available separately or as part of our Software-Defined Data Center Suites or Platform:

- Compute
- Cloud Management
- Networking and Security
- Storage and Availability

Compute

vSphere, our flagship data center platform that utilizes our hypervisor software, provides the fundamental compute layer for VMware environments. A “hypervisor” is a layer of software that resides between the operating system and system hardware to enable compute virtualization. Users deploy the vSphere hypervisor when they implement vSphere, VMware Cloud Foundation or suite solutions that include vSphere, such as VMware vCloud Suite.

We have continued to develop vSphere solutions to be compatible with new technologies and tools utilized by software developers and enterprises, including modern cloud-native applications. During fiscal 2018, we expanded our container solutions by announcing Pivotal Container Services (“PKS”), a jointly developed, marketed, sold and supported Kubernetes container solution with Pivotal Software, Inc. (“Pivotal”), an indirectly-held, majority-owned subsidiary of Dell in which we have an ownership interest.

During the fourth quarter of fiscal 2019, we acquired Heptio Inc. (“Heptio”), a leader in the open Kubernetes ecosystem. Kubernetes is an open-source container orchestration system used for automating deployment of scaling and managing applications across all cloud environments. Heptio’s products and services help enterprises deploy and operationalize Kubernetes.

Cloud Management

Our comprehensive cloud management platform manages hybrid environments running a range of workloads from traditional to container. Cloud management solutions are available as both an on-premises platform or as a service under our VMware Cloud Services offering, providing businesses with an automated operation, programmable provisioning and application monitoring. VMware Cloud Services optimize cloud usage and cost, improve cloud security and compliance, monitor application and cloud infrastructure, and automate the deployment, management and migration of applications and data across vSphere, non-vSphere, hybrid and public clouds. VMware Cloud Services enable our customers to run, manage, connect and better secure their applications across hybrid and public clouds, including Amazon Web Services (“AWS”), Microsoft Azure (“Azure”), Google Cloud Platform (“Google Cloud”) and IBM Cloud, as well as all devices in a common operating environment, regardless whether the underlying infrastructure is VMware-based.

Key products in the cloud management product portfolio include:

- *vRealize Operations* —provides performance, capacity and configuration management for virtual or physical infrastructure as well as transparency and control over the costs and quality of IT services.
- *vRealize Automation* —enables customers to rapidly deploy and provision cloud services.
- *Wavefront by VMware* —provides a Software-as-a-Service (“SaaS”) based metrics monitoring and analytics platform for modern cloud-native applications.
- *CloudHealth by VMware (“CloudHealth”)*— acquired during fiscal 2019 to further enhance our cloud management portfolio, CloudHealth delivers a consistent cloud operations platform across AWS, Azure and Google Cloud, enabling customers to analyze and manage cloud cost, usage, security and performance centrally for native public clouds.

Networking and Security

VMware networking and security products and services enable our customers to connect, better secure and operate their network consistently within and across the data center, the cloud and network edges. Our offerings also provide networking and security capabilities to virtual machines, containers and public cloud workloads.

Our network virtualization solution, VMware NSX (“NSX”), abstracts physical networks and greatly simplifies the provisioning and consumption of networking and security resources. NSX can be layered into any environment, integrates with many automation, security and container solutions and is an integral part of our key offerings, including VMware Cloud Foundation, VMware Cloud on AWS and PKS.

AppDefense and Network Insight further broaden our networking and security portfolio by adding zero-trust security that protect applications running in virtualized environments. Network Insight delivers intelligent operations and planning for software defined networking and security across virtual, physical and multi-cloud environments.

VMware SD-WAN by VeloCloud, available as a service and as an on-premises software solution, enables simple, agile and more secure branch connectivity. Our SD-WAN solution serves as a platform for deploying virtual network services that integrate with local edge compute to manage and control application traffic from users and Internet-connected devices.

Storage and Availability

We provide many storage and availability products to offer cost-effective, holistic data storage and protection options to all applications running on the vSphere platform. These products are applicable to hyperconverged infrastructure as well as

traditional infrastructure solutions designed to enable customers to deploy a broad range of hardware solutions. Key solutions include:

- *VMware vSAN* (“vSAN”)— clusters server disks to create simple, shared storage designed for virtual machines in hyperconverged infrastructure.
- *VxRail*— a hyperconverged infrastructure solution comprised of a fully integrated and pre-configured Dell EMC Appliance powered by vSAN and vSphere software.

Software-Defined Data Center Suites

Our SDDC products are available separately or our compute and management products may be acquired as part of a broader offering. The VMware vCloud Suite and VMware vRealize Suite are packaged solutions for building and managing a complete cloud infrastructure optimized for use with the vSphere platform:

- *VMware vCloud Suite*— an integrated offering that brings together our vSphere hypervisor and our vRealize Suite multi-vendor hybrid cloud management platform.
- *VMware vRealize Suite*— an enterprise-ready cloud management platform that enables customers to manage heterogeneous, hybrid cloud environments.

Software-Defined Data Center Platform — On Premises

VMware Cloud Foundation is a unified platform that combines our compute, storage and networking technologies with cloud management into an integrated stack that delivers enterprise-ready cloud infrastructure for private and public clouds. The offering includes lifecycle management capabilities to span the full stack. SDDC products can also be delivered through our VMware vCloud NFV, which is a fully integrated, modular, multi-tenant network functions virtualization (“NFV”) platform. It provides the compute, storage, networking and operations management and service assurance capabilities to enable operators to provide virtualized network services and drive NFV deployments with an architecture that will support 5G and Internet of Things (“IoT”) services in the future.

During fiscal 2019, we continued to develop our VMware Pulse IoT Center (“Pulse IoT Center”) offering. Pulse IoT Center is an IoT device management and monitoring solution that helps both IT and Operational Technology (“OT”) organizations to onboard, manage, monitor and secure their IoT use cases from the edge to the cloud. This new solution has been built to meet the needs of IoT for both IT and OT teams, while supporting a broad range of edge systems and their connected devices.

Hybrid Cloud Computing

Our hybrid cloud offering is based on consistent infrastructure and consistent operations across the data center, public cloud and edge environment. This allows customers to benefit from a single deployment model with consistent security policies, visibility and governance for all applications, running on-premises and off-premises. It builds on our private and hybrid cloud capabilities by offering customers the freedom to innovate in multiple clouds and is delivered through VMware Cloud Foundation, the VMware vRealize cloud management platform and a new set of VMware Cloud Services that we are developing. Our overarching cloud strategy contains three key components: (i) continue to expand beyond compute virtualization in the private cloud, (ii) extend the private cloud into the public cloud and (iii) connect and secure endpoints across a range of public clouds. Our cloud strategy is designed to provide organizations with solutions that work across all clouds and devices.

VMware Cloud Provider Program Services

We currently enable our customers to utilize vSphere-based hybrid cloud computing capacity through our VMware Cloud Provider Program (“VCP”) offerings. Our VCP partners represent a key component of our strategic priority to support hybrid cloud and are a global ecosystem of over 4,000 cloud providers in more than 100 countries providing VMware-based cloud services. Our VCP offering is directed at hosting and cloud computing providers, enabling organizations to choose between running applications in virtual machines on their own private clouds inside their data center or on public clouds hosted and managed by a VMware cloud provider.

Software-Defined Data Center Platform — Hybrid Cloud

VMware Cloud Foundation can be used for on-premises private clouds and also can be extended to hybrid cloud environments using VMware Cloud on AWS or VCP. VMware Cloud on AWS is an on-demand service that enables customers to run applications across vSphere-based cloud environments and provides access to a broad range of AWS services. This hybrid offering, a strategic alliance with AWS, integrates vSphere, vSAN and NSX along with VMware vCenter management and is optimized to run on dedicated, elastic, bare-metal AWS infrastructure. VMware Cloud on AWS is currently available in certain geographies, and we expect to continue expanding into additional regions in fiscal 2020. Beginning in late fiscal 2019, VMware Cloud on AWS has been available to our VCP and System Integrators and System Outsourcers partners through our

VMware Cloud Provider – Managed Services Provider offering, which enables our partners to make VMware Cloud on AWS available to their end customers without having to create a similar service in their own data centers.

VMware Cloud Foundation is also offered as a service platform through a select number of our VCPP partners. For example, IBM, OVH US LLC (“OVH”) and Rackspace are VCPP partners who leverage our SDDC technologies to create cloud services addressing the needs of customers globally. IBM was our first VCPP partner to offer VMware Cloud Foundation as a service, which enables their customers to leverage our SDDC technologies on IBM Cloud in their worldwide cloud data centers.

VMware Cloud Services

VMware Cloud Services are new SaaS offerings that optimize cloud usage and cost, improve cloud security and compliance, monitor application and cloud infrastructure, and automate the deployment, management and migration of applications and data across vSphere, non-vSphere, hybrid and public clouds. VMware Cloud Services enable our customers to run, manage, connect and better secure their applications across hybrid and public clouds, including AWS, Azure, Google Cloud Platform and IBM Cloud, as well as all devices in a common operating environment, regardless whether the underlying infrastructure is VMware-based.

End-User Computing

Our EUC portfolio offers a digital workspace to enable our customers to more securely deliver access to applications and data for their end users from any device of the user’s choice and from any location. Our EUC solutions are designed to optimize simplicity and choice for end users, while providing more security and control to corporate IT organizations. IT organizations can enhance their enterprise security for corporate applications, data and endpoints utilizing our EUC solutions.

Our complete EUC solution consists of VMware Workspace ONE (“Workspace ONE”), our digital workspace platform that more securely delivers and manages any application on any device by integrating access control, application management and multi-platform endpoint management. Workspace ONE is powered by Unified Endpoint Management (formerly known as AirWatch) and VMware Horizon (“Horizon”) application and desktop virtualization, tied together with a common access control layer:

- *Unified Endpoint Management*— a platform built to manage and secure endpoints across all major operating systems from a single management console, enabling customers to effectively manage, secure and benefit from “bring your own device” programs.
- *Horizon*— a virtual platform that provides a streamlined approach to delivering, protecting and managing virtual desktops and applications from one digital workspace, while containing costs and allowing end users to work anytime, anywhere and across any device.

While Unified Endpoint Management and Horizon are also offered separately, together this solution provides customers with a complete digital workspace solution that combines identity, mobile management, and application and desktop virtualization solutions. Through the continued expansion of our virtual desktop portfolio, we offer customers the opportunity to run virtual desktops as-a-service through multiple environments including the Azure platform, VMware Cloud on AWS and IBM Cloud.

Technology Alliances

We have more than 1,300 technology partners with whom we bring joint offerings to the marketplace and over 4,000 active cloud provider partners. We classify our partners as follows:

Independent Hardware Vendors (“IHVs”) —we have established relationships with large system vendors, including Cisco, Fujitsu, HPE, IBM, Lenovo and Hitachi Vantara for joint certification and co-development, and we continue to work closely with Dell. We also work closely with Intel, Nvidia and other IHVs to provide input on product development to enable them to deliver hardware advancements that benefit virtualization users. We coordinate with the leading storage and networking vendors to ensure joint interoperability and enable our software to access their differentiated functionality.

Independent Software Vendors (“ISVs”) —we partner with leading systems management, infrastructure software and application software vendors including healthcare, telecom, finance and retail leaders to deliver value-added products that integrate with our products.

VMware Cloud Providers —we have established partnerships with over 4,000 active cloud providers including CenturyLink, Fujitsu, IBM, KPN, NTT, OVH, Rackspace, Softbank, Telefonica, Tieto and Virtustream, to enable them to host and deliver enterprise-class hybrid clouds as a way for enterprises to extend their data centers to external clouds, while preserving security, compliance and quality of service.

In addition to our base of active cloud provider partnerships, we have a strategic alliance with AWS to build and deliver an integrated hybrid offering, VMware Cloud on AWS, that enables customers to run applications across vSphere-based private, public and hybrid cloud environments.

Our Technology Alliance Partner (“TAP”) program facilitates joint solution creation and coordinated go-to-market activities for our greater than 1,300 technology partner ecosystem. Created exclusively for IHV and ISV partners, the TAP program gives technology partners the ability to test, integrate and package application software, infrastructure and hardware products with our products and services across the SDDC, EUC and Hybrid Cloud Computing areas—on premises or in the cloud.

Our ISVs and other alliance partners, developers and additional VMware community members continue to distribute software applications as virtual appliances. We invest significant capital in testing and certification of infrastructure to rigorously ensure our software is compatible with major hardware and software products.

Research and Development

We have made, and expect to continue to make, significant investments in research and development (“R&D”). We have assembled an experienced group of developers with compute, storage, management, hybrid and public cloud, networking and security, traditional, cloud native and SaaS applications, digital workspace and mobility, container and open source software expertise. We also have strong ties to leading academic institutions around the world, and we invest in joint research with academia.

We prioritize our product development efforts through a combination of engineering-driven innovation and customer- and market-driven feedback. Our R&D culture places a high value on innovation, quality and open collaboration with our partners. We currently participate in numerous standards groups, and our employees hold a variety of standards organization leadership positions.

We continue to invest in our key growth areas, including NSX, vSAN, VMware Cloud on AWS and cloud-delivered services, while also investing in areas that we expect to be significant growth drivers in future periods.

Sales and Marketing

We have a highly leveraged go-to-market strategy that includes a direct sales force, including a specialized sales force for our key growth products, and our channel partners.

We have established ongoing business relationships with our distributors. Our distributors purchase software licenses and software support from us for resale to end-user customers via resellers. These resellers are part of our VMware Partner Network, which offers resellers pricing incentives, rebates, sales and product training through the VMware Partner Central Web portal, and access to the worldwide network of VMware distributors. In addition, our channel partner network includes certain systems integrators and resellers trained and certified to deliver consulting services and solutions leveraging our products.

We generally do not have long-term contracts or minimum-purchase commitments with our distributors, resellers, system vendors and systems integrators, and our contracts with these channel partners do not prohibit them from offering products or services that compete with ours.

End users can purchase our offerings through discrete purchases to meet their immediate needs or through the adoption of enterprise agreements (“EAs”). EAs are comprehensive volume license offerings that provide for multi-year maintenance and support at negotiated prices. EAs enable us to build long-term relationships with our customers as they commit to our virtual infrastructure solutions. Our sales cycle can vary greatly depending on numerous factors, including the size and complexity of the proposed offering and customer’s infrastructure footprint.

In establishing list prices for our products, we take into account, among other numerous factors, the value our products and solutions deliver and the cost of alternative virtualization, end-user computing and hardware solutions.

Our marketing efforts focus on communicating the benefits of our solutions and educating our customers, distributors, resellers, system vendors, systems integrators, the media and analysts about the advantages of our innovative virtualization technology, cloud services and digital workspace solutions. We raise awareness of our company and brands, market our products and generate sales leads through VMware and industry events, public relations efforts, marketing materials, advertising, direct marketing, social media initiatives, free downloads and our website. We have invested in multiple online communities that enable customers and partners to share and discuss sales and development resources, best practices implementation and industry trends among other topics. Our annual user conference, VMworld, is held in both the United States (“U.S.”) and Europe, while our vForum events are held in the Asia Pacific and Japan region. We also offer management presentations, seminars and webinars on our products of virtualization, EUC and cloud services. We believe the combination of these activities strengthens our brand and enhances our leading positions in our industry.

We continue joint marketing, sales, branding and product development efforts with Dell and other Dell companies to enhance the collective value we deliver to our mutual customers. Our collective business with Dell continued to create synergies that benefited our sales during fiscal 2019, and, since Dell's acquisition of EMC, bookings through Dell sales channels have grown more rapidly than through non-Dell resellers and distributors. We also have strategic partnerships with AWS and IBM to jointly provide the expertise, solutions and go-to-market capabilities to help our customers efficiently and securely extend their proven software-defined solutions into public clouds, utilizing the tools and processes with which our customers are already familiar.

Our business is subject to seasonality in the sale of our products and services. For example, our fourth quarter revenue is affected by a number of seasonal factors, including year-end spending trends which impact the timing of renewals of our EAs and support and maintenance contracts.

Backlog

Backlog is comprised of unfulfilled purchase orders or unfulfilled executed agreements at the end of a given period and is net of related estimated rebates and marketing development funds. As of February 1, 2019, our total backlog was approximately \$449 million. Backlog primarily consists of licenses, maintenance and services. Our backlog related to licenses was approximately \$147 million, which we generally expect to deliver and recognize as revenue during the following quarter. As of February 2, 2018, total backlog was approximately \$285 million and backlog related to licenses was approximately \$99 million.

The amount and composition of backlog will fluctuate period to period, and backlog is managed based upon multiple considerations, including product and geography. We do not believe that the amount of backlog is indicative of future sales or revenue or that the mix of backlog at the end of any given period correlates with actual sales performance of a particular geography or particular products or services.

Customers

Our product offerings allow customers to manage IT resources across private clouds and complex multi-cloud, multi-device environments. Customer deployments range in size from a single virtualized server for small businesses to thousands of virtual machines and managed devices for our largest enterprise customers.

During fiscal 2019, two distributors, who purchased software licenses and software support from us for resale to end-user customers directly or via resellers, each accounted for over 10% of our consolidated revenue. Arrow Electronics, Inc. and Tech Data Corporation accounted for 14% and 13%, respectively, of our consolidated revenue in fiscal 2019. Our distribution agreements are typically terminable at will by either party upon 30 to 90 days' prior written notice to the other party, and neither party has any obligation to purchase or sell any products under the agreement.

During fiscal 2019, revenue from Dell, including purchases of products and services directly from us, as well as through our channel partners, accounted for 25% of our consolidated revenue.

Competition

We face intense competition across all markets for our products and services. We believe that the key factors in our ability to successfully compete include the level of reliability, interoperability and new functionality of our product and service offerings; the ability of our product offerings to support multiple hardware platforms, operating systems, applications frameworks and public cloud platforms; our ability to anticipate customer needs in rapidly evolving markets for IT resources; the pricing of our product and service offerings; the ability to integrate open source technologies that are critical in private and public cloud computing architectures; the ability to attract and retain key employees; and the ability to maintain and expand our ecosystem of technology partners, service providers and sales channel partners. While we believe that we are a technology leader in virtualization and cloud infrastructure solutions and have a strong, favorable image with our customers, many of our current or potential competitors have longer operating histories, greater name recognition, larger customer bases and significantly greater financial, technical, sales, marketing and other resources than we do. Additionally, the adoption of public cloud, micro-services, containers and open source technologies has the potential to erode our profitability.

We face competition from, among others:

Providers of public cloud infrastructure and SaaS-based offerings. As businesses increasingly utilize public cloud and SaaS-based offerings, they are building more of their new compute workloads off-premises and may also shift some of their existing workloads. As a result, the demand for on-premises IT resources is expected to slow, and our products and services will need to increasingly compete for customers' IT workloads with off-premises public cloud and SaaS-based offerings. If our private, hybrid and public cloud products and services fail to address evolving customer requirements, the demand for our virtualization products and services may decline, and we could experience lower growth. Additionally, VCPP offerings from our partners may compete directly with infrastructure-as-a-service ("IaaS") offerings from various public cloud providers such as AWS and Microsoft. Many of these cloud providers are partnering with on-premises hardware vendors to deliver their cloud

platform as an on-premise solution, including Microsoft Azure Stack (“Azure Stack”) and AWS Outposts. In fiscal 2018, we made VMware Cloud on AWS, a strategic alliance with AWS to deliver a vSphere-based cloud service running in AWS data centers, available in certain geographies. Our strategic alliance with AWS may also be seen as competitive with VCPP offerings and adversely affect our relationship with VCPP partners, while some VCPP partners may elect to include VMware Cloud on AWS as part of their managed services provider offerings. In addition, in November 2018, when AWS announced AWS Outposts, we extended our collaboration with AWS by previewing offerings that will run on AWS Outposts. To the extent customers choose to operate native AWS environments (or similar non-VMware environments, such as Azure Stack) in their data centers in lieu of purchasing our on-premises and hybrid cloud products, our operating results could be materially adversely affected.

Large, diversified enterprise software and hardware companies. These competitors supply a wide variety of products and services to, and have well-established relationships with, our current and prospective end users. For example, small- to medium-sized businesses and companies in emerging markets that are evaluating the adoption of virtualization-based technologies and solutions may be inclined to consider Microsoft solutions because of their existing use of Windows and Office products. Some of these competitors have in the past and may in the future take advantage of their existing relationships to engage in business practices that make our products and services less attractive to our end users. Other competitors have limited or denied support for their applications running in VMware virtualization environments. In addition, these competitors could integrate competitive capabilities into their existing products and services and make them available without additional charge. For example, Oracle provides free server virtualization software intended to support Oracle and non-Oracle applications, Microsoft offers its own server, network, and storage virtualization software packaged with its Windows Server product as well as built-in virtualization in the client version of Windows and Cisco includes network virtualization technology in many of their data center networking platforms. As a result, our existing and prospective customers may elect to use products that are perceived to be “free” or “very low cost” instead of purchasing our products and services for certain applications where they do not believe that more advanced and robust capabilities are required.

Companies offering competing platforms based on open source technologies. Open source technologies for virtualization, containerization and cloud platforms such as Xen, KVM, Docker, rkt, OpenShift, Mesos, Kubernetes and OpenStack appear to provide pricing competition and enable competing vendors to leverage these open source technologies to compete directly with our SDDC initiative. A number of enterprise IT vendors have released solutions based on open source technologies that are targeting data center virtualization and private cloud, including Red Hat, which was recently acquired by IBM, and Nutanix. We are delivering container technologies such as PKS and Cloud Native Application technologies that are designed to help customers adopt micro-services architectures. The adoption of distributed micro-service application architectures, and their alignment with container technologies, represents an emerging area of competition.

Other industry alliances. Many of our competitors have entered into or extended partnerships or other strategic relationships to offer more comprehensive virtualization and cloud computing solutions than they individually had offered. We expect these trends to continue as companies attempt to strengthen or maintain their positions in the evolving virtualization infrastructure and enterprise IT solutions industry. These alliances may result in more compelling product and service offerings than we offer.

Our partners and members of our developer and technology partner ecosystem. We face competition from our partners. For example, third parties currently selling our products and services could build and market their own competing products and services or market competing products and services of other vendors. Additionally, as formerly distinct sectors of enterprise IT such as software-based virtualization and hardware-based server, networking and storage solutions converge, we also increasingly compete with companies who are members of our developer and technology partner ecosystem. For example, in October 2018, one of our important partners and customers, IBM, announced it had reached an agreement to acquire Red Hat, one of our competitors in the cloud native applications space. Consequently, we may find it more difficult to continue to work together productively on other projects, and the advantages we derive from our ecosystem could diminish.

This competition could result in increased pricing pressure and sales and marketing expenses, thereby materially reducing our operating margins, and could also prevent our new products and services from gaining market acceptance, thereby harming our ability to increase, or causing us to lose, market share.

Intellectual Property

As of February 1, 2019, over 2,300 patents of varying duration issued by the U.S. Patent and Trademark Office have been granted or assigned to us. We also have been granted or assigned patents from other countries. These patents cover various aspects of our server virtualization and other technologies. We also have numerous pending U.S. provisional and non-provisional patent applications, and numerous pending foreign and international patent applications, that cover other aspects of our virtualization and other technologies.

We have federal trademark registrations in the U.S. for “VMWARE,” “VMWORLD,” “VSPHERE,” “VCLOUD,” “VCENTER SERVER,” “VMOTION,” “HORIZON,” “AIRWATCH,” “VREALIZE,” “VFABRIC,” “VCLLOUD,”

“WORKSPACE ONE,” “ESX,” “VMWARE NSX,” “VMWARE CLOUD FOUNDATION,” “VELOCLOUD,” and numerous other trademarks. We have also registered trademarks in several foreign countries.

We rely on a combination of patent, trademark, copyright and trade secret laws in the U.S. and other jurisdictions, as well as confidentiality procedures and contractual provisions to protect our intellectual property rights and our brand.

We enforce our intellectual property rights in the U.S. and several foreign countries. Despite our efforts, the steps we have taken to protect our proprietary rights may not be adequate to preclude misappropriation of our proprietary information or infringement of our intellectual property rights, and our ability to police such misappropriation or infringement is uncertain, particularly in countries outside of the United States. U.S. patent filings are intended to provide the holder with a right to exclude others from making, using, offering to sell, selling or importing into the U.S. products covered by the claims of granted patents.

Our granted U.S. patents, and any future patents (to the extent they are issued), may be contested, circumvented or invalidated in the future. Moreover, the rights granted under any issued patents may not provide us with proprietary protection or competitive advantages, and we may not be able to prevent third parties from infringing these patents. Therefore, the exact effect of our patents and the other steps we have taken to protect our intellectual property cannot be predicted with certainty.

Employees

As of February 1, 2019, we had approximately 24,200 employees in 125 offices worldwide, less than 5% of which were contracted through Dell. None of our employees are represented by labor unions, and we consider current employee relations to be good.

We contract with Dell subsidiaries for support from Dell personnel who are managed by us on a full-time basis. These individuals are located in countries in which we do not currently have an operating subsidiary and are predominantly dedicated to our sales and marketing efforts. We use contractors from time to time for temporary assignments and in locations in which we do not currently have operating subsidiaries. In the event that these contractor resources were not available, we do not believe that this would have a material adverse effect on our operations.

Available Information

Our website is located at www.vmware.com, and our investor relations website is located at <http://ir.vmware.com>. Our goal is to maintain the investor relations website as a portal through which investors can easily find or navigate to pertinent information about us, all of which is made available free of charge, including:

- our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports, as soon as reasonably practicable after we electronically file that material with or furnish it to the Securities and Exchange Commission (“SEC”);
- announcements of investor conferences, speeches and events at which our executives discuss our products, services and competitive strategies;
- webcasts of our quarterly earnings calls and links to webcasts of investor conferences at which our executives appear (archives of these events are also available for a limited time);
- additional information on financial metrics, including reconciliations of non-GAAP financial measures discussed in our presentations to the nearest comparable GAAP measure;
- press releases on quarterly earnings, product and service announcements, legal developments and international news;
- corporate governance information including our certificate of incorporation, bylaws, corporate governance guidelines, board committee charters, business conduct guidelines (which constitutes our code of business conduct and ethics) and other governance-related policies;
- other news, blogs and announcements that we may post from time to time that investors might find useful or interesting; and
- opportunities to sign up for email alerts and RSS feeds to have information pushed in real time.

The information found on our website is not part of, and is not incorporated by reference into, this or any other report we file with, or furnish to, the SEC. The SEC also maintains a website at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

EXECUTIVE OFFICERS OF THE REGISTRANT

The names of our executive officers and their ages as of March 19, 2019, are as follows:

Name	Age	Position(s)
Patrick Gelsinger	58	Chief Executive Officer and Director
Zane Rowe	48	Chief Financial Officer and Executive Vice President
Maurizio Carli	60	Executive Vice President, Worldwide Sales and Services
Amy Fliegelman Olli	55	Senior Vice President, General Counsel and Secretary
Sanjay Poonen	49	Chief Operating Officer, Customer Operations
Rangarajan (Raghu) Raghuram	56	Chief Operating Officer, Products and Cloud Services
Rajiv Ramaswami	53	Chief Operating Officer, Products and Cloud Services

Patrick Gelsinger has served as Chief Executive Officer and a director of VMware since September 2012. Prior to joining VMware, he served as President and Chief Operating Officer, EMC Information Infrastructure Products at EMC from September 2009 to August 2012. Mr. Gelsinger joined EMC from Intel Corporation, where he served as Senior Vice President and Co-General Manager of Intel Corporation's Digital Enterprise Group from 2005 to September 2009 and served as Intel's Senior Vice President, Chief Technology Officer from 2002 to 2005. Prior to that, Mr. Gelsinger led Intel's Desktop Products Group.

Zane Rowe has served as VMware's Chief Financial Officer and Executive Vice President since March 2016. Prior to joining VMware, he was EMC's Executive Vice President and Chief Financial Officer from October 2014 until February 2016. Prior to joining EMC, Mr. Rowe was Vice President of North American Sales of Apple Inc., a technology company that designs, develops, and sells consumer electronics, computer software, online services, and personal computers, from May 2012 until May 2014. He was Executive Vice President and Chief Financial Officer of United Continental Holdings, Inc., an airline holdings company, from October 2010 until April 2012 and was Executive Vice President and Chief Financial Officer of Continental Airlines from August 2008 to September 2010. Mr. Rowe joined Continental Airlines in 1993. Mr. Rowe currently serves on the boards of Sabre Corporation and Pivotal, an indirect majority-owned subsidiary of VMware's parent company, Dell, and in which VMware has an ownership interest.

Maurizio Carli has served as VMware's Executive Vice President, Worldwide Sales and Services since February 2017. Mr. Carli previously served as VMware's Executive Vice President, Worldwide Sales since April 2016, Corporate Senior Vice President and General Manager, Americas from April 2015 to March 2016, and as Senior Vice President and General Manager, EMEA from December 2008 to April 2015. Before joining VMware, Mr. Carli held executive sales management positions at Google Inc., where he served as Managing Director, Enterprise Business, EMEA from June 2008 to November 2008; Business Objects S.A., where he served as Senior Vice President & General Manager, EMEA, from December 2002 to December 2007; and at IBM Corporation, where he spent 19 years, from 1984 to 2002, serving in a variety of sales, marketing and leadership positions, including Vice President Software Group from 2000 to 2002 and General Manager and Vice President Tivoli EMEA from 1998 to 2000.

Amy Fliegelman Olli joined VMware as Senior Vice President and General Counsel in August 2017, and was appointed as Secretary in October 2017. Prior to joining VMware, Ms. Fliegelman Olli served as Senior Vice President and General Counsel of Avaya, Inc., a provider of contact center, unified communications and networking products, from June 2014 through August 2017. Previously, she was the General Counsel of CA, Inc., a provider of software solutions, from September 2006 to June 2014 where her responsibilities covered all legal, governance, compliance, internal audit, security, risk management and controls matters. Ms. Fliegelman Olli also spent 18 years with IBM Corporation, ultimately serving as Vice President and General Counsel for the Americas and Europe.

Sanjay Poonen has served as VMware's Chief Operating Officer, Customer Operations since October 2016. Prior to that he served as Executive Vice President and General Manager, End-User Computing, Head of Global Marketing from April 2016 to October 2016. He joined VMware as Executive Vice President and General Manager, End-User Computing in August 2013. Prior to joining VMware, he spent more than seven years at SAP AG, an enterprise application software and services company, serving as President and Corporate Officer of Platform Solutions and the Mobile Division from April 2012 to July 2013, prior to that as President of Global Solutions from November 2010 to March 2012, as Executive Vice President of Performance Optimization Apps from June 2008 to September 2009 and Senior Vice President of Analytics from April 2006 to May 2008. Mr. Poonen's over 20 years of technology industry experience also included executive-level positions with Symantec and Veritas, and product management and engineering positions with Alphablox Corporation, Apple, Inc. and Microsoft Corporation.

Rangarajan (Raghu) Raghuram has served as VMware's Chief Operating Officer, Products and Cloud Services since October 2016. Prior to that he served as Executive Vice President, Software-Defined Data Center Division from April 2012 to October 2016. Mr. Raghuram joined VMware in 2003 and has held multiple product management and marketing roles. Mr. Raghuram served as Senior Vice President and General Manager, Cloud Infrastructure and Management, Virtualization and Cloud Platforms, and Enterprise Products, from December 2009 through March 2012. Mr. Raghuram previously served as Vice President of VMware's Server Business Unit and of Product and Solutions Marketing from September 2003 through December 2009. Prior to VMware, Mr. Raghuram held product management and marketing roles at Netscape Communications Corporation and Bang Networks, Inc.

Rajiv Ramaswami has served as VMware's Chief Operating Officer, Products and Cloud Services since October 2016. Mr. Ramaswami joined VMware in April 2016 and served as VMware's Executive Vice President and General Manager of its Networking and Security business. Prior to joining VMware he was Executive Vice President and General Manager of the Infrastructure & Networking Group of Broadcom Corporation, a semiconductor company, from 2010. Prior to that he was Vice President and General Manager of the Cloud Services and Switching Technology Group at Cisco Systems, Inc., where he also served as Vice President and General Manager for a variety of business units in Optical, Switching and Storage Networking. Prior to joining Cisco, he served in various technical and leadership positions at Xros, Tellabs Inc. and IBM's Thomas J. Watson Research Center. Mr. Ramaswami is a member of the board of directors of NeoPhotonics Corporation.

ITEM 1A. RISK FACTORS

The risk factors that appear below could materially affect our business, financial condition and operating results. The risks and uncertainties described below are not the only risks and uncertainties facing us. Our business is also subject to general risks and uncertainties that affect many other companies. Specific risk factors related to our status as a controlled subsidiary of Dell overlapping business opportunities, Dell's ability to control certain transactions and resource allocations and related persons transactions with Dell and its other affiliated companies are set forth below under the heading "Risks Related to Our Relationship with Dell."

Risks Related to Our Business

Our success depends increasingly on customer acceptance of our newer products and services.

Our products and services are primarily based on server virtualization and related compute technologies used for virtualizing on-premises data center servers, which form the foundation for private cloud computing. As the market for server virtualization continues to mature, the rate of growth in license sales of vSphere has declined. We are increasingly directing our product development and marketing efforts toward products and services that enable businesses to utilize virtualization as the foundation for private, public and hybrid cloud-based computing and mobile computing, including our vSphere-based SDDC products such as our vRealize management and automation offerings, vSAN storage virtualization offerings, and NSX offerings, as well as our Horizon client virtualization offerings, VMware AirWatch ("AirWatch") mobile device management offerings and our VMware Cloud on AWS offering. We have also been introducing SaaS versions of our on-premises products, including VMware Horizon Suite and certain AirWatch offerings, and are working to extend our SDDC and NSX offerings and management software into the public cloud and to introduce cloud products and services by investing in cloud and SaaS initiatives and partnering with public cloud providers such as AWS and IBM. Recently, VMware has begun to build, invest in, and acquire a range of SaaS and cloud-native technologies and products, including those acquired through our Heptio, CloudHealth Technologies, Inc., and VeloCloud Networks, Inc. ("VeloCloud") acquisitions. These initiatives present new and difficult technological and compliance challenges, and significant investments continue to be required to develop or acquire solutions to address those challenges. Our success depends on our current and future customers perceiving technological and operational benefits and cost savings associated with adopting our private and hybrid cloud solutions and our client virtualization and mobile device management solutions. As the market for our server virtualization products continues to mature, and the scale of our business continues to increase, our rate of revenue growth increasingly depends upon the success of our newer product and service offerings. To the extent that our newer products and services are adopted more slowly than revenue growth in our established server virtualization offerings declines, our revenue growth rates may slow materially or our revenue may decline substantially, we may fail to realize returns on our investments in new initiatives and our operating results could be materially adversely affected.

A significant decrease in demand for our server virtualization products would adversely affect our operating results.

A significant portion of our revenue is derived, and will for the foreseeable future continue to be derived, from our server virtualization products. As more businesses achieve high levels of virtualization in their data centers, the market for our vSphere product continues to mature. Additionally, as businesses increasingly utilize public cloud and SaaS-based offerings, they are building more of their new compute workloads off-premises and are increasingly shifting some of their existing and many of their new workloads to public cloud providers, thereby limiting growth, and potentially reducing, the market for on-premises deployments of vSphere. Although sales of vSphere have declined as a portion of our overall business, and we expect

this trend to continue, vSphere remains key to our future growth, as it serves as the foundation for our newer SDDC, network virtualization and our newer hybrid cloud and SaaS offerings. Although we have launched, and are continuing to develop products to extend our vSphere-based SDDC offerings to the public cloud, due to our product concentration a significant decrease in demand for our server virtualization products would adversely affect our operating results.

We face intense competition that could adversely affect our operating results.

The virtualization, cloud computing, end-user computing and software-defined data center industries are interrelated and rapidly evolving, and we face intense competition across all the markets for our products and services. Many of our current or potential competitors have longer operating histories, greater name recognition, larger customer bases and significantly greater financial, technical, sales, marketing and other resources than we do. Additionally, the adoption of public cloud, micro-services, containers, and open source technologies has the potential to erode our profitability.

We face competition from, among others:

Providers of public cloud infrastructure and SaaS-based offerings. As businesses increasingly utilize public cloud and SaaS-based offerings, they are building more of their new compute workloads off-premises and may also shift some of their existing workloads. As a result, the demand for on-premises IT resources is expected to slow, and our products and services will need to increasingly compete for customers' IT workloads with off-premises public cloud and SaaS-based offerings. If our private, hybrid and public cloud products and services fail to address evolving customer requirements, the demand for VMware's virtualization products and services may decline, and we could experience lower growth. Additionally, VCPP offerings from our partners may compete directly with IaaS offerings from various public cloud providers such as AWS and Microsoft. Many of these cloud providers are partnering with on-premises hardware vendors to deliver their cloud platform as an on-premises solution, including Azure Stack and AWS Outposts. In fiscal 2018, we made VMware Cloud on AWS, a strategic alliance with AWS to deliver a vSphere-based cloud service running in AWS data centers, available in certain geographies. Our strategic alliance with AWS may also be seen as competitive with VCPP offerings and adversely affect our relationship with VCPP partners, while some VCPP partners may elect to include VMware Cloud on AWS as part of their managed services provider offerings. In addition, in November 2018, when AWS announced AWS Outposts we extended our collaboration with AWS by previewing offerings that will run on AWS Outposts. To the extent customers choose to operate native AWS environments (or similar non-VMware environments, such as Azure Stack) in their data centers in lieu of purchasing VMware's on-premises and hybrid cloud products, our operating results could be materially adversely affected.

Large, diversified enterprise software and hardware companies. These competitors supply a wide variety of products and services to, and have well-established relationships with, our current and prospective end users. For example, small- to medium-sized businesses and companies in emerging markets that are evaluating the adoption of virtualization-based technologies and solutions may be inclined to consider Microsoft solutions because of their existing use of Windows and Office products. Some of these competitors have in the past and may in the future take advantage of their existing relationships to engage in business practices that make our products and services less attractive to our end users. Other competitors have limited or denied support for their applications running in VMware virtualization environments. In addition, these competitors could integrate competitive capabilities into their existing products and services and make them available without additional charge. For example, Oracle provides free server virtualization software intended to support Oracle and non-Oracle applications, Microsoft offers its own server, network, and storage virtualization software packaged with its Windows Server product as well as built-in virtualization in the client version of Windows and Cisco includes network virtualization technology in many of their data center networking platforms. As a result, existing and prospective VMware customers may elect to use products that are perceived to be "free" or "very low cost" instead of purchasing VMware products and services for certain applications where they do not believe that more advanced and robust capabilities are required.

Companies offering competing platforms based on open source technologies. Open source technologies for virtualization, containerization and cloud platforms such as Xen, KVM, Docker, rkt, OpenShift, Mesos, Kubernetes and OpenStack appear to provide pricing competition and enable competing vendors to leverage these open source technologies to compete directly with our SDDC initiative. A number of enterprise IT vendors have released solutions based on open source technologies that are targeting data center virtualization and private cloud, including Red Hat, which was recently acquired by IBM, and Nutanix. VMware is delivering container technologies such as PKS, and Cloud Native Application technologies that are designed to help customers adopt micro-services architectures. The adoption of distributed micro-service application architectures, and their alignment with container technologies, represents an emerging area of competition.

Other industry alliances. Many of our competitors have entered into or extended partnerships or other strategic relationships to offer more comprehensive virtualization and cloud computing solutions than they individually had offered. We expect these trends to continue as companies attempt to strengthen or maintain their positions in the evolving virtualization infrastructure and enterprise IT solutions industry. These alliances may result in more compelling product and service offerings than we offer.

Our partners and members of our developer and technology partner ecosystem. We face competition from our partners. For example, third parties currently selling our products and services could build and market their own competing products and services or market competing products and services of other vendors. Additionally, as formerly distinct sectors of enterprise IT such as software-based virtualization and hardware-based server, networking and storage solutions converge, we also increasingly compete with companies who are members of our developer and technology partner ecosystem. For example, in October 2018, one of our important partners and customers, IBM, announced it had reached an agreement to acquire Red Hat, one of our competitors in the cloud native applications space. Consequently, we may find it more difficult to continue to work together productively on other projects, and the advantages we derive from our ecosystem could diminish.

This competition could result in increased pricing pressure and sales and marketing expenses, thereby materially reducing our operating margins, and could also prevent our new products and services from gaining market acceptance, thereby harming our ability to increase, or causing us to lose, market share.

Competition for our target employees is intense and costly, and we may not be able to attract and retain highly skilled employees.

To execute on our strategy, we must continue to attract and retain highly qualified personnel. Competition for these personnel is intense, especially for senior sales executives and engineers with significant experience designing and developing software and cloud offerings. We may not be successful in attracting and retaining qualified personnel. We have in the past experienced, and we expect to continue to experience in the future, difficulty in hiring and retaining highly skilled employees with appropriate qualifications. Many of the companies with which we compete for experienced personnel have greater resources than we have. Research and development personnel are also aggressively recruited by startup and emerging growth companies, which are especially active in many of the technical areas and geographic regions in which we conduct product and service development. Competition for our key personnel results in increased costs in the form of cash and stock-based compensation and can have a dilutive impact on our stock. Additionally, changes in immigration and work permit laws and regulations or the administration or interpretation of such laws or regulations could impair our ability to attract and retain highly qualified employees. If we fail to attract new personnel or fail to retain and motivate our current personnel, our business and future growth prospects could suffer.

Adverse economic conditions may harm our business.

Our business depends on the overall demand for IT and on the economic health of our current and prospective customers. The purchase of our products and services is often discretionary and may involve a significant commitment of capital and other resources. Weak economic conditions or significant uncertainty regarding the stability of financial markets, including as a result of volatility in the stock market or recent changes in tariffs and trade agreements, could adversely impact our business, financial condition and operating results in a number of ways, including by lengthening sales cycles, affecting the size of EAs that customers will commit to, reducing the level of our non-EA transactional sales, lowering prices for our products and services, reducing unit sales and reducing the rate of adoption of our products and services by new customers and the willingness of current customers to purchase upgrades to our existing products and services. For example, a recurrence of the sovereign debt crisis in Europe, repercussions from the United Kingdom's ("U.K.") planned exit from the European Union ("EU") ("Brexit") or that region's failure to sustain its recovery from recession would threaten to suppress demand and our customers' access to credit in that region which is an important market for our products and services. In addition, political and economic instability created by Brexit has caused and may continue to cause significant volatility in global financial markets. In response to sustained economic uncertainty, many national and local governments that are current or prospective customers for our products and services, including the U.S. federal government, have made, or threatened to make, significant spending cutbacks which could reduce the amount of government spending on IT and the potential demand for our products and services from the government sector.

Regional economic uncertainty can also result in general and ongoing tightening in the credit markets, lower levels of liquidity, increases in the rates of default and bankruptcy and significant volatility in the credit, equity and fixed income markets. Changes in governmental fiscal, monetary and tax policies may also impact interest rates on credit and debt, which have been at relatively low levels for several years. As a result, current or potential customers may be unable to fund software purchases, which could cause them to delay, decrease or cancel purchases of our products and services. Increases in our cost of borrowing could also impact our ability to access capital markets should we wish to raise additional funding for business investments, which could adversely affect our ability to repay or refinance our outstanding indebtedness, fund future product development and acquisitions or conduct stock buybacks.

The loss of key management personnel could harm our business.

We depend on the continued services of key management personnel. We generally do not have employment or non-compete agreements with our employees, and, therefore, they could terminate their employment with us at any time without penalty and could pursue employment opportunities with any of our competitors. In addition, we do not maintain any key-person life insurance policies. The loss of key management personnel could harm our business.

We may not be able to respond to rapid technological changes with new solutions and services offerings.

The software-defined data center, hybrid cloud computing and end-user computing industries are characterized by rapid technological change, changing customer needs, frequent new software product introductions and evolving industry standards. The introduction of third-party solutions embodying new technologies and the emergence of new industry standards could make our existing and future software solutions obsolete and unmarketable. Cloud computing has proven to be a disruptive technology that is altering the way that businesses consume, manage and provide physical IT resources, applications, data and IT services. We may not be able to establish or sustain our thought leadership in the cloud computing and enterprise software fields, and our customers may not view our products and services as cost effective, innovative and best-of-breed, which could result in a reduction in market share and our inability to command a pricing premium over competitor products and services. We may not be able to develop updated products and services that keep pace with technological developments and emerging industry standards, that address the increasingly sophisticated needs of our customers or that interoperate with new or updated operating systems and hardware devices. We may also fail to adequately anticipate and prepare for the commercialization of emerging technologies such as blockchain and the development of new markets and applications for our technology such as the IoT and “edge” computing and thereby fail to take advantage of new market opportunities or fall behind early movers in those markets.

Our ability to react quickly to new technology trends and customer requirements is negatively impacted by the length of our development cycle for new products and services and product and service enhancements, which has frequently been longer than we originally anticipated. This is due in part to the increasing complexity of our product offerings as we increase their interoperability, and enable and maintain their compatibility with multiple IT resources such as public clouds utilized by our customers, which can significantly increase the development time and effort necessary to achieve the interoperability of our offerings while maintaining product quality. When we release significant new versions of our existing offerings, the complexity of our products may require existing customers to remove and replace prior versions in order to take full advantage of substantial new features and capabilities, which may subdue initial demand for the new versions or, conversely, depress demand for existing versions until the customer is ready to purchase and install the newest release. If we are unable to evolve our solutions and offerings in time to respond to and remain ahead of new technological developments, our ability to retain or increase market share and revenue in the software-defined data center, hybrid cloud computing and end-user computing industries could be materially adversely affected. With respect to our SDDC products, if we fail to introduce compelling new features in future upgrades to our vSphere product line, manage the transition to hybrid cloud platforms, develop new or tightly integrate existing applications for our virtualization technology that address customer requirements for integration, automation and management of their IT systems with public cloud resources, overall demand for products and services based on vSphere may decline. Additionally, if we fail to realize returns on investments in our newer NSX virtual networking, hyperconverged infrastructure, hybrid cloud and SaaS, and edge computing initiatives, our operating margins and results of operations will be adversely impacted.

Breaches of our cybersecurity systems or the systems of our vendors, partners and suppliers could seriously harm our business.

We increasingly depend upon our IT systems and the IT systems of key SaaS providers to conduct virtually all of our business operations, ranging from our internal operations and product development activities to our marketing and sales efforts and communications with our customers and business partners. Unauthorized parties (which may have included nation states and individuals sponsored by them) have penetrated our network security and our website in the past and such unauthorized parties may do so in the future. Employees or contractors have introduced vulnerabilities in, and enabled the exploitation of, our IT environments in the past and may do so in the future. These cyber-attacks, which are increasing in number and technical sophistication, threaten to misappropriate our proprietary information, cause interruptions of our IT services and commit fraud. Because the techniques used by unauthorized persons to access or sabotage networks change frequently and may not be recognized until launched against a target, we may be unable to anticipate these tactics. Further, if unauthorized access or sabotage remains undetected for an extended period of time, the effects of such breach could be exacerbated. In addition, sophisticated hardware and operating system software and applications that we produce or procure from third parties may contain defects in design or manufacture, including “bugs” and other problems that could unexpectedly interfere with the operation of our systems and processes. Our exposure to cybersecurity threats and negative consequences of cybersecurity breaches will likely increase as our customers conduct more purchase and service transactions online, and as we store increasing amounts of customer data and host or manage parts of customers’ businesses in cloud-based IT environments. Additionally, as we increasingly market the security features in our products, our products may be targeted by computer hackers seeking to compromise product security.

We have also outsourced a number of our business functions to third parties, and we rely upon distributors, resellers, system vendors and systems integrators to sell our products and services. Accordingly, if our cybersecurity systems and those of our contractors, partners and vendors fail to protect against breaches, our ability to conduct our business could be damaged in a number of ways, including:

- sensitive data regarding our business, including intellectual property and other proprietary data, could be stolen;
- our electronic communications systems, including email and other methods, could be disrupted, and our ability to conduct our business operations could be seriously damaged until such systems can be restored and secured;
- our ability to process customer orders and electronically deliver products and services could be degraded, and our distribution channels could be disrupted, resulting in delays in revenue recognition;
- defects and security vulnerabilities could be exploited or introduced into our software products or our hybrid cloud and SaaS offerings and impair or disrupt their availability, thereby damaging the reputation and perceived reliability and security of our products and services and potentially making the data systems of our customers vulnerable to further data loss and cyber incidents; and
- personally identifiable or confidential data of our customers, employees and business partners could be stolen or lost.

Should any of the above events occur, or are perceived to have occurred, we could be subject to significant claims for liability from our customers, we could face regulatory actions and sanctions from governmental agencies under privacy, data protection or other laws, our ability to protect our intellectual property rights could be compromised, our reputation and competitive position could be materially harmed, we could face material losses as the result of successful financial cyber-fraud schemes and we could incur significant costs in order to upgrade our cybersecurity systems and remediate damages. Consequently, our business, financial condition and operating results could be materially adversely affected.

Our operating results may fluctuate significantly.

Our operating results may fluctuate due to a variety of factors, many of which are outside of our control. As a result, comparing our operating results on a period-to-period basis may not be meaningful, and our past results should not be relied upon as an indication of our future performance. In addition, a significant portion of our quarterly sales typically occurs during the last two weeks of the quarter, which generally reflects customer buying patterns for enterprise technology. As a result, our quarterly operating results are difficult to predict even in the near term. If our revenue or operating results fall below the expectations of investors or securities analysts or below any guidance we may provide to the market, the price of our Class A common stock would likely decline substantially.

Factors that may cause fluctuations in our operating results include, among others, the factors described elsewhere in this risk factors section and the following:

- fluctuations in demand, adoption rates, sales cycles and pricing levels for our products and services;
- changes in customers' budgets for information technology purchases and in the timing of their purchasing decisions;
- the timing of announcements or releases of new or upgraded products and services by us or by our competitors;
- the timing and size of business realignment plans and restructuring charges;
- our ability to maintain scalable internal systems for reporting, order processing, license fulfillment, product delivery, purchasing, billing and general accounting, among other functions;
- our ability to control costs, including our operating expenses;
- the credit risks associated with our distributors, who account for a significant portion of our product revenue and accounts receivable, and our customers;
- the timing of when sales orders are processed, which can cause fluctuations in our backlog and impact our bookings and timing of revenue recognition;
- seasonal factors such as the end of fiscal period budget expenditures by our customers and the timing of holiday and vacation periods;
- renewal rates and the amounts of the renewals for EAs as original EA terms expire;
- the timing and amount of internally developed software development costs that may be capitalized;
- unplanned events that could affect market perception of the quality or cost-effectiveness of our products and solutions;
- fluctuations in the fair value of our investment in Pivotal, which is primarily based on Pivotal's closing stock price on the last trading day of each fiscal quarter;

- the impact of new accounting pronouncements, for example, the adoption of Accounting Standards Update (“ASU”) 2016-16, which could result in increased volatility in the provision for income taxes in periods in which transfers of intellectual property between our legal entities occur; and
- our ability to accurately predict the degree to which customers will elect to purchase our subscription-based offerings in place of licenses to our on-premises offerings.

We are exposed to foreign exchange risks.

Because we conduct business in currencies other than the U.S. dollar but report our operating results in U.S. dollars, we face exposure to fluctuations in currency exchange rates. For example, political and economic instability created by Brexit has resulted in significant volatility in the value of the British pound and other currencies, including the euro. During the twelve months ended February 1, 2019, approximately 30% of our sales were invoiced and collected in non-U.S. dollar denominated currencies. The realized gain or loss on foreign currency transactions is dependent upon the types of foreign currency transactions that we enter into, the exchange rates associated with these transactions and changes in those rates, the net realized gain or loss on our foreign currency forward contracts, and other factors. Although we hedge a portion of our foreign currency exposure, a significant fluctuation in exchange rates between the U.S. dollar and foreign currencies may adversely affect our operating results. For example, we experienced a measurable negative impact to our revenue in 2015 due to exchange rate fluctuations. Any future weakening of foreign currency exchange rates against the U.S. dollar would likely result in additional adverse impact on our revenue.

Our \$11 billion special dividend could limit our ability to fund significant future stock repurchases and strategic investments.

On December 28, 2018, we paid a special dividend of \$11 billion (the “Special Dividend”) to our stockholders. With payment of the Special Dividend, our cash, cash equivalents and short-term investments have declined significantly. While we believe our remaining cash balances and cash generated by our business operations will be sufficient to fund our operations and pursue our existing stock repurchase program and strategic plans, if our business operations do not generate the cash flows we expect, then our ability to fund future stock repurchases, invest in our business and pursue strategic alternatives, including business acquisitions, will be reduced, which could reduce our ability to manage dilution of our stock and limit our future growth.

We operate a global business that exposes us to additional risks.

Our international activities account for a substantial portion of our revenue and profits, a substantial portion of our employees work in non-U.S. locations, and we plan to further expand internationally. In addition, our investment portfolio includes investments in non-U.S. financial instruments and holdings in non-U.S. financial institutions, including European institutions. In addition to the risks described elsewhere in these risk factors, our international operations subject us to a variety of risks, including:

- difficulties in enforcing contracts and collecting accounts receivable and longer payment cycles, especially in emerging markets;
- difficulties in delivering support, training and documentation in certain foreign markets;
- tariffs and trade barriers, which could increase due to the current geopolitical climate, and other regulatory or contractual limitations on our ability to sell or develop our products and services in certain foreign markets;
- changes and instability in government policies and international trade arrangements that could adversely affect the ability of U.S.-based companies to conduct business in non-U.S. markets;
- economic or political instability and security concerns in countries that are important to our international sales and operations;
- difficulties in transferring funds from certain countries;
- increased compliance risks, particularly in emerging markets; and
- difficulties in maintaining appropriate controls relating to revenue recognition practices.

For example, we currently comply with a number of EU regulations that govern our sales, facilities and employees located in the U.K. There is considerable regulatory uncertainty regarding the impact of Brexit on the laws and regulations that we will need to comply with in the U.K. post-Brexit.

Another example is the ongoing efforts of the Chinese government to more closely regulate network security. In that respect, a Cyber Security Law came into effect on June 1, 2017. The Cyber Security Law promotes utilization of “secure and reliable” network products and services, requires the sale of certain key network equipment and network security products to be

subject to security certification, and imposes data localization measures and various network security measures relevant to a vaguely defined scope of “critical information infrastructure.” Among those network security measures is a requirement that certain network products and services procured by operators of “critical information infrastructure” undergo a formal security assessment in order to evaluate their “security” and “controllability.” The specific technical requirements of the security assessment have still not been fully defined.

Also, in December 2015, China enacted an Anti-Terrorism Law that gives local public security and state security authorities the broad discretionary authority to require companies to provide access to their equipment and decryption support in particular cases. Failure to comply with such requests can result in fines and imprisonment. In addition, a broad range of businesses will be required to verify the identities of customers and are prohibited from providing services to customers whose identities are unclear or who refuse to cooperate in the verification process. If we are not able to, or choose not to, comply with these and other information and network security standards that the Chinese government might implement in the future, our business in China may suffer.

There is also significant uncertainty about the future relationship between the U.S. and various other countries, most significantly China, with respect to trade policies, treaties, government regulations and tariffs. The current U.S. presidential administration has called for substantial changes to U.S. foreign trade policy with respect to China and other countries, including the possibility of imposing greater restrictions on international trade and significant increases in tariffs on goods imported into the U.S. Given the relatively fluid regulatory environment in China and the United States and uncertainty regarding how the U.S. or foreign governments will act with respect to tariffs, international trade agreements and policies, a trade war, further governmental action related to tariffs or international trade policies, or additional tax or other regulatory changes in the future could occur and could directly and adversely impact our financial results and results of operations.

Furthermore, if we fail to comply with legal and regulatory requirements covering the foreign activities of U.S. corporations, such as export control requirements and the Foreign Corrupt Practices Act, as well as with local regulatory requirements in non-U.S. jurisdictions, we may be exposed to significant fines and penalties and reputational harm. These risks will increase as we expand our operations in locations with a higher incidence of corruption and fraudulent business practices.

In addition, potential fallout from past disclosures related to the U.S. Internet and communications surveillance and possible efforts to enable increased surveillance could make foreign customers reluctant to purchase products and services from U.S.-based technology companies and impair our growth rate in foreign markets.

Our failure to manage any of these risks successfully could negatively affect our reputation and adversely affect our operating results.

We have outstanding indebtedness in the form of unsecured notes and may incur other debt in the future, which may adversely affect our financial condition and future financial results.

We have \$4,000 million in unsecured notes outstanding as well as an additional unsecured promissory note with an outstanding principal amount of \$270 million owed to Dell. We also have a \$1,000 million unsecured revolving credit facility (“Credit Facility”) that is currently undrawn. Our current and any future debt may adversely affect our financial condition and future financial results by, among other things:

- requiring the dedication of a portion of our expected cash flow from operations to service our indebtedness, thereby reducing the amount of expected cash flow available for other purposes, including capital expenditures and acquisitions; and
- limiting our flexibility in planning for, or reacting to, changes in our business and our industry.

The terms of our unsecured notes and Credit Facility impose restrictions on us and require us to maintain compliance with specified and customary covenants. Our ability to comply with these covenants may be affected by events beyond our control, including prevailing economic, financial, and industry conditions. If we breach any of the covenants and do not obtain a waiver from the lenders or note holders, then, subject to applicable cure periods, any outstanding indebtedness may be declared immediately due and payable.

In addition, any actual or anticipated changes to our credit ratings, including any announcement that our credit ratings are under review, by any rating agency may negatively impact the value and liquidity of both our debt and equity securities. Under certain circumstances, if our credit ratings are downgraded or other negative action is taken, the interest rate payable by us and the cost of borrowing under our Credit Facility could increase. Downgrades in our credit ratings could also affect the terms of and restrict our ability to obtain additional financing in the future. In addition, upon the occurrence of certain downgrades of the ratings of our unsecured notes, we may be required to repurchase our unsecured notes at a repurchase price equal to 101% of the aggregate principal plus any accrued and unpaid interest on the date of purchase.

Additionally, our parent company, Dell, currently has a significant level of debt financing. Accordingly, negative changes to Dell’s credit rating could also negatively impact our credit rating and the value and liquidity of any future debt we might

raise. Refer to “Liquidity and Capital Resources” in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Part II, Item 7 of this Annual Report on Form 10-K for more information on our outstanding indebtedness.

Our current research and development efforts may not produce significant revenue for several years, if at all.

Developing our products and services is expensive. In particular, developing and launching disruptive technologies in new areas, as we are continuing to do with our NSX virtual networking, hyperconverged infrastructure, hybrid cloud and SaaS, and edge computing initiatives, requires significant investments of resources and often entails greater risk than incremental investments in existing products and services. Our investment in research and development may not result in marketable products or services or may result in products and services that generate less revenue than we anticipate. Our research and development expenses were approximately 22% of our total revenue during the twelve months ended February 1, 2019. Our future plans include significant investments in software research and development and related product opportunities. We believe that we must continue to dedicate a significant amount of resources to our research and development efforts to maintain our competitive position. However, we may not receive significant revenue from these investments for several years, if at all.

We are involved in litigation, investigations and regulatory inquiries and proceedings that could negatively affect us.

From time to time, we are involved in various legal, administrative and regulatory proceedings, claims, demands and investigations relating to our business, which may include claims with respect to commercial, product liability, intellectual property, cybersecurity, privacy, data protection, antitrust, breach of contract, employment, class action, whistleblower and other matters. In the ordinary course of business, we also receive inquiries from and have discussions with government entities regarding the compliance of our contracting and sales practices with laws and regulations.

We have been, and expect to continue to be, subject to intellectual property infringement claims, including claims by entities that do not have operating businesses of their own and therefore may limit our ability to seek counterclaims for damages and injunctive relief. In addition to monetary judgments, a judgment could also include an injunction or other court order that could prevent us from offering our products. In addition, we might be required to seek a license for the use of such intellectual property, which may not be available on commercially reasonable terms or at all. Alternatively, we may be required to develop non-infringing technology, which could require significant effort and expense and may ultimately not be successful. Third parties may also assert infringement claims against our customers and channel partners, which could require us to initiate or defend potentially protracted and costly litigation on their behalf, regardless of the merits of these claims, because we generally indemnify our customers and channel partners from claims of infringement of proprietary rights of third parties in connection with the use of our products. These matters can be time-consuming, divert management’s attention and resources and cause us to incur significant expenses. Allegations made in the course of regulatory or legal proceedings may also harm our reputation, regardless of whether there is merit to such claims. Furthermore, because litigation and the outcome of regulatory proceedings are inherently unpredictable, our business, financial condition or operating results could be materially affected by an unfavorable resolution of one or more of these proceedings, claims, demands or investigations.

Refer to Note L to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for a description of certain claims and litigation.

We may not be able to adequately protect our intellectual property rights.

We depend on our ability to protect our proprietary technology. We rely on trade secret, patent, copyright and trademark laws and confidentiality agreements with employees and third parties, all of which offer only limited protection. As such, despite our efforts, the steps we have taken to protect our proprietary rights may not be adequate to prevent misappropriation of our proprietary information or infringement of our intellectual property rights, and our ability to police such misappropriation or infringement is uncertain, particularly in countries outside of the U.S. In addition, we rely on confidentiality or license agreements with third parties in connection with their use of our products and technology. There is no guarantee that such parties will abide by the terms of such agreements or that we will be able to adequately enforce our rights, in part because we rely on “click-wrap” and “shrink-wrap” licenses in some instances.

Detecting and protecting against the unauthorized use of our products, technology proprietary rights and intellectual property rights is expensive, difficult and, in some cases, impossible. Litigation is necessary from time to time to enforce or defend our intellectual property rights, to protect our trade secrets or to determine the validity and scope of the proprietary rights of others. Despite our efforts, we may not be able to prevent third parties from infringing upon or misappropriating our intellectual property, which could result in a substantial loss of our market share.

Our use of “open source” software in our products could negatively affect our ability to sell our products and subject us to litigation.

Many of our products and services incorporate so-called “open source” software, and we may incorporate open source software into other products and services in the future. Open source software is generally licensed by its authors or other third

parties under open source licenses. Open source licensors generally do not provide warranties or assurance of title or controls on origin of the software, which exposes us to potential liability if the software fails to work or infringes the intellectual property of a third party.

We monitor our use of open source software in an effort to avoid subjecting our products to conditions we do not intend and avoid exposing us to unacceptable financial risk. However, the processes we follow to monitor our use of open source software could fail to achieve their intended result. In addition, although we believe that we have complied with our obligations under the various applicable licenses for open source software that we use, there is little or no legal precedent governing the interpretation of terms in most of these licenses, which increases the risk that a court could interpret the license differently than we do.

From time to time, we receive inquiries or claims from authors or distributors of open source software included in our products regarding our compliance with the conditions of one or more open source licenses. An adverse outcome to a claim could require us to:

- pay significant damages;
- stop distributing our products that contain the open source software;
- revise or modify our product code to remove alleged infringing code;
- release the source code of our proprietary software; or
- take other steps to avoid or remedy an alleged infringement.

In March 2015, a software developer who alleges that software code he wrote is used in a component of our vSphere product filed a lawsuit against us in Germany alleging copyright infringement for failing to comply with the terms of the open source General Public License v.2 (“GPL v.2”) and seeking an order requiring us to comply with the GPL v.2 or cease distribution of any affected code within Germany. On July 8, 2016, the German court issued a written decision dismissing the lawsuit. Following Mr. Hellwig’s appeal of that decision, on February 28, 2019, the appellate court affirmed the regional court’s decision dismissing Mr. Hellwig’s lawsuit. The time for Mr. Hellwig to file a further appeal has not yet expired. The Company intends to continue vigorously defending itself against this lawsuit.

The evolution of our business requires more complex go-to-market strategies, which involve significant risk.

Our increasing focus on developing and marketing IT management and automation and IaaS (including software-defined networking, VCPP-integrated virtual desktop and mobile device, cloud and SaaS) offerings that enable customers to transform their IT systems requires a greater focus on marketing and selling product suites and more holistic solutions, rather than selling on a product-by-product basis. Consequently, we have developed, and must continue to develop, new strategies for marketing and selling our offerings. In addition, marketing and selling new technologies to enterprises requires significant investment of time and resources in order to educate customers on the benefits of our new product offerings. These investments can be costly and the additional effort required to educate both customers and our own sales force can distract from their efforts to sell existing products and services. Further, upon entering into new industry segments, we may choose to go to market with hardware appliances that are integrated with our software—as we did when we entered into the SD-WAN space through our acquisition of VeloCloud—which requires us to rapidly develop, deploy and scale new hardware procurement, supply chain and inventory management processes and product support services and integrate them into our ongoing business systems and controls.

Our success depends upon our ability to develop appropriate business and pricing models.

If we cannot adapt our business models to keep pace with industry trends, including the industry-wide transition to cloud-based computing, our revenue could be negatively impacted. Certain of our product initiatives, such as our VCPP and SaaS offerings, have a subscription model. As we increase our adoption of subscription-based pricing models for our products, we may fail to set pricing at levels appropriate to maintain our revenue streams or our customers may choose to deploy products from our competitors that they believe are priced more favorably. In addition, we may fail to accurately predict subscription renewal rates or their impact on operating results, and because revenue from subscriptions is recognized for our services over the term of the subscription, downturns or upturns in sales may not be immediately reflected in our results. Additionally, as customers transition to our hybrid cloud and SaaS products and services, our revenue growth rate may be adversely impacted during the period of transition as we will recognize less revenue up front than we would otherwise recognize as part of the multi-year license contracts through which we typically sell our established offerings. Finally, as we offer more services that depend on converting users of free services to users of premium services and converting purchasers of our on-premises products to our SaaS offerings, and as such services grow in size, our ability to maintain or improve and to predict conversion rates will become more important.

Our products and services are highly technical and may contain or be subject to other suppliers' errors, defects or security vulnerabilities.

Our products and services are highly technical and complex and, when deployed, have contained and may contain errors, defects or security vulnerabilities. Some errors in our products or services may only be discovered after a product or service has been installed and used by customers. Undiscovered vulnerabilities in our products or services could expose our customers to hackers or other unscrupulous third parties who develop and deploy viruses, worms and other malicious software programs that could attack our products or services. Further, our use of open-source software in our offerings can make our products and services vulnerable to additional security risks not posed by proprietary products. In the past, VMware has been made aware of public postings by hackers of portions of our source code. It is possible that the released source code could expose unknown security vulnerabilities in our products and services that could be exploited by hackers or others. VMware products and services are also subject to known and unknown security vulnerabilities resulting from integration with products or services of other companies (such as applications, operating systems or semi-conductors). For example, vulnerabilities in certain microprocessors were publicly announced in 2018 under the names Spectre, Meltdown and Foreshadow. Actual or perceived errors, defects or security vulnerabilities in our products or services could harm our reputation and lead some customers to return products or services, reduce or delay future purchases or use competitive products or services, all of which could negatively impact our business, operating results and stock price.

Failure to effectively manage our product and service lifecycles could harm our business.

As part of the natural lifecycle of our products and services, we periodically inform customers that products or services will be reaching their end of life or end of availability and will no longer be supported or receive updates and security patches. To the extent these products or services remain subject to a service contract with the customer, we offer to transition the customer to alternative products or services. Failure to effectively manage our product and service lifecycles could lead to customer dissatisfaction and contractual liabilities, which could adversely affect our business and operating results.

Our success depends on the interoperability of our products and services with those of other companies.

The success of our products depends upon the cooperation of hardware and software vendors to ensure interoperability with our products and offer compatible products and services to end users. In addition, we have begun to extend the functionality of various products to work with native public cloud applications, which may require the cooperation of public cloud vendors. To the extent that hardware, software and public cloud vendors perceive that their products and services compete with ours or those of our controlling stockholder, Dell, they may have an incentive to withhold their cooperation, decline to share access or sell to us their proprietary APIs, protocols or formats, or engage in practices to actively limit the functionality, compatibility and certification of our products. In addition, vendors may fail to certify or support or continue to certify or support our products for their systems. If any of the foregoing occurs, our product development efforts may be delayed or foreclosed and it may be difficult and more costly for us to achieve functionality and service levels that would make our services attractive to end users, any of which could negatively impact our business and operating results.

Disruptions to our distribution channels could harm our business.

Our future success is highly dependent on our relationships with distributors, resellers, system vendors and systems integrators, which account for a significant portion of our revenue. Recruiting and retaining qualified channel partners and training them in the use of our technology and product offerings requires significant time and resources. Our failure to maintain good relationships with channel partners would likely lead to a loss of end users of our products and services, which would adversely affect our revenue. We generally do not have long-term contracts or minimum purchase commitments with our distributors, resellers, system vendors and systems integrators, and our contracts with these channel partners do not prohibit them from offering products or services that compete with ours.

Two of our distributors each accounted for 10% or more of our consolidated revenue during the twelve months ended February 1, 2019. Although we believe that we have in place, or would have in place by the date of any such termination, agreements with replacement distributors sufficient to maintain our revenue from distribution, if we were to lose the distribution services of a significant distributor, such loss could have a negative impact on our operating results until such time as we arrange to replace these distribution services with the services of existing or new distributors.

Our SaaS offerings, which constitute a growing portion of our business, involve various risks, including, among others, reliance on third-party providers for data center space and colocation services.

As we continue to develop and offer SaaS versions of our products, we will need to continue to evolve our processes to meet a number of regulatory, intellectual property, contractual and service compliance challenges. These challenges include compliance with licenses for open source and third-party software embedded in our SaaS offerings, maintaining compliance with export control and privacy regulations, including HIPAA, protecting our services from external threats, maintaining the continuous service levels and data security expected by our customers, preventing the inappropriate use of our services and adapting our go-to-market efforts. The expansion of our SaaS and related cloud offerings also requires significant investments,

and our operating margins, results of operations and operating cash flows may be adversely affected if our new offerings are not widely adopted by customers.

Additionally, our SaaS offerings rely upon third-party providers to supply data center space, equipment maintenance and other colocation services. Although we have entered into various agreements for the lease of data center space, equipment maintenance and other services, third parties could fail to live up to the contractual obligations under those agreements. The failure of a third-party provider to prevent service disruptions, data losses or security breaches may require us to issue credits or refunds or indemnify or otherwise be liable to customers or third parties for damages that may occur. Additionally, if these third-party providers fail to deliver on their obligations, our reputation could be damaged, our customers could lose confidence in us and our ability to maintain and expand our SaaS offerings would be impaired.

Joint ventures may not yield expected benefits and outcomes.

As we expand our offerings into new technologies such as the public cloud and seek more efficient methods of marketing our products and services in regions where local partners can operate more easily, we sometimes rely upon joint ventures with established providers of IT products and services in particular regions, for example as go-to-market and channel partners. Joint ventures are inherently risky and the requirements for close ongoing cooperation and commitments from the joint venture partners to devote adequate resources often present significant challenges. Joint ventures can also be difficult to manage, given the potentially different interests of joint venture partners. Accordingly, there can be no guarantee that our joint ventures will achieve their intended objectives. If we are unable to continue our strategic alignment with joint venture partners or obtain the cooperation and commitments we are relying upon, our ability to successfully expand our offerings globally and in certain regions may diminish.

Non-compliance or perceived non-compliance with existing and evolving international and domestic privacy and data protection laws, regulations and standards could result in liability and adversely impact our business.

Our business is subject to regulation by various federal, state and international governmental agencies responsible for monitoring and enforcing privacy and data protection laws. The regulatory framework for privacy issues worldwide is rapidly evolving, as many new laws, regulations and standards regarding the collection, location, use and disclosure of personal information are being adopted, and existing laws and regulations may be subject to new and changing interpretations, creating uncertainty and additional legal obligations for ourselves, our partners, vendors and customers for the foreseeable future. For example, the EU's General Data Protection Regulation (the "GDPR") came into force in May 2018 and established new requirements applicable to the handling of personal data; the California Consumer Privacy Act, which comes into effect in January 2020, broadly defines personal information and provides California consumers increased privacy rights and protections; and the EU's proposed e-Privacy Regulation regulates the use of information for marketing purposes and the tracking of individuals' online activities. Additionally, the application of law and regulations to our role as a provider of cloud-based compute infrastructure delivered by third party cloud providers is uncertain. We expect that there will continue to be new proposed laws, regulations and industry standards, including self-regulatory standards advocated by industry groups, concerning privacy, data protection and transfers, and information security in the U.S., EU and other jurisdictions globally, and we cannot yet determine the impacts such future laws, regulations and standards may have on our business or the businesses of our partners, vendors and customers.

We continue to make investments in and enhance our policies and controls across our business relating to how we and our business partners protect, collect and use customer and employee personal data, as U.S. and international regulatory frameworks evolve. Ongoing compliance efforts may increase the cost and complexity of our business relationships and the delivery of our products and services and may negatively impact our business, our ability to run promotions and effectively market our offerings, and the demand for our products and services.

Any failure or perceived failure by us or our business partners to comply with such federal, state or international privacy or data protection laws and regulations, the privacy commitments contained in our contracts or the privacy policies we have posted on our website could subject us to investigations, sanctions, enforcement actions, disgorgement of profits, fines, damages, civil and criminal liability, penalties or injunctions. For example, failure to comply with the EU's GDPR requirements may lead to fines of up to €20 million or 4% of the annual global revenues of the infringer, whichever is greater. Additionally, as a technology provider, our customers expect that we can demonstrate compliance with current data privacy and data protection laws and regulations, and our inability or perceived inability to do so may adversely impact sales of our products and services, particularly to customers in highly-regulated industries. As a result, our reputation and brand may be harmed, we could incur significant costs, and financial and operating results could be materially adversely affected.

If we fail to comply with our customer contracts or government contracting regulations, our business could be adversely affected.

Contracts with many of our customers include unique and specialized performance requirements. In particular, our contracts with federal, state, local and non-U.S. governmental customers and our arrangements with distributors and resellers

who may sell directly to governmental customers are subject to various procurement regulations, contract provisions and other requirements relating to their formation, administration and performance. Any failure by us to comply with provisions in our customer contracts or any violation of government contracting regulations could result in the imposition of various civil and criminal penalties, which may include termination of contracts, forfeiture of profits, suspension of payments and, in the case of our government contracts, fines and suspension from future government contracting. Further, any negative publicity related to our customer contracts or any proceedings surrounding them, regardless of its accuracy, may damage our business and affect our ability to compete for new contracts. In the ordinary course of business, we also receive inquiries from and have ongoing discussions with government entities regarding the compliance of our contracting and sales practices with laws and regulations. A failure in the future to comply with federal and state governmental contracting requirements could result in the termination of customer contracts, our suspension from government work, the imposition of fines or other government sanctions or an inability to compete for new contracts, any of which could adversely affect our business, operating results or financial condition.

Acquisitions and divestitures could harm our business and operating results.

We have acquired in the past, and plan to acquire in the future, other businesses, products or technologies. We also from time to time sell or divest businesses, products and technologies. For instance, in May 2017, we sold the VMware vCloud Air business (“vCloud Air”) to OVH. Acquisitions and divestitures involve significant risks and uncertainties, which include:

- disrupting our ongoing operations, diverting management from day-to-day responsibilities, increasing our expenses, and adversely impacting our business, financial condition and operating results;
- failure of an acquired business to further our business strategy;
- uncertainties in achieving the expected benefits of an acquisition or disposition, including enhanced revenue, technology, human resources, cost savings, operating efficiencies and other synergies;
- reducing cash available for operations, stock repurchase programs and other uses and resulting in potentially dilutive issuances of equity securities or the incurrence of debt;
- incurring amortization expense related to identifiable intangible assets acquired that could impact our operating results;
- difficulty integrating the operations, systems, technologies, products and personnel of acquired businesses effectively;
- the need to provide transition services in connection with a disposition, such as the sale of vCloud Air, which may result in the diversion of resources and focus;
- difficulty achieving expected business results due to a lack of experience in new markets, products or technologies or the initial dependence on unfamiliar distribution partners or vendors;
- retaining and motivating key personnel from acquired companies;
- declining employee morale and retention issues affecting employees of businesses that we acquire or dispose of, which may result from changes in compensation, or changes in management, reporting relationships, future prospects or the direction of the acquired or disposed business;
- assuming the liabilities of an acquired business, including acquired litigation-related liabilities and regulatory compliance issues, and potential litigation or regulatory action arising from a proposed or completed acquisition;
- lawsuits resulting from an acquisition or disposition;
- maintaining good relationships with customers or business partners of an acquired business or our own customers as a result of any integration of operations or the divestiture of a business upon which our customers rely, such as our recent divestiture of our vCloud Air business;
- unidentified issues not discovered during the diligence process, including issues with the acquired or divested business’s intellectual property, product quality, security, privacy practices, accounting practices, regulatory compliance or legal contingencies;
- maintaining or establishing acceptable standards, controls, procedures or policies with respect to an acquired business;
- risks relating to the challenges and costs of closing a transaction; and
- the need to later divest acquired assets at a loss if an acquisition does not meet our expectations.

If our goodwill or amortizable intangible assets become impaired, we may be required to record a significant charge to earnings.

We may not realize all the economic benefit from our business acquisitions, which could result in an impairment of goodwill or intangibles. As of February 1, 2019, goodwill and amortizable intangible assets were \$5,381 million and \$541 million, respectively. We review our goodwill and amortizable intangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. We test goodwill for impairment at least annually. Factors that may lead to impairment include a substantial decline in stock price and market capitalization or cash flows, reduced future cash flow estimates related to the assets and slower growth rates in our industry. We may be required to record a significant charge in our financial statements during the period in which any impairment of our goodwill or amortizable intangible assets is determined, which would negatively impact our operating results.

Problems with our information systems could interfere with our business and could adversely impact our operations.

We rely on our information systems and those of third parties for processing customer orders, delivering products, providing services and support to our customers, billing and tracking our customer orders, fulfilling contractual obligations, performing accounting operations and otherwise running our business. If our systems fail, our disaster and data recovery planning and capacity may prove insufficient to enable timely recovery of important functions and business records. Any disruption in our information systems and those of the third parties upon whom we rely could have a significant impact on our business.

In addition, we continuously work to enhance our information systems, such as our enterprise resource planning software. The implementation of these types of enhancements is frequently disruptive to the underlying business of an enterprise, which may especially be the case for us due to the size and complexity of our business. Implementation may disrupt internal controls and business processes and could introduce unintended vulnerability to error.

Additionally, our information systems may not support new business models and initiatives and significant investments could be required in order to upgrade them. For example, in fiscal 2019 we implemented new revenue accounting software and during the first quarter of fiscal 2020 we implemented a new lease accounting software in order to facilitate the preparation of financial information related to the adoption of accounting standard updates.

We may have exposure to additional tax liabilities, and our operating results may be adversely impacted by higher than expected tax rates.

As a multinational corporation, we are subject to income taxes as well as non-income based taxes, such as payroll, sales, use, value-added, net worth, property and goods and services taxes, in both the U.S. and various foreign jurisdictions. Our domestic and international tax liabilities are subject to the allocation of revenue and expenses in different jurisdictions and the timing of recognizing revenue and expenses. Significant judgment is required in determining our worldwide provision for income taxes and other tax liabilities. We are subject to income and indirect tax examinations. The Dell-owned EMC consolidated group is routinely under audit by the Internal Revenue Service (“IRS”). All U.S. federal income tax matters have been concluded for years through 2011, except for any matters under appeal. In addition, we are under corporate income tax audits in various states and non-U.S. jurisdictions. While we believe we have complied with all applicable income tax laws, a governing tax authority could have a different interpretation of the law and assess us with additional taxes. In addition, regulatory guidance is still forthcoming with respect to the 2017 Tax Cuts and Jobs Act and such guidance may impact our tax provision. Any assessment of additional taxes could materially affect our financial condition and operating results.

Our future effective tax rate may be affected by such factors as changes in tax laws, changes in our business or statutory rates, changing interpretation of existing laws or regulations, the impact of accounting for stock-based compensation and the recognition of excess tax benefits and tax deficiencies within the income tax provision in the period in which they occur, the impact of accounting for business combinations, shifts in the amount of earnings in the U.S. compared with other regions in the world and overall levels of income before tax, changes in our international organization, as well as the expiration of statute of limitations and settlements of audits.

In addition, in the ordinary course of our global business, there are many intercompany transactions, including the transfer of intellectual property, where the ultimate tax determination is uncertain. Although we believe that our tax estimates are reasonable, the final determination of tax audits or tax disputes may differ from what is reflected in our historical income tax provisions and accruals.

Our effective tax rate in the future will depend upon the proportion of our income before provision for income taxes earned in the U.S. and in jurisdictions with a tax rate lower than the U.S. statutory rate. Our non-U.S. earnings are primarily earned by our subsidiaries organized in Ireland where the rate of taxation is lower than our U.S. tax rate, and as such, our annual effective tax rate can be significantly affected by the composition of our earnings in the U.S. and non-U.S. jurisdictions. During October 2014, Ireland announced revisions to its tax regulations that will require foreign earnings of our subsidiaries organized in Ireland to be taxed at higher rates. We will be impacted by the changes in tax laws in Ireland beginning in 2021. In addition, we

will be impacted by changes in tax laws in Bermuda and may be impacted by changes in other jurisdictions in 2019. We may proactively make structural changes in Ireland that may reduce the impact to our future tax rates. Currently, there are certain structural changes in Ireland that may be available to multi-national companies. However, due to the acquisition of EMC, VMware's parent company, by Dell effective September 7, 2016 (the "Dell Acquisition"), we could be subject to higher tax obligations in the event we executed similar structural changes.

Any other significant changes to U.S. or international tax laws could have a material impact on our effective tax rate, financial condition, operating results and timing and amount of tax payments.

In addition, numerous other countries have recently enacted or are considering enacting changes to tax laws, administrative interpretations, decisions, policies and positions. These changes could adversely affect our effective tax rate or result in higher cash tax liabilities.

Catastrophic events or geo-political conditions could disrupt our business.

Our corporate headquarters are located in the San Francisco Bay Area, a region known for seismic activity. A significant natural disaster, such as an earthquake, fire, flood or other act of God, could have a material adverse impact on our business and operating results. Abrupt political change, terrorist activity and armed conflict pose a risk of general economic disruption in affected countries, and disease pandemics could temporarily sideline a substantial part of our or our customers' workforce at any particular time, any of which could disrupt our business. Furthermore, some of our new product initiatives and business functions are hosted and carried out by third parties that may be vulnerable to disruptions of these sorts, many of which may be beyond our control. Unanticipated disruptions in services provided through localized physical infrastructure, such as utility or telecommunication outages, can curtail the functioning of local offices as well as critical components of our information systems, and adversely affect our ability to process orders, provide services, respond to customer requests and maintain local and global business continuity. To the extent that such disruptions result in delays or cancellations of customer orders, or the deployment or availability of our products and services, our revenue would be adversely affected. Additionally, any such catastrophic event could cause us to incur significant costs to repair damages to our facilities, equipment and infrastructure.

Changes in accounting principles and guidance could result in unfavorable accounting charges or effects.

We prepare our consolidated financial statements in accordance with accounting principles generally accepted in the U.S. These principles are subject to interpretation by the Securities and Exchange Commission and various bodies formed to create and interpret appropriate accounting principles and guidance. A change in these principles or guidance, or in their interpretations, may have a material effect on our reported results, as well as our processes and related controls, and may retroactively affect previously reported results. For example, during February 2016, the Financial Accounting Standards Board issued ASU 2016-02, Leases (Topic 842). The updated standard requires the recognition of a liability for lease obligations and a corresponding right-of-use asset on the balance sheet, and disclosures of key information regarding leasing arrangements. The standard may be early adopted and is effective for interim and annual periods beginning after December 15, 2018 and requires a modified retrospective adoption with the option of applying the requirements of the standard either (1) retrospectively to each prior comparative reporting period presented, or (2) retrospectively at the beginning of the period of adoption. We will adopt this standard beginning with our first quarter of fiscal 2020 and will apply it retrospectively at the beginning of the period of adoption through a cumulative-effect adjustment to retained earnings. We are continuing to evaluate the effect that the updated standard will have on our consolidated financial statements and related disclosures and preliminary assessments are subject to change.

Risks Related to Our Relationship with Dell

Our relationship with Dell may adversely impact our business and stock price.

As of February 1, 2019, Dell beneficially owned 30,679,000 shares of our Class A common stock and all 300,000,000 shares of our Class B common stock, representing 80.5% of the total outstanding shares of common stock or 97.4% of the voting power of outstanding common stock held by EMC, and we are considered a "controlled" company under the rules of the New York Stock Exchange ("NYSE"). Accordingly, strategic and business decisions made by Dell can impact our strategic and business decisions and relationships, and public speculation regarding Dell's strategic direction and prospects, as well as our relationship with Dell, can cause our stock price to fluctuate.

For example, during 2018, Dell announced that it was reviewing its strategic opportunities, including a possible business combination with us, a review that led to Dell's exchange of its Class V common stock designed to track our financial performance for its Class C common stock (the "Dell Share Exchange") and our payment of the Special Dividend, both on December 28, 2018. Throughout the year, the stock price of our Class A common stock experienced periods of significant volatility related to public speculation regarding the outcome of Dell's strategic review and the likelihood of its success. Additionally, with completion of the Dell Share Exchange, speculation regarding how our relationship with Dell might be affected by Dell's status as a publicly traded company or additional strategic transactions involving Dell creates uncertainty for

our stockholders, customers, partners and employees, which could negatively impact sales, make it difficult to attract and retain employees and distract management's focus from executing on other strategic initiatives.

A number of other factors relating to our relationship with Dell could adversely affect our business or our stock price in the future, including:

- Dell is able to control matters requiring our stockholders' approval, including the election of a majority of our directors as described in the risk factors below.
- Dell could implement changes to our business, including changing our commercial relationship with Dell or taking other corporate actions, such as participating in business combinations, that our other stockholders may not view as beneficial.
- We have arrangements with a number of companies that compete with Dell, and our relationship with Dell could adversely affect our relationships with these companies or other customers, suppliers and partners.
- Since the Dell Acquisition, the portion of our bookings that are realized through Dell sales channels has grown more rapidly than our sales through non-Dell resellers and distributors, and we expect this trend to continue. To the extent that we find ourselves relying more heavily upon Dell for our channel sales, Dell's leverage over our sales and marketing efforts may increase and our ability to negotiate favorable go-to-market arrangements with Dell and with other channel partners may decline.
- Dell has a right to approve certain matters under our certificate of incorporation, including acquisitions or investments in excess of \$100 million, and Dell may choose not to consent to matters that our board of directors believes are in the best interests of VMware.
- Synergies and benefits that we expect from our relationship with Dell may not be realized.
- Dell is highly leveraged and commits a substantial portion of its cash flows to servicing its indebtedness. Dell's significant debt could create the perception that Dell may exercise its control over us to limit our growth in favor of its other businesses or cause us to transfer cash to Dell. In addition, if Dell defaults, or appears in danger of defaulting, on its indebtedness, uncertainty as to the impact of such a default on VMware could disrupt our business.
- Investor perceptions of Dell's performance, future plans and prospects could contribute to volatility in the price of our Class A common stock.
- Some of our products compete directly with products sold or distributed by Dell, which could result in reduced sales.

Holders of our Class A common stock have limited ability to influence matters requiring stockholder approval.

As of February 1, 2019, Dell controlled 80.5% of the total outstanding shares of common stock, including all of our outstanding Class B common stock, representing 97.4% of the voting power of our total outstanding common stock. Through its control of the Class B common stock, which is generally entitled to 10 votes per share, Dell controls the vote to elect all of our directors and to approve or disapprove all other matters submitted to a stockholder vote.

Prior to a distribution by Dell to its stockholders under Section 355 of the Internal Revenue Code of 1986, as amended (a "355 Distribution"), shares of Class B common stock transferred to any party other than a successor-in-interest or a subsidiary of EMC automatically convert into Class A common stock. Dell's voting control over VMware will continue so long as the shares of Class B common stock it controls continue to represent at least 20% of our outstanding stock. If its ownership falls below 20% of the outstanding shares of our common stock, all outstanding shares of Class B common stock will automatically convert to Class A common stock. If Dell effects a 355 Distribution at a time when it holds shares of Class B common stock, its stockholders will receive Class B common stock. These shares will remain entitled to 10 votes per share, holders of these shares will remain entitled to elect 80% of the total number of directors on our board of directors and the holders of our Class A common stock will continue to have limited ability to influence matters requiring stockholder approval and have limited ability to elect members of our board of directors. Following a 355 Distribution, shares of Class B common stock may convert to Class A common stock if such conversion is approved by VMware stockholders after the 355 Distribution and we have obtained a private letter ruling from the IRS. In January 2014, the IRS announced in Revenue Procedure 2014-3 that, generally, it would no longer issue private letter rulings on 355 Distributions.

Dell has the ability to prevent us from taking actions that might be in our best interest.

Under our certificate of incorporation and the master transaction agreement we entered into with EMC, we must (subject to certain exceptions) obtain the consent of EMC (which is controlled by Dell) or its successor-in-interest, as the holder of our Class B common stock, prior to taking specified actions, such as acquiring other companies for consideration in excess of \$100 million, issuing stock or other VMware securities, except pursuant to employee benefit plans (provided that we obtain Class B common stockholder approval of the aggregate annual number of shares to be granted under such plans), paying

dividends, entering into any exclusive or exclusionary arrangement with a third party involving, in whole or in part, products or services that are similar to EMC's or amending certain provisions of our charter documents. In addition, we have agreed that for so long as EMC or its successor-in-interest continues to own greater than 50% of the voting control of our outstanding common stock, we will not knowingly take or fail to take any action that could reasonably be expected to preclude the ability of EMC or its successor-in-interest (including Dell) to undertake a tax-free spin-off. If Dell does not provide any requisite consent allowing us to conduct such activities when requested, we will not be able to conduct such activities. As a result, we may have to forgo capital raising or acquisition opportunities that would otherwise be available to us, and we may be precluded from pursuing certain growth initiatives.

By becoming a stockholder in our company, holders of our Class A common stock are deemed to have notice of and have consented to the provisions of our certificate of incorporation and the master transaction agreement with respect to the limitations that are described above.

Dell has the ability to prevent a change-in-control transaction and may sell control of VMware without benefiting other stockholders.

Dell's voting control and its additional rights described above give Dell the ability to prevent transactions that would result in a change of control of VMware, including transactions in which holders of our Class A common stock might otherwise receive a premium for their shares over the then-current market price. In addition, Dell is not prohibited from selling a controlling interest in us to a third party and may do so without the approval of the holders of our Class A common stock and without providing for a purchase of any shares of Class A common stock held by persons other than Dell. Accordingly, shares of Class A common stock may be worth less than they would be if Dell did not maintain voting control over us or if Dell did not have the additional rights described above.

If Dell's level of ownership significantly increases, Dell could unilaterally effect a merger of VMware into Dell without a vote of VMware stockholders or the VMware Board of Directors at a price per share that might not reflect a premium to then-current market prices.

As of February 1, 2019, Dell controlled 80.5% of VMware's outstanding common stock, and Dell's percentage ownership of VMware common stock could increase as a result of repurchases by VMware of its Class A common stock or purchases by Dell. Section 253 of the Delaware General Corporation Law permits a parent company, when it owns 90% or more of each class of a subsidiary's stock that generally would be entitled to vote on a merger of that subsidiary with the parent, to unilaterally effect a merger of the subsidiary into the parent without a vote of the subsidiary's board or stockholders. Accordingly, if Dell becomes the holder of at least 90% of VMware's outstanding stock, neither VMware's board of directors nor VMware's stockholders would be entitled to vote on a merger of VMware into Dell (the "short-form merger"). Moreover, a short-form merger is not subject to the stringent "entire fairness" standard and the parent company is not required to negotiate with a special committee of disinterested directors that would serve to approximate arm's length negotiations designed to ensure that a fair price is paid. Rather, a minority stockholder's sole remedy in the context of a short-form merger is to exercise appraisal rights under Delaware law. In such a proceeding, petitioning stockholders may be awarded more or less than the merger price or the amount they would have received in a merger negotiated between the parent and a disinterested special committee advised by independent financial and legal advisors. Pursuant to a letter agreement entered into by VMware and Dell on July 1, 2018, until the ten-year anniversary of the agreement, Dell may not purchase or otherwise acquire any shares of common stock of VMware if such acquisition would cause the common stock of VMware to no longer be publicly traded on a U.S. securities exchange or VMware to no longer be required to file reports under Sections 13 and 15(d) of the Exchange Act, in each case, unless such transaction has been approved in advance by a special committee of the VMware Board of Directors comprised solely of independent and disinterested directors or such acquisition of VMware common stock is required in order for VMware to continue to be a member of the affiliated group of corporations filing a consolidated tax return with Dell.

We engage in related persons transactions with Dell that may divert our resources, create opportunity costs and prove to be unsuccessful.

We currently engage in a number of related persons transactions with Dell that include joint product development, go-to-market, branding, sales, customer service activities, real estate and various support services, and we expect to engage in additional related persons transactions with Dell to leverage the benefits of our strategic alignment. Additionally, we hold a significant ownership interest in Pivotal, which became publicly traded on April 20, 2018.

We believe that these related persons transactions provide us a unique opportunity to leverage the respective technical expertise, product strengths and market presence of Dell and its subsidiaries for the benefit of our customers and stockholders while enabling us to compete more effectively with competitors who are much larger than us. However, these transactions may prove not to be successful and may divert our resources or the attention of our management from other opportunities. Negotiating and implementing these arrangements can be time consuming and cause delays in the introduction of joint product and service offerings and disruptions to VMware's business. We cannot predict whether our stockholders and industry or securities analysts who cover us will react positively to announcements of new related persons transactions with Dell, and such

announcements could have a negative impact on our stock price. Our participation in these transactions may also cause certain of our other vendors and ecosystem partners who compete with Dell and its subsidiaries to also view us as their competitors. Additionally, following Pivotal's initial public offering, VMware held a 17% financial interest in the outstanding shares of capital stock in Pivotal, which was accounted for using the fair value option. The fair value of VMware's investment is determined primarily using the quoted market price of Pivotal's Class A common stock. Any volatility in Pivotal's publicly traded Class A common stock therefore introduces a degree of variability to our consolidated balance sheets and statements of income (loss), over which we have little control so long as we maintain our ownership interest.

Our business and Dell's businesses overlap, and Dell may compete with us, which could reduce our market share.

We and Dell are IT infrastructure companies providing products and services that overlap in various areas, including software-based storage, management, hyper-converged infrastructure and cloud computing. Dell competes with us in these areas now and may engage in increased competition with us in the future. In addition, the intellectual property agreement that we have entered into with EMC (which is controlled by Dell) provides EMC the ability to use our source code and intellectual property, which, subject to limitations, it may use to produce certain products that compete with ours. EMC's rights in this regard extend to its majority-owned subsidiaries, which could include joint ventures where EMC holds a majority position and one or more of our competitors hold minority positions.

Dell could assert control over us in a manner that could impede our growth or our ability to enter new markets or otherwise adversely affect our business. Further, Dell could utilize its control over us to cause us to take or refrain from taking certain actions, including entering into relationships with channel, technology and other marketing partners, enforcing our intellectual property rights or pursuing business combinations, other corporate opportunities (which EMC is expressly permitted to pursue under the circumstances set forth in our certificate of incorporation) or product development initiatives that could adversely affect our competitive position, including our competitive position relative to that of Dell in markets where we compete with Dell. In addition, Dell maintains significant partnerships with certain of our competitors, including Microsoft.

Dell's competition in certain markets may affect our ability to build and maintain partnerships.

Our existing and potential partner relationships may be negatively affected by our relationship with Dell. We partner with a number of companies that compete with Dell in certain markets in which Dell participates. Dell's control of EMC's majority ownership in us may affect our ability to effectively partner with these companies. These companies may favor our competitors because of our relationship with Dell.

Dell competes with certain of our significant channel, technology and other marketing partners, including IBM and Hewlett-Packard. Pursuant to our certificate of incorporation and other agreements that we have with EMC, EMC and Dell may have the ability to impact our relationship with those of our partners that compete with EMC or Dell, which could have a material adverse effect on our operating results and our ability to pursue opportunities which may otherwise be available to us.

We could be held liable for the tax liabilities of other members of Dell's consolidated tax group, and compared to our historical results as a member of the EMC consolidated tax group, our tax liabilities may increase, fluctuate more widely and be less predictable.

We have historically been included in EMC's consolidated group for U.S. federal income tax purposes, as well as in certain consolidated, combined or unitary groups that include EMC Corporation or certain of its subsidiaries for state and local income tax purposes, and since the Dell Acquisition, we have been included in Dell's consolidated tax group. Effective as of the close of the Dell Acquisition, we amended our tax sharing agreement with EMC to include Dell. Although our tax sharing agreement provides that our tax liability is calculated primarily as though VMware were a separate taxpayer, certain tax attributes and transactions are assessed using consolidated tax return rules as applied to the Dell consolidated tax group and are subject to other specialized terms under the tax sharing agreement. Pursuant to our agreement, we and Dell generally will make payments to each other such that, with respect to tax returns for any taxable period in which we or any of our subsidiaries are included in Dell's consolidated group for U.S. federal income tax purposes or any other consolidated, combined or unitary group of Dell or its subsidiaries, the amount of taxes to be paid by us will be determined, subject to certain consolidated return adjustments, as if we and each of our subsidiaries included in such consolidated, combined or unitary group filed our own consolidated, combined or unitary tax return. Consequently, compared to our historical results as a member of the EMC consolidated tax group, the amount of our tax sharing payment compared to our separate return basis liability may increase, vary more widely from period to period and be less predictable. Additionally, the impact of the 2017 Tax Act upon consolidated groups is highly complex and uncertain and its impact must be further interpreted in the context of the tax sharing agreement to determine VMware's tax sharing payment. VMware and Dell are reviewing the tax sharing agreement in connection with the enactment of the 2017 Tax Act.

When we become subject to federal income tax audits as a member of Dell's consolidated group, the tax sharing agreement provides that Dell has authority to control the audit and represent Dell and our interests to the IRS. Accordingly, if we and Dell or its successor-in-interest differ on appropriate responses and positions to take with respect to tax questions that may arise in

the course of an audit, our ability to affect the outcome of such audits may be impaired. In addition, if Dell effects a 355 Distribution or other transaction that is subsequently determined to be taxable, we could be liable for all or a portion of the tax liability, which could have a material adverse effect on our operating results and financial condition.

We have been included in the EMC consolidated group for U.S. federal income tax purposes since our acquisition by EMC in 2004, and will continue to be included in Dell's consolidated group for periods in which Dell or its successor-in-interest beneficially owns at least 80% of the total voting power and value of our outstanding stock. Each member of a consolidated group during any part of a consolidated return year is jointly and severally liable for tax on the consolidated return of such year and for any subsequently determined deficiency thereon. Similarly, in some jurisdictions, each member of a consolidated, combined or unitary group for state, local or foreign income tax purposes is jointly and severally liable for the state, local or foreign income tax liability of each other member of the consolidated, combined or unitary group. Accordingly, for any period in which we are included in the Dell consolidated group for U.S. federal income tax purposes or any other consolidated, combined or unitary group of Dell and its subsidiaries, we could be liable in the event that any income tax liability was incurred, but not discharged, by any other member of any such group.

Also, under the tax sharing agreement, if it is subsequently determined that the tracking stock issued in connection with the Dell Acquisition and which Dell subsequently eliminated through a share exchange constitutes a taxable distribution, we could be liable for all or a portion of the tax liability, which could have a material adverse effect on our operating results and financial condition.

We have limited ability to resolve favorably any disputes that arise between us and Dell.

Disputes may arise between Dell and us in a number of areas relating to our ongoing relationships, including our reseller, technology and other business agreements with Dell, areas of competitive overlap, strategic initiatives, requests for consent to activities specified in our certificate of incorporation and the terms of our intercompany agreements. We may not be able to resolve any potential conflicts with Dell, and even if we do, the resolution may be less favorable than if we were dealing with an unaffiliated party.

While we are controlled by Dell, we may not have the leverage to negotiate renewals or amendments to these agreements, if required, on terms as favorable to us as those we would negotiate with an unaffiliated third party, if at all.

Some of our directors have potential conflicts of interest with Dell.

The Chairman of our Board of Directors, Michael Dell, is also Chairman and CEO of Dell and is a significant stockholder of Dell, and one of our directors, Egon Durbin, is member of the Dell board of directors and managing partner of Silver Lake Partners, which is a significant stockholder of Dell. Another of our directors also holds shares of Dell common stock. Dell, through its controlling voting interest in our outstanding common stock, is entitled to elect 7 of our 8 directors and possesses sufficient voting control to elect the remaining director. Ownership of Dell common stock by our directors and the presence of executive officers or directors of Dell on our board of directors could create, or appear to create, conflicts of interest with respect to matters involving both us and Dell that could have different implications for Dell than they do for us. Our Board has approved resolutions that address corporate opportunities that are presented to our directors that are also directors or officers of Dell. These provisions may not adequately address potential conflicts of interest or ensure that potential conflicts of interest will be resolved in our favor. As a result, we may not be able to take advantage of corporate opportunities presented to individuals who are directors of both us and Dell and we may be precluded from pursuing certain growth initiatives.

We are a "controlled company" within the meaning of the New York Stock Exchange rules and, as a result, are relying on exemptions from certain corporate governance requirements that provide protection to stockholders of companies that are not "controlled companies."

Dell owns more than 50% of the total voting power of our common stock and, as a result, we are a "controlled company" under the NYSE corporate governance standards. As a controlled company, we are exempt under the NYSE standards from the obligation to comply with certain NYSE corporate governance requirements, including the requirements:

- that a majority of our board of directors consists of independent directors;
- that we have a corporate governance and nominating committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities;
- that we have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities; and
- for an annual performance evaluation of the nominating and governance committee and compensation committee.

While we have voluntarily caused our Compensation and Corporate Governance Committee to currently be composed entirely of independent directors, reflecting the requirements of the NYSE, we are not required to maintain the independent composition of the committee. As a result of our use of the "controlled company" exemptions, holders of our Class A common

stock will not have the same protection afforded to stockholders of companies that are subject to all of the NYSE corporate governance requirements.

Dell's ability to control our board of directors may make it difficult for us to recruit independent directors.

So long as Dell beneficially owns shares of our common stock representing at least a majority of the votes entitled to be cast by the holders of outstanding voting stock, Dell can effectively control and direct our board of directors. Further, the interests of Dell and our other stockholders may diverge. Under these circumstances, it may become difficult for us to recruit independent directors.

Our historical financial information as a majority-owned subsidiary may not be representative of the results of a completely independent public company.

The financial information covering the periods included in this report does not necessarily reflect what our financial condition, operating results or cash flows would have been had we been a completely independent entity during those periods. In certain geographic regions where we do not have an established legal entity, we contract with Dell subsidiaries for support services and Dell personnel who are managed by us. The costs incurred by Dell on our behalf related to these employees are passed on to us and we are charged a mark-up intended to approximate costs that would have been charged had we contracted for such services with an unrelated third party. These costs are included as expenses on our consolidated statements of income (loss). Additionally, we engage with Dell in intercompany transactions, including agreements regarding the use of Dell's and our intellectual property and real estate, agreements regarding the sale of goods and services to one another and to Pivotal, and agreements for Dell to resell and distribute our products and services to third party customers. If Dell were to distribute its shares of our common stock to its stockholders or otherwise divest itself of all or a significant portion of its VMware shares, there would be numerous implications to us, including the fact that we could lose the benefit of these arrangements with Dell. There can be no assurance that we would be able to renegotiate these arrangements with Dell or replace them on the same or similar terms. Additionally, our business could face significant disruption and uncertainty as we transition from these arrangements with Dell. Moreover, our historical financial information is not necessarily indicative of what our financial condition, operating results or cash flows would be in the future if and when we contract at arm's length with independent third parties for the services we have received and currently receive from Dell. During fiscal 2019, we recognized revenue of \$2,211 million, and as of February 1, 2019, \$2,388 million of sales were included in unearned revenue from such transactions with Dell. For additional information, refer to "Our Relationship with Dell" in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 and Note C to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

Risks Related to Owning Our Class A Common Stock

The price of our Class A common stock has fluctuated significantly in recent years and may fluctuate significantly in the future.

The trading price of our Class A common stock has fluctuated significantly in the past and could fluctuate substantially in the future due to the factors discussed in this Risk Factors section and elsewhere in this report. The elimination of the trading market for Class V common stock upon completion of the Dell Share Exchange could increase the volatility in the price of our Class A common stock due to our relatively small public float.

Dell, which beneficially owned 80.5% of our outstanding stock as of February 1, 2019, is not restricted from selling its shares and is entitled to certain registration rights. If a significant number of shares enters the public trading markets in a short period of time, the market price of our Class A common stock may decline. In addition, if our Class B common stock is distributed to Dell stockholders and remains outstanding, it would trade separately from and potentially at a premium to our Class A common stock, and could thereby contribute additional volatility to the price of our Class A common stock.

Broad market and industry factors may also decrease the market price of our Class A common stock, regardless of our actual operating performance. The stock market in general and technology companies in particular have often experienced extreme price and volume fluctuations. Our public float is also relatively small due to Dell's holdings, which can result in greater volatility in our stock compared to that of other companies with a market capitalization similar to ours. In addition, in the past, following periods of volatility in the overall market and the market price of a company's securities, securities class action litigation has often been instituted, including against us, and, if not resolved swiftly, can result in substantial costs and a diversion of management's attention and resources.

If securities or industry analysts change their recommendations regarding our stock adversely, our stock price and trading volume could decline.

The trading market for our Class A common stock is influenced by the research and reports that industry or securities analysts publish about us, our business, our market or our competitors. If any of the analysts who cover us change their

recommendation regarding our stock adversely, or provide more favorable relative recommendations about our competitors, our stock price would likely decline.

Anti-takeover provisions in Delaware law and our charter documents could discourage takeover attempts.

As our controlling stockholder, Dell has the ability to prevent a change in control of VMware. Provisions in our certificate of incorporation and bylaws may also have the effect of delaying or preventing a change of control or changes in our management. These provisions include the following:

- the division of our board of directors into three classes, with each class serving for a staggered three-year term, which prevents stockholders from electing an entirely new board of directors at any annual meeting;
- the right of the board of directors to elect a director to fill a vacancy created by the expansion of the board of directors;
- following a 355 Distribution of Class B common stock by Dell to its stockholders, the restriction that a beneficial owner of 10% or more of our Class B common stock may not vote in any election of directors unless such person or group also owns at least an equivalent percentage of Class A common stock or obtains approval of our board of directors prior to acquiring beneficial ownership of at least 5% of Class B common stock;
- the prohibition of cumulative voting in the election of directors or any other matters, which would otherwise allow less than a majority of stockholders to elect director candidates;
- the requirement for advance notice for nominations for election to the board of directors or for proposing matters that can be acted upon at a stockholders' meeting;
- the ability of the board of directors to issue, without stockholder approval, up to 100,000,000 shares of preferred stock with terms set by the board of directors, which rights could be senior to those of common stock; and
- in the event that Dell or its successor-in-interest no longer owns shares of our common stock representing at least a majority of the votes entitled to be cast in the election of directors, stockholders may not act by written consent and may not call special meetings of the stockholders.

In addition, we have elected to apply the provisions of Section 203 of the Delaware General Corporation Law. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us. These provisions in our certificate of incorporation and bylaws and under Delaware law could discourage potential takeover attempts and could reduce the price that investors might be willing to pay for shares of our common stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

As of February 1, 2019, we owned or leased the facilities described below:

Location		Approximate Sq. Ft.	Principal Use(s)
Palo Alto, CA	owned:	1,604,769 ⁽¹⁾	Executive and administrative offices, sales and marketing, and R&D
North and Latin American region	leased:	1,238,212 ⁽²⁾	Administrative offices, sales and marketing, R&D and data center
Asia Pacific region	leased:	1,339,174	Administrative offices, sales and marketing, R&D and data center
Europe, Middle East and Africa region	leased:	576,660	Administrative offices, sales and marketing, R&D and data center

⁽¹⁾ Represents all of the right, title and interest purchased in ground leases, which expire in fiscal 2047, covering the property and improvements located at VMware's Palo Alto, California campus.

⁽²⁾ Includes leased space for a Washington data center facility, for which VMware is considered to be the owner for accounting purposes.

We believe that our current facilities are suitable for our current employee headcount and will sustain us through fiscal 2020, but we intend to add new facilities or expand existing facilities as needed as we add employees and expand our operations. We believe that suitable additional or substitute space will be available as needed to accommodate expansion of our operations.

ITEM 3. LEGAL PROCEEDINGS

Refer to Note L to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for a description of legal proceedings. See also the risk factor entitled “We are involved in litigation, investigations and regulatory inquiries and proceedings that could negatively affect us” in Part I, Item 1A of this Annual Report on Form 10-K for a discussion of potential risks to our results of operations and financial condition that may arise from legal proceedings.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES**Market Information**

Our Class A common stock, par value \$0.01 per share, trades on the New York Stock Exchange under the symbol VMW.

Holders

We had 30 holders of record of our Class A common stock, and two holders of record, EMC Corporation (“EMC”) and VMW Holdco LLC, a wholly-owned subsidiary of EMC, of our Class B common stock as of March 19, 2019 .

Dividends

Subsequent to our initial public offering in August 2007, we have not declared or paid regular cash dividends on our common stock. On July 1, 2018, we declared a conditional special dividend of \$11 billion (the “Special Dividend”). During the fourth quarter of fiscal 2019, the conditions of the Special Dividend were met. The record date for the dividend was December 27, 2018, the dividend payment date was December 28, 2018 and the per share dividend amount was \$26.81.

We currently do not anticipate declaring any cash dividends in the foreseeable future. Any future determination to declare cash dividends will be made at the discretion of our board of directors, subject to the consent of the holders of our Class B common stock pursuant to our certificate of incorporation. Holders of our Class A common stock and our Class B common stock will share equally on a per share basis in any dividend declared on our common stock by our board of directors.

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

Issuer purchases of Class A common stock during the quarter ended February 1, 2019:

	Total Number of Shares Purchased	Average Price Paid Per Share ⁽¹⁾	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Publicly Announced Plans or Programs ⁽²⁾
November 3 – November 30, 2018	—	\$ —	—	\$ 876,272,615
December 1 – December 28, 2018	—	—	—	876,272,615
December 29, 2018 – February 1, 2019	286,000	148.05	286,000	833,929,476
	<u>286,000</u>	<u>\$ 148.05</u>	<u>286,000</u>	<u>833,929,476</u>

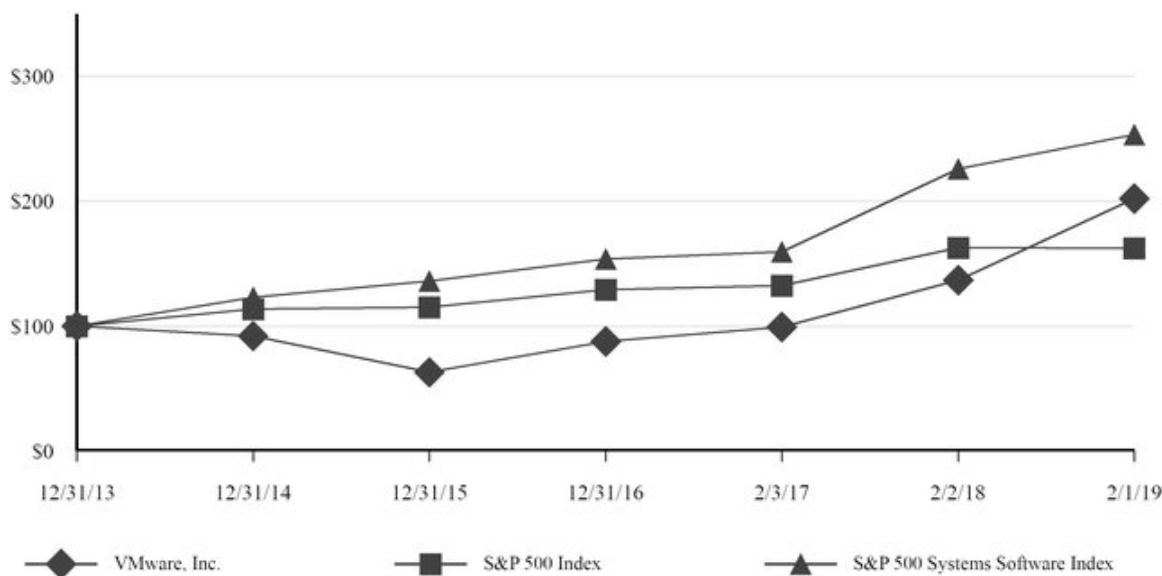
⁽¹⁾ The average price paid per share excludes commissions.

⁽²⁾ Represents the amounts remaining from VMware’s \$1,000 million stock repurchase authorization announced on August 14, 2017 that expires on August 31, 2019.

Stock Performance Graph

The graph below compares the cumulative total stockholder return on our Class A common stock with the cumulative total return on the S&P 500 Index and the S&P 500 Systems Software index for the period beginning on December 31, 2013 through February 1, 2019, assuming an initial investment of \$100. The stockholder return assumes reinvestment of dividends.

Comparison of Cumulative Five Year Total Return



	Base Period 12/31/2013	12/31/2014	12/31/2015	12/31/2016	2/3/2017	2/2/2018	2/1/2019
VMware, Inc.	\$ 100.00	\$ 91.99	\$ 63.06	\$ 87.76	\$ 99.15	\$ 136.80	\$ 201.96
S&P 500 Index	100.00	113.69	115.26	129.05	132.61	162.63	162.54
S&P 500 Systems Software Index	100.00	123.01	135.89	153.87	159.37	225.93	253.38

Note: The stock price performance shown on the graph above is not necessarily indicative of future price performance. This graph shall not be deemed “filed” for purposes of Section 18 of the Exchange Act or otherwise subject to the liabilities of that section nor shall it be deemed incorporated by reference in any filing under the Securities Act or the Exchange Act, regardless of any general incorporation language in such filing.

ITEM 6. SELECTED FINANCIAL DATA
FIVE-YEAR SELECTED CONSOLIDATED FINANCIAL DATA
(amounts in millions, except per share amounts, and shares in thousands)

	For the Year Ended					Transition Period
	February 1,	February 2,	December 31,	December 31,	December 31,	January 1 to
	2019	2018 ⁽¹⁾⁽²⁾	2016 ⁽¹⁾⁽²⁾	2015 ⁽²⁾	2014 ⁽²⁾	February 3,
						2017 ⁽¹⁾⁽²⁾
Results of Operations Data:						
Revenue:						
License	\$ 3,788	\$ 3,200	\$ 2,799	\$ 2,720	\$ 2,591	\$ 134
Services	5,186	4,662	4,274	3,927	3,444	378
GSA settlement	—	—	—	(76)	—	—
Total revenue	\$ 8,974	\$ 7,862	\$ 7,073	\$ 6,571	\$ 6,035	\$ 512
Operating income (loss)	2,050	1,702	1,469	1,197	1,027	(42)
Net income (loss)	2,422	659	1,223	997	886	(5)
Net income (loss) per weighted average share, basic, for Classes A and B	\$ 5.94	\$ 1.62	\$ 2.91	\$ 2.35	\$ 2.06	\$ (0.01)
Net income (loss) per weighted average share, diluted, for Classes A and B	\$ 5.85	\$ 1.59	\$ 2.87	\$ 2.34	\$ 2.04	\$ (0.01)
Weighted average shares, basic, for Classes A and B	407,766	406,738	420,520	424,003	430,355	408,625
Weighted average shares, diluted, for Classes A and B	414,267	413,368	423,994	426,547	434,513	408,625
Cash Flow Data:						
Net cash provided by operating activities	\$ 3,663	\$ 3,218	\$ 2,379	\$ 1,898	\$ 2,184	\$ 361
	February 1,	February 2,	February 3,	December 31,	December 31,	December 31,
	2019	2018 ⁽¹⁾	2017 ⁽¹⁾	2016 ⁽¹⁾	2015 ⁽¹⁾	2014
Balance Sheet Data:						
Cash, cash equivalents and short-term investments ⁽³⁾	\$ 2,849	\$ 11,653	\$ 8,393	\$ 7,985	\$ 7,509	\$ 7,075
Working capital ⁽³⁾⁽⁴⁾	(45)	9,026	5,908	6,114	5,581	4,886
Total assets	14,662	21,206	16,837	17,090	16,130	15,216
Total unearned revenue	6,978	5,839	4,885	5,168	4,634	4,833
Long-term obligations ⁽⁵⁾⁽⁶⁾	4,242	4,234	1,500	1,500	1,500	1,500
Total stockholders' equity	551	8,624	8,975	8,853	8,642	7,586

⁽¹⁾ Amounts reflect the impact of our retrospective adoption of Accounting Standards Codification 606, Revenue from Contracts with Customers ("Topic 606").

⁽²⁾ Amounts reflect the impact of our retrospective adoption of Accounting Standards Update ("ASU") 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash.

⁽³⁾ On July 1, 2018, VMware's board of directors declared a conditional \$11 billion Special Dividend, payable pro-rata to VMware stockholders as of the record date. The Special Dividend was paid on December 28, 2018 to stockholders of record as of the close of business on December 27, 2018 in the amount of \$26.81 per outstanding share of VMware common stock. Refer to Note P to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further information.

⁽⁴⁾ Working capital as of February 1, 2019 was impacted by a decrease in cash, cash equivalents and short-term investments and an increase in the current portion of unearned revenue when compared to February 2, 2018.

⁽⁵⁾ On January 21, 2014, in connection with our agreement to acquire A.W.S. Holding, LLC, the sole member and equity holder of AirWatch LLC, we entered into a note exchange agreement with Dell Technologies Inc. ("Dell") (formerly EMC) providing for the issuance of three

promissory notes in the aggregate principal amount of \$1,500 million. Refer to Note C to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further information.

⁽⁶⁾On August 21, 2017, we issued three series of unsecured senior notes pursuant to a public debt offering in an aggregate principal amount of \$4,000 million, which consisted of outstanding principal due on the following dates: \$1,250 million due August 21, 2020, \$1,500 million due August 21, 2022 and \$1,250 million due August 21, 2027. Upon closing, a portion of the net proceeds from the offering was used to repay two of the notes payable to Dell due May 1, 2018 and May 1, 2020 in the aggregate principal amount of \$1,230 million. Refer to Note H to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further information.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following management's discussion and analysis is provided in addition to the accompanying consolidated financial statements and notes to assist in understanding our results of operations and financial condition. Multiple accounting standards were adopted during the year ended February 1, 2019, which resulted in adjustments or reclassifications of amounts previously reported.

As a result of the change to our fiscal year from a fiscal year ending on December 31 of each calendar year to a fiscal year ending on the Friday nearest to January 31 of each year, the period that began on January 1, 2017 and ended on February 3, 2017 was a transition period (the "Transition Period"). Our first full fiscal year 2018 was a 52-week year that began on February 4, 2017 and ended on February 2, 2018. Prior-period financial statements have not been recast as we believe (i) the year ended December 31, 2016 is comparable to the year ended February 2, 2018 and (ii) recasting prior-period results was not practicable or cost justified.

Period-over-period changes are calculated based upon the respective underlying, non-rounded data. We refer to our fiscal years ended January 31, 2020, February 1, 2019, February 2, 2018, and December 31, 2016 as "fiscal 2020," "fiscal 2019," "fiscal 2018," and "fiscal 2016," respectively. Unless the context requires otherwise, we are referring to VMware, Inc. and its consolidated subsidiaries when we use the terms "VMware," the "Company," "we," "our" or "us."

Overview

We originally pioneered the development and application of virtualization technologies with x86 server-based computing, separating application software from the underlying hardware. Information technology ("IT") driven innovation continues to disrupt markets and industries. Technologies emerge faster than organizations can absorb, creating increasingly complex environments. IT is working at an accelerated pace to harness new technologies, platforms and cloud models, ultimately guiding their business through a digital transformation. To take on these challenges, we are working with customers in the areas of hybrid cloud, multi-cloud, modern applications, networking and security, and digital workspaces. Our software provides a flexible digital foundation to help enable customers in their digital transformation.

We help customers manage their IT resources across private clouds and complex multi-cloud, multi-device environments by offering solutions across three categories: Software-Defined Data Center ("SDDC"), Hybrid Cloud Computing and End-User Computing ("EUC"). This portfolio supports and addresses the key IT priorities of our customers: accelerating their cloud journey, empowering digital workspaces and transforming networking and security. These VMware solutions enable the digital transformation our customers need as they ready their applications, infrastructure and devices for their future business needs.

We sell our solutions using enterprise agreements ("EAs") or as part of our non-EA, or transactional, business. EAs are comprehensive volume license offerings, offered both directly by us and through certain channel partners that also provide for multi-year maintenance and support. We continue to experience strong renewals, including renewals of our EAs, resulting in additional license sales of both our existing and newer products and solutions.

SDDC or Software-Defined Data Center

Our SDDC technologies form the foundation of our customers' private cloud environments and provide the capabilities for our customers to extend their private cloud to the public cloud and to help them run, manage, secure and connect all their applications across all clouds and devices. During fiscal 2019, we continued to see broad-based strength of our SDDC solutions. Future sales growth rates may fluctuate period to period, depending largely upon the extent to which SDDC technologies are included in our larger EAs. For example, sales from our management products were positively impacted during fiscal 2019 as a result of being included in some of the larger strategic deals.

Hybrid Cloud Computing

Our overarching cloud strategy contains three key components: (i) continue to expand beyond compute virtualization in the private cloud; (ii) extend the private cloud into the public cloud; and (iii) connect and secure endpoints across a range of public clouds. Hybrid Cloud Computing was primarily comprised of VMware Cloud Provider Program ("VCP") and included

VMware Cloud Services, which enable customers to run, manage, connect and secure their applications across private and public clouds.

During fiscal 2019, revenue growth in our Hybrid Cloud Computing offerings was primarily driven by our VCPP offerings. We expect VMware Cloud on AWS and other cloud services offerings such as CloudHealth by VMware to drive revenue growth in this product category in fiscal 2020.

End-User Computing

Our EUC solution consists of VMware Workspace ONE (“Workspace ONE”), our digital workspace platform, which includes VMware AirWatch (“AirWatch”) and VMware Horizon. Our AirWatch business model includes an on-premises solution that we offer through the sale of perpetual licenses, subscription and software-as-a-service (“SaaS”) solutions. Workspace ONE continued to be our primary growth driver within our EUC product group during fiscal 2019.

Dell Synergies

We continue joint marketing, sales, branding and product development efforts with Dell and other Dell companies to enhance the collective value we deliver to our mutual customers. Our collective business built with Dell continued to create synergies that benefit our sales during fiscal 2019.

Special Dividend

On July 1, 2018, our board of directors declared a conditional \$11 billion Special Dividend, payable pro-rata to our stockholders as of the record date. The Special Dividend was paid on December 28, 2018 to stockholders of record as of the close of business on December 27, 2018 in the amount of \$26.81 per outstanding share of our common stock. The Special Dividend was paid in connection with the closing of a proposed transaction by Dell (the “Dell Class V Transaction”) pursuant to which holders of Dell Class V common stock, which was designed to track our economic performance, exchanged the Dell Class V common stock for Dell Class C common stock or cash or both, resulting in the elimination of the Dell Class V common stock.

As a result of the payment of the Special Dividend, our cash, cash equivalents and short-term investments declined significantly. This will result in significantly lower investment income for the foreseeable future, which will also impact cash provided by operating activities, net income and net income per share in future periods.

Results of Operations

Approximately 70% of our sales are denominated in the United States (“U.S.”) dollar, however, in certain countries we also invoice and collect in the following currencies: euro ; British pound ; Japanese yen ; Australian dollar ; and Chinese renminbi . In addition, we incur and pay operating expenses in currencies other than the U.S. dollar. As a result, our financial statements, including our revenue, operating expenses, unearned revenue and the resulting cash flows derived from the U.S. dollar equivalent of foreign currency transactions, are affected by foreign exchange fluctuations.

Revenue

Our revenue during the periods presented was as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year		
	February 1,	February 2,	December 31,	2019 vs. 2018		2018 vs. 2016		
	2019	2018 ⁽¹⁾	2016 ⁽¹⁾	\$ Change	% Change	\$ Change	% Change	
Revenue:								
License	\$ 3,788	\$ 3,200	\$ 2,799	\$ 588	18%	\$ 401	14%	
Services:								
Software maintenance	4,506	4,032	3,722	474	12	310	8	
Professional services	680	630	552	49	8	78	14	
Total services	5,186	4,662	4,274	523	11	388	9	
Total revenue	\$ 8,974	\$ 7,862	\$ 7,073	\$ 1,112	14	\$ 789	11	
Revenue:								
United States	\$ 4,205	\$ 3,834	\$ 3,538	\$ 371	10%	\$ 296	8%	
International	4,769	4,028	3,535	741	18	493	14	
Total revenue	\$ 8,974	\$ 7,862	\$ 7,073	\$ 1,112	14	\$ 789	11	

⁽¹⁾ Fiscal 2018 and fiscal 2016 amounts reflect the impact of our retrospective adoption of Topic 606, effective February 3, 2018.

Revenue from our Hybrid Cloud Computing offerings consisted primarily of VCPP, and revenue from our SaaS offerings consisted primarily of our AirWatch mobile solution within Workspace ONE. VCPP revenue is included in license revenue and SaaS revenue is included in both license and services revenue. Hybrid Cloud Computing, together with our SaaS offerings, increased to approximately 10% of our total revenue during fiscal 2019 from approximately 9% and 8% of our total revenue during fiscal 2018 and fiscal 2016, respectively.

License revenue relating to the sale of perpetual licenses that are part of a multi-year contract is generally recognized upon delivery of the underlying license, whereas revenue derived from our Hybrid Cloud Computing and SaaS offerings is recognized on a consumption basis or over a period of time.

License Revenue

During fiscal 2019, license revenue continued to benefit from broad-based growth across our diverse product portfolio and across our U.S. and international geographies. Revenue growth from our VCPP offerings continued to contribute to license revenue growth during fiscal 2019. Strength in our EA renewal business and product offerings acquired in recent acquisitions such as VeloCloud Networks, Inc. (“VeloCloud”), also contributed to license revenue growth during fiscal 2019 compared to fiscal 2018.

Drivers of license revenue growth during fiscal 2018 compared to fiscal 2016 included continued scale and growth of our VMware NSX (“NSX”) and vSAN offerings. EUC growth driven in part by sales of Workspace ONE and continued strength of our VCPP offerings were also key factors contributing to license growth. Strength in our renewal business, including EAs, also contributed to license revenue growth during fiscal 2018 compared to fiscal 2016.

Services Revenue

During fiscal 2019 and fiscal 2018, software maintenance revenue continued to benefit from strong renewals of our EAs, maintenance contracts sold in previous periods and additional maintenance contracts sold in conjunction with new software license sales. In each period presented, customers purchased, on a weighted-average basis, approximately three years of support and maintenance with each new license purchased.

Professional services revenue increased 8% in fiscal 2019 and 14% in fiscal 2018. Services we provide through our technical account managers and our continued focus on solution deployments, including our NSX products, contributed to the increase in professional services revenue. We continue to also focus on enabling our partners to deliver professional services for our solutions and as such, our professional services revenue may vary as we continue to leverage our partners. Timing of service engagements will also impact the amount of professional services revenue we recognize during a period.

Unearned Revenue

Unearned revenue as of the periods presented consisted of the following (dollars in millions):

	February 1, 2019	February 2, 2018 ⁽¹⁾
Unearned license revenue	\$ 255	\$ 184
Unearned software maintenance revenue	5,972	5,082
Unearned professional services revenue	751	573
Total unearned revenue	<u>\$ 6,978</u>	<u>\$ 5,839</u>

⁽¹⁾ Fiscal 2018 amounts reflect the impact of our retrospective adoption of Topic 606, effective February 3, 2018.

Unearned license revenue is primarily related to the allocated portion of our SaaS offerings and is generally recognized over time as customers consume the services or ratably over the term of the subscription, commencing upon provisioning of the service.

Unearned software maintenance revenue is attributable to our maintenance contracts and is generally recognized over time on a ratably basis over the contract duration. The weighted-average remaining term as of February 1, 2019 was approximately two years. In addition, unearned software maintenance revenue also includes the allocated portion of our SaaS offerings. Unearned professional services revenue results primarily from prepaid professional services and is generally recognized as the services are performed.

Remaining Performance Obligations and Backlog**Remaining Performance Obligations**

Remaining performance obligations represent the aggregate amount of the transaction price in contracts allocated to performance obligations not delivered, or partially undelivered, as of the end of the reporting period. Remaining performance obligations include unearned revenue, multi-year contracts with future installment payments and certain unfulfilled orders against accepted customer contracts at the end of any given period.

As of February 1, 2019, the aggregate transaction price allocated to remaining performance obligations was \$7,749 million. Approximately 56% is expected to be recognized as revenue over the next 12 months and the remainder thereafter.

Backlog

Backlog is comprised of unfulfilled purchase orders or unfulfilled executed agreements at the end of a given period and is net of related estimated rebates and marketing development funds. As of February 1, 2019, our total backlog was \$449 million. Backlog primarily consists of licenses, maintenance and services. Our backlog related to licenses was \$147 million, which we generally expect to deliver and recognize as revenue during the following quarter. Backlog totaling \$34 million as of February 1, 2019 is excluded from the remaining performance obligations because such contracts are subject to cancellation until fulfillment of the performance obligation occurs. As of February 2, 2018, our total backlog was approximately \$285 million and our backlog related to licenses was approximately \$99 million.

The amount and composition of backlog will fluctuate period to period, and backlog is managed based upon multiple considerations, including product and geography. We do not believe the amount of backlog is indicative of future sales or revenue or that the mix of backlog at the end of any given period correlates with actual sales performance of a particular geography or particular products and services.

Cost of License Revenue, Cost of Services Revenue and Operating Expenses

Our cost of services revenue and operating expenses primarily reflected increasing cash-based employee-related expenses, driven by incremental growth in salaries and headcount across most of our income statement expense categories in fiscal 2019. We expect increases in cash-based employee-related expenses to continue.

Cost of License Revenue

Cost of license revenue primarily consists of the cost of fulfillment of our software and SD-WAN offerings, royalty costs in connection with technology licensed from third-party providers and amortization of intangible assets. The cost of fulfillment of our software and SD-WAN offerings includes personnel costs and related overhead associated with the physical and electronic delivery of our products.

Cost of license revenue during the periods presented was as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 1,	February 2,	December 31,	2019 vs. 2018		2018 vs. 2016	
	2019	2018	2016	\$ Change	% Change	\$ Change	% Change
Cost of license revenue	\$ 190	\$ 155	\$ 157	\$ 35	23 %	\$ (2)	(1)%
Stock-based compensation	1	2	2	(1)	(50)	—	(21)
Total expenses	\$ 191	\$ 157	\$ 159	\$ 34	22	\$ (2)	(1)
<i>% of License revenue</i>	5%	5%	6%				

Cost of license revenue increased in fiscal 2019 compared to fiscal 2018 , primarily driven by fulfillment-related costs for our SD-WAN offerings as well as an increase in amortization of intangible assets in fiscal 2019 .

Cost of Services Revenue

Cost of services revenue primarily includes the costs of personnel and related overhead to physically and electronically deliver technical support for our products, hosted services supporting our SaaS offerings, and costs to deliver professional services. Additionally, cost of services revenue includes depreciation of equipment supporting our service offerings.

Cost of services revenue during the periods presented was as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 1,	February 2,	December 31,	2019 vs. 2018		2018 vs. 2016	
	2019	2018	2016	\$ Change	% Change	\$ Change	% Change
Cost of services revenue	\$ 1,016	\$ 934	\$ 842	\$ 83	9%	\$ 91	11 %
Stock-based compensation	51	50	52	1	1	(1)	(2)
Total expenses	\$ 1,067	\$ 984	\$ 894	\$ 83	8	\$ 90	10
<i>% of Services revenue</i>	21%	21%	21%				

Cost of services revenue increased during fiscal 2019 compared to fiscal 2018 . The increase was primarily due to an increase in costs associated with third-party hosting services to support our SaaS offerings of \$36 million in fiscal 2019 , and growth in cash-based employee-related expenses of \$27 million, driven by incremental growth in headcount and salaries.

Cost of services revenue increased in fiscal 2018 compared to fiscal 2016 , but remained consistent as a percentage of revenue. The increase was primarily due to growth in cash-based employee-related expenses of \$81 million during fiscal 2018, driven by incremental growth in headcount and salaries, as well as increased IT development costs of \$24 million. These increased costs were offset in part by a decrease in equipment, depreciation and facilities-related costs of \$33 million.

Research and Development Expenses

Research and development expenses include the personnel and related overhead associated with the development of our product software and service offerings. We continue to invest in our key growth areas, including NSX and VMware vSAN, while also investing in areas that we expect to be significant growth drivers in future periods, such as VMware Cloud on AWS.

Research and development expenses during the periods presented were as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 1,	February 2,	December 31,	2019 vs. 2018		2018 vs. 2016	
	2019	2018	2016	\$ Change	% Change	\$ Change	% Change
Research and development	\$ 1,604	\$ 1,400	\$ 1,198	\$ 204	15%	\$ 203	17%
Stock-based compensation	371	355	305	16	5	49	16
Total expenses	\$ 1,975	\$ 1,755	\$ 1,503	\$ 220	13	\$ 252	17
<i>% of Total revenue</i>	<i>22%</i>	<i>22%</i>	<i>21%</i>				

Research and development expenses increased in fiscal 2019 compared to fiscal 2018. The increase was primarily due to growth in cash-based employee-related expenses of \$136 million in fiscal 2019, driven by incremental growth in headcount and salaries, and an increase in stock-based compensation of \$16 million, primarily driven by an increase in performance stock unit awards granted in fiscal 2019. The increase was also driven by increased equipment, depreciation and facilities-related costs of \$50 million, primarily including costs associated with third-party hosting services related to research and development, and a decrease in capitalized internal-use software development costs of \$26 million.

Research and development expenses increased in fiscal 2018 compared to fiscal 2016. The increase was primarily due to growth in cash-based employee-related expenses of \$194 million, driven by incremental growth in headcount and salaries. In addition, stock-based compensation increased by \$49 million, primarily driven by an increase in restricted stock unit awards and performance stock unit awards granted after the fourth quarter of fiscal 2016. Research and development expenses also increased due to higher equipment, depreciation and facilities-related costs of \$34 million. These increases were offset in part by an increase in capitalized internal-use software development costs of \$55 million.

Sales and Marketing Expenses

Sales and marketing expenses include personnel costs, sales commissions and related overhead associated with the sale and marketing of our license and services offerings, as well as the cost of product launches and marketing initiatives. A significant portion of our sales commissions are deferred and recognized over the expected period of benefit.

Sales and marketing expenses during the periods presented were as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 1,	February 2,	December 31,	2019 vs. 2018		2018 vs. 2016	
	2019	2018 ⁽¹⁾	2016 ⁽¹⁾	\$ Change	% Change	\$ Change	% Change
Sales and marketing	\$ 2,715	\$ 2,309	\$ 2,112	\$ 404	17%	\$ 199	9%
Stock-based compensation	203	197	195	7	3	1	1
Total expenses	\$ 2,918	\$ 2,506	\$ 2,307	\$ 410	16	\$ 201	9
<i>% of Total revenue</i>	<i>33%</i>	<i>32%</i>	<i>33%</i>				

⁽¹⁾ Fiscal 2018 and fiscal 2016 amounts reflect the impact of our retrospective adoption of Topic 606, effective February 3, 2018.

Sales and marketing expenses increased in fiscal 2019 compared to fiscal 2018. The increase was primarily due to growth in cash-based employee-related expenses of \$298 million in fiscal 2019, driven by incremental growth in headcount and salaries, as well as higher commission costs, resulting from increased sales volume and headcount. The increase during fiscal 2019 was also driven by an increase in costs incurred for sales enablement-based initiatives of \$30 million and an increase in travel-related expenses primarily driven by incremental growth in headcount. An increase in equipment, depreciation and facilities-related costs of \$20 million also contributed to the increase in sales and marketing expenses during fiscal 2019.

Sales and marketing expenses increased in fiscal 2018 compared to fiscal 2016. The increase was primarily due to growth in cash-based employee-related expenses of \$233 million, driven by incremental growth in headcount and salaries, as well as higher commission costs, resulting from increased sales volume.

General and Administrative Expenses

General and administrative expenses include personnel and related overhead costs to support the business. These expenses include the costs associated with finance, human resources, IT infrastructure and legal, as well as expenses related to corporate costs and initiatives, including certain charitable donations to the VMware Foundation.

General and administrative expenses during the periods presented were as follows (dollars in millions):

	For the Year Ended			Fiscal Year 2019 vs. 2018		Fiscal Year 2018 vs. 2016	
	February 1, 2019	February 2, 2018	December 31, 2016	\$ Change	% Change	\$ Change	% Change
	General and administrative	\$ 659	\$ 575	\$ 607	\$ 85	15%	\$ (32)
Stock-based compensation	105	79	82	25	32	(2)	(3)
Total expenses	\$ 764	\$ 654	\$ 689	\$ 110	17	\$ (35)	(5)
<i>% of Total revenue</i>	<i>9%</i>	<i>8%</i>	<i>10%</i>				

General and administrative expenses increased in fiscal 2019 compared to fiscal 2018. The increase was primarily due to \$45 million of costs incurred in connection with the Special Dividend and an increase in stock-based compensation of \$25 million, primarily driven by an increase in performance stock unit awards granted in fiscal 2019. An increase in IT-related costs, including telecommunication, of \$23 million also contributed to the increase in general and administrative costs during fiscal 2019.

General and administrative expenses decreased in fiscal 2018 compared to fiscal 2016. The decrease was primarily driven by a decrease in IT-related costs, including telecommunication, equipment and depreciation, of \$73 million, offset in part by decreased capitalization of internal-use software development costs of \$27 million, as well as increased cash-based employee-related expenses of \$33 million, resulting primarily from incremental growth in headcount and salaries.

Realignment and Loss on Disposition

Realignment expenses and loss on disposition during the periods presented were as follows (dollars in millions):

	For the Year Ended			Fiscal Year 2019 vs. 2018		Fiscal Year 2018 vs. 2016	
	February 1, 2019	February 2, 2018 ⁽¹⁾	December 31, 2016	\$ Change	% Change	\$ Change	% Change
	Realignment and loss on disposition	\$ 9	\$ 104	\$ 52	\$ (95)	(91)%	\$ 52
<i>% of Total revenue</i>	<i>—%</i>	<i>1%</i>	<i>1%</i>				

⁽¹⁾ Fiscal 2018 amounts reflect the impact of our retrospective adoption of Topic 606, effective February 3, 2018.

During the second quarter of fiscal 2018, we completed the sale of our VMware vCloud Air business to OVH US LLC. The loss recognized in connection with this transaction was \$104 million during fiscal 2018 and included the impairment of deferred commissions of approximately \$13 million resulting from the retrospective adoption of Topic 606.

On January 22, 2016, we approved a plan to streamline our operations, with plans to reinvest the associated savings in field, technical and support resources associated with growth products. As a result of these actions, approximately 800 positions were eliminated during fiscal 2016. We recognized \$50 million of severance-related realignment expenses during fiscal 2016 on the consolidated statements of income (loss). Additionally, we consolidated certain facilities as part of this plan, which resulted in the recognition of \$2 million of related expenses during fiscal 2016. Actions associated with this plan were substantially completed by December 31, 2016.

Investment Income

Investment income during the periods presented was as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 1,	February 2,	December 31,	2019 vs. 2018		2018 vs. 2016	
	2019	2018	2016	\$ Change	% Change	\$ Change	% Change
Investment income	\$ 161	\$ 120	\$ 77	\$ 41	35%	\$ 42	55%
% of Total revenue	2%	2%	1%				

Investment income increased in fiscal 2019 compared to fiscal 2018 and fiscal 2018 compared to fiscal 2016, primarily driven by increased interest income earned on our cash equivalents and short-term investments resulting from higher yields and from higher average invested balances.

Our cash, cash equivalents and short-term investments declined significantly as a result of the Special Dividend paid on December 28, 2018. Upon liquidation of investment securities that were used primarily to fund the Special Dividend, the Company recognized a loss of \$53 million. We expect to have significantly lower investment income in future periods as a result of the decline in our cash equivalents and short-term investments.

Interest expense

Interest expense during the periods presented was as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 1,	February 2,	December 31,	2019 vs. 2018		2018 vs. 2016	
	2019	2018	2016	\$ Change	% Change	\$ Change	% Change
Interest expense	\$ 134	\$ 74	\$ 26	\$ 60	80%	\$ 48	183%
% of Total revenue	1%	1%	—%				

On August 21, 2017, we issued three series of unsecured senior notes (“Senior Notes”) pursuant to a public debt offering in the aggregate principal amount of \$4,000 million. Upon closing, a portion of the net proceeds from the offering was used to repay two of the notes payable to Dell in the aggregate principal amount of \$1,230 million. Interest expense increased by \$60 million in fiscal 2019 compared to fiscal 2018 and \$48 million in fiscal 2018 compared to fiscal 2016, due to the issuance of the Senior Notes, offset in part by a reduction in interest expense on the notes payable to Dell.

Other Income (Expense), net

Other income (expense), net during the periods presented was as follows (dollars in millions):

	For the Year Ended			Fiscal Year		Fiscal Year	
	February 1,	February 2,	December 31,	2019 vs. 2018		2018 vs. 2016	
	2019	2018	2016	\$ Change	% Change	\$ Change	% Change
Other income (expense), net	\$ 806	\$ 66	\$ (17)	\$ 739	1,110%	\$ 84	479%
% of Total revenue	9%	1%	—%				

Other income (expense), net increased in fiscal 2019 compared to fiscal 2018 primarily due to the adoption of ASU 2016-01, Financial Instruments-Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities. Upon adoption, all gains and losses on non-marketable equity securities, realized and unrealized, are recognized in other income (expense), net on the consolidated statements of income (loss). During fiscal 2019, we recognized an unrealized gain of \$813 million on our investment in Pivotal Software Inc. (“Pivotal”), which included an unrealized gain of \$668 million resulting from Pivotal’s initial public offering during the first quarter of fiscal 2019. As of February 1, 2019, the fair value of our investment in Pivotal was \$833 million.

The fair value of our investment is determined primarily using the quoted market price of Pivotal’s Class A common stock. As a result, any volatility in Pivotal’s publicly traded Class A common stock introduces variability to our consolidated statements of income (loss).

The unrealized gain related to our investment in Pivotal was partially offset by the absence of gains recognized on two step acquisitions completed in fiscal 2018. During fiscal 2018, we completed two step acquisitions, Wavefront, Inc. (“Wavefront”) and VeloCloud, which resulted in an aggregate gain of \$42 million for the remeasurement of our respective ownership interest in each company. Additionally, an unrealized loss of \$14 million was recognized for an equity security in fiscal 2019, compared to an unrealized gain of \$11 million in fiscal 2018.

Other income (expense), net increased in fiscal 2018 compared to fiscal 2016 primarily due to a \$42 million gain recognized upon completion of two step acquisitions, Wavefront and VeloCloud and \$6 million gain on extinguishment of debt related to the repayment of two of the notes payable to Dell in aggregate principal amount of \$1,230 million in fiscal 2018. The increase in other income (expense), net, as compared to fiscal 2016, was also driven by gains and losses on foreign currency exchange.

Income Tax Provision

Our annual effective income tax rate was 16.0% , 63.7% and 18.6% during fiscal 2019, 2018, and 2016, respectively. Our effective income tax rate in fiscal 2019 decreased compared to fiscal 2018 primarily due to a one-time expense of approximately \$900 million in fiscal 2018 resulting from the U.S. Tax Cuts and Jobs Act (the “2017 Tax Act”). Our effective income tax rate in fiscal 2018 was substantially higher compared to fiscal 2016 primarily due to this one-time expense resulting from the 2017 Tax Act.

Key components of the tax expense relating to the 2017 Tax Act included provisional estimates for the mandatory one-time transition tax on accumulated earnings of foreign subsidiaries (“Transition Tax”) of approximately \$800 million and the remeasurement of our deferred tax assets and liabilities of approximately \$100 million resulting from the reduction in the U.S. statutory corporate tax rate from 35% to 21%, effective January 1, 2018.

Due to the timing of the enactment and the complexity involved in applying the provisions of the 2017 Tax Act, we made reasonable estimates for the related tax effects and recorded provisional amounts on our consolidated financial statements for fiscal 2018. During fiscal 2019, we collected and prepared necessary data and finalized our income tax accounting analysis based on the guidance and interpretations issued by the U.S. Treasury Department, the Internal Revenue Service (“IRS”), and other standard-setting bodies, and relevant authorities. The adjustment to the provisional amount was not material.

We are included in Dell’s consolidated tax group for U.S. federal income tax purposes and will continue to be included in Dell’s consolidated tax group for periods in which Dell beneficially owns at least 80% of the total voting power and value of our combined outstanding Class A and Class B common stock as calculated for U.S. federal income tax purposes. The percentage of voting power and value calculated for U.S. federal income tax purposes may differ from the percentage of outstanding shares beneficially owned by Dell due to the greater voting power of our Class B common stock as compared to our Class A common stock and other factors. Each member of a consolidated tax group during any part of a consolidated return year is jointly and severally liable for tax on the consolidated return of such year and for any subsequently determined deficiency thereon. Should Dell’s ownership fall below 80% of the total voting power or value of our outstanding stock in any period, then we would no longer be included in the Dell consolidated tax group for U.S. federal income tax purposes, and our U.S. federal income tax would be reported separately from that of the Dell consolidated tax group.

Although our results are included in the Dell consolidated return for U.S. federal income tax purposes, our income tax provision, including the impact of taxes relating to the 2017 Tax Act, is calculated primarily as though we were a separate taxpayer. However, under certain circumstances, transactions between us and Dell are assessed using consolidated tax return rules.

Our future effective tax rate will depend upon the proportion of our income before provision for income taxes earned in the U.S. and in jurisdictions with a tax rate lower than the U.S. statutory rate. Our non-U.S. earnings are primarily earned by our subsidiaries organized in Ireland where the rate of taxation is lower than our U.S. tax rate, and as such, our annual effective tax rate can be significantly affected by the composition of our earnings in the U.S. and non-U.S. jurisdictions. Our future effective tax rate is subject to variance arising from changes in international tax laws and may also be significantly affected by such factors, as changes in our business or statutory rates, changing interpretation of existing laws or regulations, the impact of accounting for stock-based compensation and the recognition of excess tax benefits and tax deficiencies within the income tax provision in the period in which they occur, the impact of accounting for business combinations, changes in the composition of earnings in the U.S. compared with other regions in the world and overall levels of income before tax, changes in our international organization, as well as the expiration of statute of limitations and settlements of audits.

Transition Period

In conjunction with our change in fiscal year end, we had a Transition Period of 34 days that began on January 1, 2017 and ended on February 3, 2017. The most comparable prior-year period, the one month ended January 31, 2016, had a duration of 31 days.

The following table presents certain financial information during the periods presented (dollars in millions):

	Transition Period	Comparable Period
	January 1 to	January 1 to
	February 3,	January 31,
	2017	2016
Total revenue	\$ 512	\$ 469
Operating income (loss)	(42)	25
Income tax provision (benefit)	(30)	5
Net income (loss)	(5)	24

During the Transition Period, total revenue increased and license sales declined when compared to the one-month period ended January 31, 2016. Operating loss during the Transition Period reflected costs related to our global sales event, as well as increases in employee-related expenses compared to the one month ended January 31, 2016. Factors contributing to the increase in employee-related expenses include both incremental headcount and costs associated with three additional days of expense included in the Transition Period.

The income tax benefit recognized during the Transition Period was driven by the pre-tax loss incurred during the period and our Internal Revenue Code Section 199 deduction (“Deduction”), which reflected the impact of claiming a higher Deduction for two of our U.S. tax return periods compared to the Deduction for fiscal 2016, which was calculated on a separate return basis. Two tax returns were required, with the first covering the period prior to the Dell Acquisition from January 1, 2016 to September 7, 2016 and the second covering the period following the Dell Acquisition through Dell’s fiscal 2017 which ended on February 3, 2017. The Deduction was greater during the two U.S tax return periods due to higher taxable income resulting from the acceleration of income recognized from unearned revenue for tax purposes.

Our Relationship with Dell

As of February 1, 2019, Dell controlled 31 million shares of Class A common stock and all 300 million shares of Class B common stock, representing 80.5% of our total outstanding shares of common stock and 97.4% of the combined voting power of our outstanding common stock. For a description of related risks, refer to “Risks Related to Our Relationship with Dell” in Part I, Item 1A of this Annual Report on Form 10-K.

The information provided below includes a summary of the transactions entered into with Dell and Dell’s consolidated subsidiaries, including EMC (collectively, “Dell”) from the effective date of the Dell Acquisition through February 1, 2019. Transactions prior to the effective date of the Dell Acquisition reflect transactions with EMC and its consolidated subsidiaries.

Transactions with Dell

We engaged with Dell in the following ongoing related party transactions, which resulted in revenue and receipts, and unearned revenue for us:

- Pursuant to original equipment manufacturer (“OEM”) and reseller arrangements, Dell integrates or bundles our products and services with Dell’s products and sells them to end users. Dell also acts as a distributor, purchasing our standalone products and services for resale to end-user customers through VMware-authorized resellers. Revenue under these arrangements is presented net of related marketing development funds and rebates paid to Dell. In addition, we provide professional services to end users based upon contractual agreements with Dell.
- Dell purchases products and services from us for its internal use.
- Pursuant to an ongoing distribution agreement, we act as the selling agent for certain products and services of Pivotal, a subsidiary of Dell, in exchange for an agency fee. Under this agreement, cash is collected from the end user by us and remitted to Pivotal, net of the contractual agency fee.
- From time to time, VMware and Dell enter into agreements to collaborate on technology projects, and Dell pays VMware for services or reimburses VMware for costs incurred by VMware, in connection with such projects.

Dell purchases our products and services directly from us, as well as through our channel partners. Information about our revenue and receipts, and unearned revenue from such arrangements, for the periods presented consisted of the following (table in millions):

	Revenue and Receipts						
	For the Year Ended			Transition Period	Unearned Revenue		
	February 1,	February 2,	December 31,	January 1 to	As of		
	February 1, 2019	February 2, 2018 ⁽¹⁾	December 31, 2016 ⁽¹⁾	February 3, 2017 ⁽¹⁾	February 1, 2019	February 2, 2018 ⁽¹⁾	
Reseller revenue	\$ 2,180	\$ 1,315	\$ 612	\$ 44	\$ 2,375	\$ 1,236	
Internal-use revenue	22	34	28	7	13	12	
Agency fee revenue	5	2	4	—	—	—	
Collaborative technology project receipts	4	—	—	—	n/a	n/a	

⁽¹⁾ Fiscal 2018, fiscal 2016 and the Transition Period amounts have been adjusted to reflect the impact of our retrospective adoption of Topic 606, effective February 3, 2018.

Customer deposits resulting from transactions with Dell were \$85 million and \$37 million as of February 1, 2019 and February 2, 2018, respectively.

We engaged with Dell in the following ongoing related party transactions, which resulted in costs to us:

- We purchase and lease products and purchase services from Dell.
- From time to time, we and Dell enter into agreements to collaborate on technology projects, and we pay Dell for services provided to us by Dell related to such projects.
- In certain geographic regions where we do not have an established legal entity, we contract with Dell subsidiaries for support services and support from Dell personnel who are managed by us. The costs incurred by Dell on our behalf related to these employees are charged to us with a mark-up intended to approximate costs that would have been incurred had we contracted for such services with an unrelated third party. These costs are included as expenses on our consolidated statements of income (loss) and primarily include salaries, benefits, travel and occupancy expenses. Dell also incurs certain administrative costs on our behalf in the U.S. that are recorded as expenses on our consolidated statements of income (loss).
- In certain geographic regions, Dell files a consolidated indirect tax return, which includes value added taxes and other indirect taxes collected by us from our customers. We remit the indirect taxes to Dell and Dell remits the tax payment to the foreign governments on our behalf.
- From time to time, we invoice end users on behalf of Dell for certain services rendered by Dell. Cash related to these services is collected from the end user by us and remitted to Dell.

Information about our payments from such arrangements during the periods presented consisted of the following (table in millions):

	For the Year Ended			Transition Period
	February 1,	February 2,	December 31,	January 1 to
	February 1, 2019	February 2, 2018	December 31, 2016	February 3, 2017
Purchases and leases of products and purchases of services ⁽¹⁾	\$ 198	\$ 142	\$ 97	\$ 14
Dell subsidiary support and administrative costs	106	123	105	13

⁽¹⁾ Amount includes indirect taxes that were remitted to Dell during the periods presented.

We also purchase Dell products through Dell's channel partners. Purchases of Dell products through Dell's channel partners were not significant during the periods presented.

From time to time, we and Dell also enter into joint marketing and product development arrangements, for which both parties may incur costs.

During the third quarter of fiscal 2019, we acquired technology and employees related to the Dell EMC Service Assurance Suite, which provides root cause analysis management software for communications service providers, from Dell. The purchase of the Dell EMC Service Assurance Suite was accounted for as a transaction by entities under common control. The amount of the purchase price in excess of the historical cost of the acquired assets was recognized as a reduction to retained earnings on the consolidated balance sheets. Transition services are to be provided by Dell over a period of 18 months, starting from the date of the acquisition. Payments for transition services are not expected to be significant.

During the second quarter of fiscal 2018, we acquired Wavefront. Upon closing of the acquisition, Dell was paid \$20 million in cash for its non-controlling ownership interest in Wavefront.

Dell Financial Services (“DFS”)

DFS provided financing to certain of our end users at our end users’ discretion. Upon acceptance of the financing arrangement by both our end user and DFS, amounts classified as trade accounts receivable are reclassified to due from related parties, net on the consolidated balance sheets. Revenue recognized on transactions financed through DFS was recorded net of financing fees, which were \$40 million and \$25 million during the year ended February 1, 2019 and February 2, 2018, respectively. Financing fees during the Transition Period were not significant.

Due To/From Related Parties, Net

Amounts due to and from related parties, net as of the periods presented consisted of the following (table in millions):

	February 1, 2019	February 2, 2018
Due from related parties	\$ 1,079	\$ 638
Due to related parties	142	106
Due from related parties, net	<u>\$ 937</u>	<u>\$ 532</u>

Amounts included in due from related parties, net, excluding DFS and tax obligations, are generally settled in cash within 60 days of each quarter-end.

Special Dividend

On July 1, 2018, our board of directors declared a conditional Special Dividend of \$11 billion, payable pro-rata to our stockholders as of the record date. During the fourth quarter of fiscal 2019, the conditions of the Special Dividend were met. The Special Dividend was paid on December 28, 2018 to stockholders of record as of the close of business on December 27, 2018 in the amount of \$26.81 per outstanding share of our common stock. Dell was paid approximately \$9 billion in cash as a result of its financial interest in our common stock as of the record date. Refer to Note P to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for more information.

Stock Purchase Arrangements with Dell

From time to time, we enter into stock purchase arrangements with Dell. The following table summarizes purchases of our Class A common stock from Dell during the periods presented, pursuant to stock purchase agreements entered into on March 29, 2017 (aggregate purchase price in millions, shares in thousands):

	For the Year Ended February 2, 2018
Aggregate purchase price	\$ 725
Class A common shares repurchased ⁽¹⁾	7,572
Weighted-average price per share	\$ 95.75

⁽¹⁾ The aggregate number of shares purchased was determined based upon a volume-weighted average price during a defined period, less an agreed upon discount.

There were no purchases of our Class A common stock from Dell during the year ended February 1, 2019 and the Transition Period.

Notes Payable to Dell

On January 21, 2014, we entered into a note exchange agreement with our parent company providing for the issuance of three promissory notes in the aggregate principal amount of \$1,500 million, which consisted of outstanding principal due on the following dates: \$680 million due May 1, 2018, \$550 million due May 1, 2020 and \$270 million due December 1, 2022.

On August 21, 2017, we repaid two of the notes payable to Dell in the aggregate principal amount of \$1,230 million, representing repayment of the note due May 1, 2018 at par value and repayment of the note due May 1, 2020 at a discount. During the year ended February 2, 2018, VMware recognized a gain on extinguishment of debt of \$6 million, which was recorded in other income (expense), net on the consolidated statements of income (loss). The remaining note payable of \$270 million due December 1, 2022 may be prepaid without penalty or premium.

Interest is payable quarterly in arrears, at the annual rate of 1.75%. During the year ended February 1, 2019 and the Transition Period, interest expense on the notes payable to Dell was not significant. Interest expense recognized during the years ended February 2, 2018 and December 31, 2016 was \$16 million and \$26 million, respectively.

Pivotal

As of February 2, 2018, we had a 20% ownership interest in Pivotal, and the investment was accounted for using the cost method. The carrying value of the investment was included in other assets on the consolidated balance sheets and was \$20 million as of February 2, 2018. Prior to Pivotal's initial public offering on April 20, 2018, our previously held preferred shares were converted to shares of non-trading Class B common stock, resulting in us having a financial interest of 17% and a voting interest of 24% in Pivotal as of February 1, 2019. We recognized an unrealized gain of \$813 million during the year ended February 1, 2019 in other income (expense), net on the consolidated statements of income (loss) to adjust our investment in Pivotal to its fair value of \$833 million as of February 1, 2019, including an unrealized gain of \$668 million recognized as a result of Pivotal's initial public offering. Refer to Note I to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further discussion.

Liquidity and Capital Resources

As of the periods presented, we held cash, cash equivalents and short-term investments as follows (table in millions):

	February 1, 2019	February 2, 2018
Cash and cash equivalents	\$ 2,830	\$ 5,971
Short-term investments	19	5,682
Total cash, cash equivalents and short-term investments	<u>\$ 2,849</u>	<u>\$ 11,653</u>

Our cash, cash equivalents and short-term investments declined significantly as a result of the payment of the Special Dividend on December 28, 2018.

We held a diversified portfolio of money-market funds and fixed income securities. Our fixed income securities were denominated in U.S. dollars and primarily consisted of highly liquid debt instruments of the U.S. Government and its agencies, municipal obligations, mortgage-backed securities and U.S. and foreign corporate debt securities. We limited the amount of our investments with any single issuer and monitored the diversity of the portfolio and the amount of investments held at any single financial institution, thereby diversifying our credit risk.

We continue to expect that cash generated by operations will be our primary source of liquidity. We also continue to believe that existing cash and cash equivalents and investments, together with any cash generated from operations, will be sufficient to fund our operations for at least the next twelve months. As a result of the enactment of the 2017 Tax Act, we have greater flexibility to repatriate foreign earnings in future periods without significant U.S. tax impact. While we believe these cash sources will be sufficient to fund our operations, our overall level of cash needs may be affected by capital allocation decisions that may include the number and size of acquisitions and stock repurchases, among other things. We remain committed to a balanced capital allocation policy through investing in our product and solution offerings, acquisitions and returning capital to stockholders through share repurchases.

The 2017 Tax Act imposed a mandatory one-time Transition Tax and eliminates U.S. Federal taxes on foreign subsidiary distributions. The Transition Tax was calculated on a separate tax return basis and the amount unpaid as of February 1, 2019 was \$671 million, which we expect to pay over the next seven years. Actual tax payments made to Dell pursuant to the tax sharing agreement may differ materially from our total estimated tax liability calculated on a separate tax return basis. The difference between our estimated liability and the amount paid to Dell is recognized as a component of additional paid-in capital, generally in the period in which the consolidated tax return is filed.

Our cash flows summarized for the periods presented were as follows (table in millions):

	For the Year Ended			Transition Period
	February 1, 2019	February 2, 2018 ⁽¹⁾	December 31, 2016 ⁽¹⁾	January 1 to February 3, 2017 ⁽¹⁾
Net cash provided by (used in):				
Operating activities	\$ 3,663	\$ 3,218	\$ 2,379	\$ 361
Investing activities	4,447	(1,512)	(463)	7
Financing activities	(11,219)	1,058	(1,619)	62
Net increase (decrease) in cash, cash equivalents and restricted cash	\$ (3,109)	\$ 2,764	\$ 297	\$ 430

⁽¹⁾ Fiscal 2018, fiscal 2016 and the Transition Period amounts have been adjusted to reflect the impact of our retrospective adoption of ASU 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash.

Operating Activities

Cash provided by operating activities increased \$445 million in fiscal 2019 compared to fiscal 2018 . Cash provided by operating activities benefited from an increase in cash collections due to increased sales. These positive impacts were partially offset by increased cash payments for employee-related expenses, including salaries, bonuses and commissions, resulting primarily from growth in headcount, as well as increased cash payments for our employee stock purchase plan. Additionally, cash outflows related to interest on the Senior Notes and tax payments were higher in fiscal 2019 compared to fiscal 2018 .

Cash provided by operating activities increased \$839 million in fiscal 2018 compared to fiscal 2016. Cash provided by operating activities benefited from increased cash collections due to increased sales and improved linearity due to the fiscal year change in fiscal 2018, and a decrease in tax payments as a result of significant tax payments made during fiscal 2016. These positive impacts were partially offset by higher cash outflows related to operating expenses, as well as increased cash payments for employee-related expenses, including salaries, bonuses and commissions, resulting primarily from growth in headcount.

Cash provided by operating activities of \$361 million during the Transition Period primarily reflected cash provided by cash collections, partially offset by cash payments for employee-related expenses.

Investing Activities

Cash used in investing activities is generally attributable to the purchase of available-for-sale securities, business acquisitions and capital expenditures. Cash provided by investing activities is affected by the sales and maturities of our available-for-sale securities.

Cash provided by investing activities increased \$5,959 million in fiscal 2019 compared to fiscal 2018 , driven primarily by the liquidation of our fixed income investments to fund the Special Dividend during fiscal 2019, partially offset by an increase in cash used in business combinations of \$267 million as compared to fiscal 2018. The increase was also due to an increase of \$54 million in net proceeds from our strategic investments.

Cash used in investing activities increased \$1,049 million in fiscal 2018 compared to fiscal 2016, driven primarily by an increase in net cash used in business combinations of \$597 million, property and equipment additions of \$110 million, and net purchases of available-for-sale securities of \$311 million.

Financing Activities

Cash used in financing activities increased \$12,277 million in fiscal 2019 compared to fiscal 2018 . The increase was primarily due to payment of the \$11 billion Special Dividend on December 28, 2018, partially offset by a decrease of \$1,407 million in repurchases of shares of our Class A common stock in fiscal 2019, as compared to fiscal 2018, due to the temporary suspension of our stock repurchase program in light of Dell's announcement of their evaluation of strategic business opportunities outlined in their Schedule 13D/A filed February 2, 2018, which concluded upon the announcement of the Dell Class V Transaction on July 2, 2018. Additionally, the increase in cash used in financing activities was driven by the absence of the net cash proceeds received from the issuance of long-term debt, partially offset by the repayment of two of our outstanding notes payable to Dell in fiscal 2018.

Cash provided by financing activities increased \$2,677 million in fiscal 2018 compared to fiscal 2016, driven primarily by the net cash proceeds received from the issuance of long-term debt of \$3,961 million, partially offset by the repayment of two of our outstanding notes payable to Dell of \$1,225 million.

Cash provided by financing activities of \$62 million during the Transition Period was driven by cash proceeds from the issuance of common stock of \$61 million, resulting primarily from our employee stock purchase plan.

Long-term Debt

On August 21, 2017, we issued Senior Notes pursuant to a public debt offering in the aggregate principal amount of \$4,000 million, which consisted of outstanding principal due on the following dates: \$1,250 million due August 21, 2020, \$1,500 million due August 21, 2022 and \$1,250 million due August 21, 2027. The notes bear interest, payable semiannually in arrears on February 21 and August 21 of each year, at annual rates of 2.30%, 2.95% and 3.90%, respectively. In fiscal 2019, \$122 million was paid for interest related to the Senior Notes. We used a portion of the net proceeds from the offering to repay certain notes payable to Dell due May 1, 2018 and May 1, 2020.

The Senior Notes also include restrictive covenants that, in certain circumstances, limit our ability to create certain liens, to enter into certain sale and leaseback transactions and to consolidate, merge, sell or otherwise dispose of all or substantially all of our assets.

Revolving Credit Facility

On September 12, 2017, we entered into an unsecured credit agreement establishing a revolving credit facility (“Credit Facility”) with a syndicate of lenders that provides us with a borrowing capacity of up to \$1,000 million, which may be used for general corporate purposes. The credit agreement contains certain representations, warranties and covenants. Commitments under the Credit Facility are available for a period of five years, which may be extended, subject to the satisfaction of certain conditions, by up to two one-year periods. As of February 1, 2019, there were no outstanding borrowings under the Credit Facility.

Notes Payable to Dell

On January 21, 2014, we entered into a note exchange agreement with Dell providing for the issuance of three promissory notes in the aggregate principal amount of \$1,500 million, which consisted of outstanding principal due on the following dates: \$680 million due May 1, 2018, \$550 million due May 1, 2020 and \$270 million due December 1, 2022. During fiscal 2018, we repaid the notes due May 1, 2018 and May 1, 2020.

Interest is payable quarterly in arrears, at the annual rate of 1.75%. The amount paid for interest related to these notes was not significant in fiscal 2019, and was \$19 million and \$26 million in fiscal 2018 and fiscal 2016.

Stock Repurchase Program

From time to time, we repurchase stock pursuant to authorized stock repurchase programs in open market transactions as permitted by securities laws and other legal requirements. We are not obligated to purchase any shares under our stock repurchase programs. The timing of any repurchases and the actual number of shares repurchased depends on a variety of factors, including our stock price, cash requirements for operations and business combinations, corporate and regulatory requirements and other market and economic conditions. Purchases can be discontinued at any time we believe additional purchases are not warranted. From time to time, we also purchase stock in private transactions, such as with Dell. All shares repurchased under our stock repurchase programs are retired. During August 2017, our board of directors authorized the repurchase of up to \$1,000 million of Class A common stock through August 31, 2018, of which \$834 million remained available for repurchase as of February 1, 2019. On July 1, 2018, our board of directors extended authorization of the existing stock repurchase program through August 31, 2019. Refer to Note P to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further discussion.

Off-Balance Sheet Arrangements and Contractual Obligations

Guarantees and Indemnification Obligations

We enter into agreements in the ordinary course of business with, among others, customers, distributors, resellers, system vendors and systems integrators. Most of these agreements require us to indemnify the other party against third-party claims alleging that one of our products infringes or misappropriates a patent, copyright, trademark, trade secret or other intellectual property right. Certain of these agreements require us to indemnify the other party against certain claims relating to property damage, personal injury, or the acts or omissions by us and our employees, agents or representatives.

We have agreements with certain vendors, financial institutions, lessors and service providers pursuant to which we have agreed to indemnify the other party for specified matters, such as acts and omissions by us and our employees, agents, or representatives.

We have procurement or license agreements with respect to technology that we have obtained the right to use in our products and agreements. Under some of these agreements, we have agreed to indemnify the supplier for certain claims that may be brought against such party with respect to our acts or omissions relating to the supplied products or technologies.

We have agreed to indemnify our directors and executive officers, to the extent legally permissible, against all liabilities reasonably incurred in connection with any action in which such individual may be involved by reason of such individual being or having been a director or officer. Our by-laws and charter also provide for indemnification of our directors and officers to the extent legally permissible, against all liabilities reasonably incurred in connection with any action in which such individual may be involved by reason of such individual being or having been a director or executive officer. We also indemnify certain employees who provide service with respect to employee benefits plans, including the members of the Administrative Committee of the VMware 401(k) Plan, and employees who serve as directors or officers of our subsidiaries.

In connection with certain acquisitions, we have agreed to indemnify the former directors and officers of the acquired company in accordance with the acquired company's by-laws and charter in effect immediately prior to the acquisition or in accordance with indemnification or similar agreements entered into by the acquired company and such persons. We typically purchase a "tail" directors and officers insurance policy, which should enable us to recover a portion of any future indemnification obligations related to the former directors and officers of an acquired company.

We are unable to determine the maximum potential amount under these indemnification agreements due to our limited history with prior indemnification claims and the unique facts and circumstances involved in each particular situation. Historically, costs related to these indemnification provisions have not been significant.

Contractual Obligations

We have various contractual obligations impacting our liquidity. The following represents our contractual obligations as of February 1, 2019 (table in millions):

	Payments Due by Period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Senior Notes ⁽¹⁾	\$ 4,674	\$ 122	\$ 1,465	\$ 1,642	\$ 1,445
Note payable to Dell ⁽²⁾	288	5	9	274	—
Operating leases ⁽³⁾	870	109	143	95	523
Purchase obligations	339	143	188	8	—
Tax obligations ⁽⁴⁾	671	57	117	168	329
Other contractual commitments ⁽⁵⁾	23	5	8	6	4
Sub-Total	6,865	441	1,930	2,193	2,301
Uncertain tax positions ⁽⁶⁾	382				
Total	\$ 7,247				

(1) Consists of principal and interest payments on the Senior Notes. Refer to "Liquidity and Capital Resources" for a discussion of the public debt offering we issued on August 21, 2017 in the aggregate principal amount of \$4,000 million.

(2) Consists of principal and interest payments on the outstanding note payable to Dell. Refer to "Liquidity and Capital Resources" for a discussion of the \$270 million note payable we entered into with Dell per the note exchange agreement from January 21, 2014.

(3) Our operating leases are primarily for facility space and land. Amounts in the table above exclude legally binding minimum lease payments for leases signed but not yet commenced of \$164 million, as well as expected sublease income.

(4) Consists of future cash payments related to the Transition Tax.

(5) Consists of various contractual agreements, which include commitments on the lease for our Washington data center facility and asset retirement obligations.

(6) As of February 1, 2019, we had \$382 million of gross uncertain tax benefits, excluding interest and penalties. The timing of future payments relating to these obligations is highly uncertain. Based on the timing and outcome of examinations of our subsidiaries, the result of the expiration of statutes of limitations for specific jurisdictions or the timing and result of ruling requests from taxing authorities, it is reasonably possible that within the next 12 months total unrecognized tax benefits could be potentially reduced by approximately \$84 million.

Critical Accounting Policies and Estimates

In preparing our consolidated financial statements in accordance with accounting principles generally accepted in the United States of America, we are required to make estimates, assumptions and judgments that affect the amounts reported on our financial statements and the accompanying disclosures. Estimates and assumptions about future events and their effects cannot be determined with certainty and therefore require the exercise of judgment. We base our estimates, assumptions and

judgments on historical experience and various other factors that we believe to be reasonable under the circumstances. These estimates may change, as new events occur and additional information is obtained, and are recognized in the consolidated financial statements as soon as they become known. Actual results could differ from those estimates and any such differences may be material to our financial statements. We believe that the critical accounting policies and estimates set forth below involve a higher degree of judgment and complexity in their application than our other significant accounting policies. Our senior management has reviewed our critical accounting policies and related disclosures with the Audit Committee of the Board of Directors. Historically, our assumptions, judgments and estimates relative to our critical accounting policies have not differed materially from actual results. Refer to Note A to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for information on significant accounting policies and estimates used in the preparation of the consolidated financial statements.

Revenue Recognition

We derive revenue primarily from licensing software under perpetual licenses or consumption-based contracts and related software maintenance and support, training, consulting services and hosted services. We account for a contract with a customer if all criteria defined by the guidance are met, including collectibility of consideration is probable. Revenue is recognized upon transfer of control of licenses or services to our customer in an amount that reflects the consideration we expect to receive in exchange for those licenses or services. Control of a promised good or service may be transferred to a customer either at a point in time or over time, which affects the timing of revenue recognition. Our contracts with customers may include a combination of licenses and services that are accounted for as distinct performance obligations. Determining whether our licenses and services are considered distinct performance obligations that should be accounted for separately or together often involves assumptions and significant judgments that can have a significant impact on the timing and amount of revenue recognized.

In addition, revenue from on-premises license software sold to OEMs is recognized when the sale to the end user occurs. Revenue is recognized upon reporting by the OEMs of their sales, and for the period where information of the underlying sales has not been made available, revenue is recognized based upon estimated sales. Our VCPP partners rent on-premises licenses from us, and the rental fee is recognized as license revenue upon consumption. License revenue is based upon reported consumption by VCPP partners and includes estimates for the period when consumption information has not been made available. Certain contracts include third-party offerings and revenue may be recognized net of the third-party costs, based upon an assessment as to whether we had control of the underlying third-party offering.

We enter into revenue contracts with multiple performance obligations in which a customer may purchase combinations of licenses, maintenance and support, training, consulting services, hosted services and rights to future products and services. For contracts with multiple performance obligations, we allocate total transaction value to the identified underlying performance obligations based on relative standalone selling price (“SSP”). We typically estimate SSP of services based on observable transactions when the services are sold on a standalone basis and those prices fall within a reasonable range. We utilize the residual approach to estimate SSP of license as the licenses are not sold standalone and the same products are sold to different customers at a broad range of prices which are highly variable. Changes in assumptions or judgments used in determining standalone selling price could have a significant impact on the timing and amount of revenue we report in a particular period.

Professional services include design, implementation, training and consulting services. Professional services performed by us represent distinct performance obligations as they do not modify or customize licenses sold. These services are not highly interdependent or highly interrelated to licenses sold such that a customer would not be able to use the licenses without the professional services. Revenue from professional services engagements performed for a fixed fee, for which we are able to make reasonably dependable estimates of progress toward completion, is recognized based on progress. We believe this method of measurement provides the closest depiction of our performance in transferring control of the professional services.

Rebate Reserves

We offer rebates to certain channel partners, which are recognized as a reduction to revenue or unearned revenue. Rebates based on actual partner sales are recognized as a reduction to revenue as the underlying revenue is recognized. Rebates earned based upon partner achievement of cumulative level of sales are recognized as a reduction of revenue proportionally for each sale that is required to achieve the target.

The estimated reserves for channel rebates and sales incentives are based on channel partners’ actual performance against the terms and conditions of the programs, historical trends and the value of the rebates. The accuracy of these reserves for these rebates and sales incentives depends on our ability to estimate these items and could have a significant impact on the timing and amount of revenue we report.

Deferred Commissions

Sales commissions, including the employer portion of payroll taxes, earned by our sales force are considered incremental and recoverable costs of obtaining a contract, and are deferred and generally amortized on a straight-line basis over the expected period of benefit. The expected period of benefit is determined using the contract term or underlying technology life,

if renewals are expected and the renewal commissions are not commensurate with the initial commissions. The determination of the expected period of benefit requires us to make significant estimates and assumptions, including the life of the underlying technology and the estimated period of contract renewal. We believe the assumptions and estimates we have made are reasonable. Differences in the estimated period of benefit could have a significant impact on the timing and amount of amortization expense recognized.

Accounting for Income Taxes

We are included in Dell's consolidated tax group for U.S. federal income tax purposes and will continue to be included in Dell's consolidated group for periods in which Dell beneficially owns at least 80% of the total voting power and value of our combined outstanding Class A and Class B common stock as calculated for U.S. federal income tax purposes. The percentage of voting power and value calculated for U.S. federal income tax purposes may differ from the percentage of outstanding shares beneficially owned by Dell due to the greater voting power of our Class B common stock as compared to our Class A common stock and other factors. Each member of a consolidated group during any part of a consolidated return year is jointly and severally liable for tax on the consolidated return of such year and for any subsequently determined deficiency thereon.

Our income tax expense and the related income tax balance sheet accounts is calculated primarily as though we were a separate taxpayer. However, under certain circumstances, transactions between us and Dell are assessed using consolidated tax return rules. The difference between the income taxes payable that is calculated on a separate tax return basis and the amount paid to Dell pursuant to our tax sharing agreement with Dell is presented as a component of additional paid-in capital, generally in the period in which the consolidated return is filed. Our assumptions, judgments and estimates used to calculate our income tax expense considers current tax laws, our interpretation of current tax laws and possible outcomes of current and future audits conducted by foreign and domestic tax authorities.

We establish reserves for income taxes to address potential exposures involving tax positions that could be challenged by federal, state and foreign tax authorities, which may result in proposed assessments. In the ordinary course of our global business there are many intercompany transactions, including the transfer of intellectual property, where the ultimate tax determination could be challenged by the tax authorities. Our assumptions, estimates, and judgments used to determine the reserve relating to these positions considers current tax laws, interpretation of current tax laws and possible outcomes of current and future examinations conducted by tax authorities. As part of the Dell consolidated group, and separately, we are subject to the periodic examination of our income tax returns by the IRS and other domestic and foreign tax authorities. We regularly assess the likelihood of outcomes resulting from these examinations to determine the adequacy of our reserves and any potential adjustments that may result from the current and future examinations. We believe such estimates to be reasonable; however, the final determination from examinations and changes in tax laws could significantly impact the amounts provided for income taxes in the consolidated financial statements.

Our deferred tax assets reflect our estimates of the amount and category of future taxable income, such as income from operations and capital gains, and also take into account valuation allowances that consider other key factors that might restrict our ability to realize the deferred tax assets. Actual operating results and the underlying amount and category of income in future years could render our current assumptions, judgments and estimates of recoverable net deferred taxes inaccurate.

New Accounting Pronouncements

ASU 2016-02, Leases

During February 2016, the Financial Accounting Standards Board issued ASU 2016-02, Leases (Topic 842). The updated standard requires the recognition of a liability for lease obligations and corresponding right-of-use assets on the balance sheet, and disclosures of key information regarding leasing arrangements. The standard may be early adopted and is effective for interim and annual periods beginning after December 15, 2018 and requires a modified retrospective adoption with the option of applying the requirements of the standard either (1) retrospectively to each prior comparative reporting period presented, or (2) retrospectively at the beginning of the period of adoption. We will adopt this standard beginning with our first quarter of fiscal 2020 and will apply it retrospectively at the beginning of the period of adoption through a cumulative-effect adjustment to retained earnings. Upon adoption, we expect to recognize a liability for lease obligations between \$625 million and \$635 million, right-of-use assets between \$660 million and \$670 million and an immaterial cumulative-effect adjustment to retained earnings. We do not expect the updated standard to have a material impact on the consolidated statements of income (loss) or net cash provided by or used in operating, investing and financing activities on the consolidated statements of cash flows.

We are continuing to evaluate the effect that the updated standard will have on our consolidated financial statements. In preparation for the adoption of the updated standard, we implemented a new lease accounting software to facilitate the preparation of financial information related to the standard and are in the process of implementing internal controls. The preliminary impact under the updated standard may differ from the final impact to the consolidated financial statements upon adoption.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Foreign Exchange Risk

We operate in foreign countries, which expose us to market risk associated with foreign currency exchange rate fluctuations between the U.S. dollar and various foreign currencies, the most significant of which is the euro.

Although approximately 70% of our sales are denominated in the U.S. dollar, we also invoice and collect in the euro, the British pound, the Japanese yen, the Australian dollar and the Chinese renminbi in their respective regions. The U.S. dollar is the functional currency for all of VMware's legal entities. At the time a non-U.S. dollar transaction is recorded, the value of the transaction is converted into U.S. dollars at the exchange rate in effect for the month in which each order is booked. As a result, the amount of license and total revenue derived from these transactions will be impacted by foreign currency exchange fluctuations.

Additionally, a portion of our operating expenses, primarily the cost of personnel to deliver technical support on our products and professional services, sales and sales support and research and development, are denominated in foreign currencies, primarily those currencies in which we also invoice and collect. As exchange rates vary, operating results may differ materially from expectations.

To manage the risk associated with fluctuations in foreign currency exchange rates, we utilize derivative financial instruments, principally foreign currency forward contracts ("forward contracts"), as described below.

Cash Flow Hedging Activities. To mitigate our exposure to foreign currency fluctuations resulting from certain operating expenses denominated in certain foreign currencies, we enter into forward contracts. We enter into forward contracts annually, which have maturities of twelve months or less. As of February 1, 2019 and February 2, 2018, we had outstanding forward contracts with a total notional value of \$367 million and \$318 million, respectively. The fair value of these forward contracts was not significant as of February 1, 2019 and February 2, 2018.

Forward Contracts Not Designated as Hedges. We enter into forward contracts to offset the foreign currency risk associated with net outstanding monetary asset and liability positions. Our forward contracts are traded on a monthly basis and typically have a contractual term of one month. As of February 1, 2019 and February 2, 2018, we had outstanding forward contracts with a total notional value of \$1,208 million and \$1,020 million, respectively. The fair value of these forward contracts was not significant as of February 1, 2019 and February 2, 2018.

Sensitivity Analysis. There can be no assurance that our hedging activities will adequately protect us against the risks associated with foreign currency fluctuations. A hypothetical adverse foreign currency exchange rate movement of 10% would have resulted in a potential loss of \$154 million in fair value of our forward contracts as of February 1, 2019. This sensitivity analysis is based on the notional value of our outstanding forward contracts as of February 1, 2019 and disregards any offsetting gain that may be associated with the underlying foreign-currency denominated assets and liabilities that we hedge.

This analysis also assumes a parallel adverse shift of all foreign currency exchange rates against the U.S. dollar; however, foreign currency exchange rates do not always move in such a manner and actual results may differ materially. We do not, and do not intend to use derivative financial instruments for trading or speculative purposes. Refer to Note J to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further information.

Interest Rate Risk

Fixed Income Securities

Our fixed income investment portfolio was denominated in U.S. dollars and consisted of various sectors at different maturities. Our primary objective for holding fixed income securities was to achieve an appropriate investment return consistent with preserving principal and managing risk. During the fourth quarter of fiscal 2019, we liquidated our fixed income securities primarily to fund the \$11 billion Special Dividend. Refer to Notes G to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further information.

Equity Price Risk

Strategic Investments

Our strategic investments include privately held companies which are considered to be in the start-up or development stages and are inherently risky. The technologies or products these companies have under development are typically in the early stages and may never materialize, which could result in a loss of a substantial part of our initial investment in these companies. We account for these investments at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar security of the same issuer. The evaluation is based on information provided by these companies, which is not subject to the same disclosure regulations as U.S. publicly traded companies, and as

such, the basis for these evaluations is subject to the timing and accuracy of the data provided. The carrying value of VMware's strategic investments was \$95 million and \$146 million as of February 1, 2019 and February 2, 2018 , respectively.

Marketable Equity Securities

Our marketable equity investments in publicly traded companies are subject to market price risk. As of February 1, 2019 and February 2, 2018 , the fair value of our equity investments was \$852 million and \$33 million , respectively. Our marketable equity investments as of February 1, 2019 included our investment in Pivotal, which became publicly traded on April 20, 2018. Accordingly, a fluctuation in the price of each equity security could have an adverse impact on the fair value of our investment. A hypothetical adverse price change of 10% would have resulted in a potential decrease of \$85 million in the fair value of our marketable equity security as of February 1, 2019 . Refer to Notes G and I to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further information.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

VMware, Inc.

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Note: All other financial statement schedules are omitted because they are not applicable or the required information is included on the consolidated financial statements or notes thereto.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of VMware, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of VMware, Inc. and its subsidiaries (the “Company”) as of February 1, 2019 and February 2, 2018, and the related consolidated statements of income (loss), comprehensive income, stockholders’ equity and cash flows for each of the two years in the period ended February 1, 2019, the period from January 1, 2017 to February 3, 2017, and for the year ended December 31, 2016, including the related notes and financial statement schedule listed in the accompanying index (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of February 1, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of February 1, 2019 and February 2, 2018, and the results of its operations and its cash flows for each of the two years in the period ended February 1, 2019, the period from January 1, 2017 to February 3, 2017, and for the year ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of February 1, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note B to the consolidated financial statements, the Company changed the manner in which it accounts for revenue from contracts with customers in the year ended February 1, 2019.

Basis for Opinions

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Annual Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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

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

Definition and Limitations of Internal Control over Financial Reporting

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

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permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ PricewaterhouseCoopers LLP

San Jose, California
March 29, 2019

We have served as the Company's auditor since 2007.

VMware, Inc.
CONSOLIDATED STATEMENTS OF INCOME (LOSS)
(amounts in millions, except per share amounts, and shares in thousands)

	For the Year Ended			Transition Period
	February 1, 2019	February 2, 2018 ⁽¹⁾	December 31, 2016 ⁽¹⁾	January 1 to February 3, 2017 ⁽¹⁾
Revenue ⁽²⁾:				
License	\$ 3,788	\$ 3,200	\$ 2,799	\$ 134
Services	5,186	4,662	4,274	378
Total revenue	8,974	7,862	7,073	512
Operating expenses ⁽³⁾:				
Cost of license revenue	191	157	159	13
Cost of services revenue	1,067	984	894	80
Research and development	1,975	1,755	1,503	150
Sales and marketing	2,918	2,506	2,307	248
General and administrative	764	654	689	63
Realignment and loss on disposition	9	104	52	—
Operating income (loss)	2,050	1,702	1,469	(42)
Investment income	161	120	77	8
Interest expense	(134)	(74)	(26)	(2)
Other income (expense), net	806	66	(17)	1
Income (loss) before income tax	2,883	1,814	1,503	(35)
Income tax provision (benefit)	461	1,155	280	(30)
Net income (loss)	\$ 2,422	\$ 659	\$ 1,223	\$ (5)
Net income (loss) per weighted-average share, basic for Classes A and B	\$ 5.94	\$ 1.62	\$ 2.91	\$ (0.01)
Net income (loss) per weighted-average share, diluted for Classes A and B	\$ 5.85	\$ 1.59	\$ 2.87	\$ (0.01)
Weighted-average shares, basic for Classes A and B	407,766	406,738	420,520	408,625
Weighted-average shares, diluted for Classes A and B	414,267	413,368	423,994	408,625
⁽¹⁾ Adjusted to reflect the retrospective adoption of Accounting Standards Codification 606, Revenue from Contracts with Customers (“Topic 606”).				
⁽²⁾ Includes related party revenue as follows (refer to Note C):				
License	\$ 1,226	\$ 717	\$ 263	\$ 12
Services	981	634	381	39
⁽³⁾ Includes stock-based compensation as follows:				
Cost of license revenue	\$ 1	\$ 2	\$ 2	\$ —
Cost of services revenue	51	50	52	5
Research and development	371	355	305	31
Sales and marketing	203	197	195	19
General and administrative	105	79	82	7

The accompanying notes are an integral part of the consolidated financial statements.

VMware, Inc.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions)

	For the Year Ended			Transition Period
	February 1, 2019	February 2, 2018 ⁽¹⁾	December 31, 2016 ⁽¹⁾	January 1 to February 3, 2017 ⁽¹⁾
Net income (loss)	\$ 2,422	\$ 659	\$ 1,223	\$ (5)
Other comprehensive income (loss):				
Changes in market value of available-for-sale securities:				
Unrealized gains (losses), net of tax provision (benefit) of \$—, (\$5), (\$4) and \$1	—	(12)	(6)	2
Reclassification of (gains) losses realized during the period, net of tax (provision) benefit of \$10, \$2, \$3 and \$—	31	3	5	—
Net change in market value of available-for-sale securities	31	(9)	(1)	2
Changes in market value of effective foreign currency forward contracts:				
Unrealized gains (losses), net of tax provision (benefit) of \$— for all periods	2	1	1	3
Reclassification of (gains) losses realized during the period, net of tax (provision) benefit of \$— for all periods	(1)	(3)	(1)	—
Net change in market value of effective foreign currency forward contracts	1	(2)	—	3
Total other comprehensive income (loss)	32	(11)	(1)	5
Total comprehensive income, net of taxes	\$ 2,454	\$ 648	\$ 1,222	\$ —

⁽¹⁾ Adjusted to reflect the retrospective adoption of Topic 606.

The accompanying notes are an integral part of the consolidated financial statements.

VMware, Inc.
CONSOLIDATED BALANCE SHEETS
(amounts in millions, except per share amounts, and shares in thousands)

	February 1, 2019	February 2, 2018 ⁽¹⁾
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 2,830	\$ 5,971
Short-term investments	19	5,682
Accounts receivable, net of allowance for doubtful accounts of \$2 and \$2	1,576	1,394
Due from related parties, net	937	532
Other current assets	289	257
Total current assets	5,651	13,836
Property and equipment, net	1,133	1,074
Other assets	1,853	924
Deferred tax assets	103	227
Intangible assets, net	541	548
Goodwill	5,381	4,597
Total assets	\$ 14,662	\$ 21,206
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 135	\$ 15
Accrued expenses and other	1,593	1,357
Unearned revenue	3,968	3,438
Total current liabilities	5,696	4,810
Notes payable to Dell	270	270
Long-term debt	3,972	3,964
Unearned revenue	3,010	2,401
Income tax payable	889	954
Other liabilities	274	183
Total liabilities	14,111	12,582
Contingencies (refer to Note L)		
Stockholders' equity:		
Class A common stock, par value \$0.01; authorized 2,500,000 shares; issued and outstanding 110,715 and 103,776 shares	1	1
Class B convertible common stock, par value \$0.01; authorized 1,000,000 shares; issued and outstanding 300,000 shares	3	3
Additional paid-in capital	531	844
Accumulated other comprehensive income (loss)	2	(15)
Retained earnings	14	7,791
Total stockholders' equity	551	8,624
Total liabilities and stockholders' equity	\$ 14,662	\$ 21,206

⁽¹⁾ Adjusted to reflect the retrospective adoption of Topic 606.

The accompanying notes are an integral part of the consolidated financial statements.

VMware, Inc.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	For the Year Ended			Transition Period
	February 1, 2019	February 2, 2018 ⁽¹⁾	December 31, 2016 ⁽¹⁾	January 1 to February 3, 2017 ⁽¹⁾
Operating activities:				
Net income (loss)	\$ 2,422	\$ 659	\$ 1,223	\$ (5)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:				
Depreciation and amortization	630	565	542	46
Stock-based compensation	731	683	636	62
Excess tax benefits from stock-based compensation	—	—	(15)	(5)
Deferred income taxes, net	113	310	(15)	(258)
Unrealized (gain) loss on equity securities, net	(799)	—	—	—
Loss on disposition	7	95	—	—
(Gain) loss on disposition of assets, revaluation and impairment, net	6	(45)	30	—
Gain on extinguishment of debt	—	(6)	—	—
(Gain) loss on Dell stock purchase	—	2	(8)	(1)
Other	7	3	(2)	—
Changes in assets and liabilities, net of acquisitions:				
Accounts receivable	(178)	(102)	(216)	651
Other current assets and other assets	(350)	(446)	(475)	197
Due to/from related parties, net	(405)	(440)	(54)	39
Accounts payable	104	(35)	(9)	(68)
Accrued expenses and other liabilities	281	330	223	(52)
Income taxes payable	(40)	660	(15)	38
Unearned revenue	1,134	985	534	(283)
Net cash provided by operating activities	3,663	3,218	2,379	361
Investing activities:				
Additions to property and equipment	(245)	(263)	(153)	(18)
Purchases of available-for-sale securities	(780)	(4,269)	(3,725)	(38)
Sales of available-for-sale securities	3,999	2,195	2,227	43
Maturities of available-for-sale securities	2,393	1,573	1,307	20
Purchases of strategic investments	(8)	(37)	(49)	—
Proceeds from disposition of assets	38	13	4	—
Business combinations, net of cash acquired, and purchases of intangible assets	(938)	(671)	(74)	—
Net cash paid on disposition of a business	(12)	(53)	—	—
Net cash provided by (used in) investing activities	4,447	(1,512)	(463)	7
Financing activities:				
Proceeds from issuance of common stock	188	122	109	61
Net proceeds from issuance of long-term debt	—	3,961	—	—
Repayment of notes payable to Dell	—	(1,225)	—	—
Payment to acquire non-controlling interests	—	—	(4)	—
Repurchase of common stock	(42)	(1,449)	(1,575)	—
Excess tax benefits from stock-based compensation	—	—	15	5
Shares repurchased for tax withholdings on vesting of restricted stock	(357)	(351)	(164)	(4)
Payment for Special Dividend	(11,000)	—	—	—
Payment for common control transaction with Dell	(8)	—	—	—
Net cash provided by (used in) financing activities	(11,219)	1,058	(1,619)	62
Net increase (decrease) in cash, cash equivalents and restricted cash	(3,109)	2,764	297	430
Cash, cash equivalents and restricted cash at beginning of the period	6,003	3,239	2,512	2,809

Cash, cash equivalents and restricted cash at end of the period	\$	2,894	\$	6,003	\$	2,809	\$	3,239
Supplemental disclosures of cash flow information:								
Cash paid for interest	\$	129	\$	21	\$	29	\$	—
Cash paid for taxes, net		398		177		467		3
Non-cash items:								
Changes in capital additions, accrued but not paid	\$	9	\$	10	\$	(7)	\$	(6)
Changes in tax withholdings on vesting of restricted stock, accrued but not paid		17		(4)		3		3

⁽¹⁾ Adjusted to reflect the retrospective adoption of Topic 606 and Accounting Standards Update (“ASU”) 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash. The adoption of Topic 606 had no impact to net cash provided by or used in operating, investing and financing activities.

The accompanying notes are an integral part of the consolidated financial statements.

withholdings on vesting of restricted stock	(3)	—	—	—	(373)	—	—	—	(373)
Stock-based compensation	—	—	—	—	731	—	—	—	731
Credit from tax sharing arrangement	—	—	—	—	2	—	—	—	2
Total other comprehensive income (loss)	—	—	—	—	—	—	32	—	32
Common control transaction with Dell	—	—	—	—	—	(6)	—	—	(6)
Special Dividend	—	—	—	—	(822)	(10,178)	—	—	(11,000)
Net income	—	—	—	—	—	2,422	—	—	2,422
Balance, February 1, 2019	<u>111</u>	<u>\$ 1</u>	<u>300</u>	<u>\$ 3</u>	<u>\$ 531</u>	<u>\$ 14</u>	<u>\$ 2</u>	<u>\$ —</u>	<u>\$ 551</u>

⁽¹⁾ Adjusted to reflect the retrospective adoption of Topic 606.

The accompanying notes are an integral part of the consolidated financial statements.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

A. Overview and Basis of Presentation

Company and Background

VMware, Inc. (“VMware” or the “Company”) originally pioneered the development and application of virtualization technologies with x86 server-based computing, separating application software from the underlying hardware. Information technology (“IT”) driven innovation continues to disrupt markets and industries. Technologies emerge faster than organizations can absorb, creating increasingly complex environments. IT is working at an accelerated pace to harness new technologies, platforms and cloud models, ultimately guiding their business through a digital transformation. To take on these challenges, VMware is working with customers in the areas of hybrid cloud, multi-cloud, modern applications, networking and security, and digital workspaces. VMware’s software provides a flexible digital foundation to help enable customers in their digital transformation.

Accounting Principles

VMware adopted Accounting Standards Codification 606, Revenue from Contracts with Customers (“Topic 606”) and ASU 2016-18, Statement of Cash Flows: Restricted Cash (Topic 230) (“ASU 2016-18”), effective February 3, 2018 using the full retrospective adoption method. As part of the adoption, certain prior period amounts have been adjusted or reclassified within the consolidated financial statements.

Basis of Presentation

The consolidated financial statements and accompanying notes have been prepared in accordance with accounting principles generally accepted in the United States of America (“GAAP”) and pursuant to the rules and regulations of the Securities and Exchange Commission (the “SEC”) for annual financial reporting.

Effective September 7, 2016, Dell Technologies Inc. (“Dell”) (formerly Denali Holding Inc.) acquired EMC Corporation (“EMC”), VMware’s parent company, including EMC’s majority control of VMware (the “Dell Acquisition”). As of February 1, 2019, Dell controlled 80.5% of VMware’s outstanding common stock and 97.4% of the combined voting power of VMware’s outstanding common stock, including 31 million shares of VMware’s Class A common stock and all of VMware’s Class B common stock.

As VMware is a majority-owned and controlled subsidiary of Dell, its results of operations and financial position are consolidated with Dell’s financial statements. Transactions prior to the effective date of the Dell Acquisition represent transactions only with EMC and its consolidated subsidiaries.

Effective January 1, 2017, VMware’s fiscal year changed from a fiscal year ending on December 31 of each calendar year to a fiscal year consisting of a 52- or 53-week period ending on the Friday nearest to January 31 of each year. The period that began on January 1, 2017 and ended on February 3, 2017 is reflected as a transition period (the “Transition Period”). VMware’s first full fiscal year 2018 under the revised fiscal calendar was a 52-week year that began on February 4, 2017 and ended on February 2, 2018. The Company has included its audited consolidated financial statements for the Transition Period in this Annual Report on Form 10-K. Prior-period financial statements have not been recast.

Management believes the assumptions underlying the consolidated financial statements are reasonable. However, the amounts recorded for VMware’s related party transactions with Dell and its consolidated subsidiaries may not be considered arm’s length with an unrelated third party. Therefore, the consolidated financial statements included herein may not necessarily reflect the results of operations, financial position and cash flows had VMware engaged in such transactions with an unrelated third party during all periods presented. Accordingly, VMware’s historical financial information is not necessarily indicative of what the Company’s results of operations, financial position and cash flows will be in the future, if and when VMware contracts at arm’s length with unrelated third parties for products and services the Company receives from and provides to Dell.

Principles of Consolidation

The consolidated financial statements include the accounts of VMware and subsidiaries in which VMware has a controlling financial interest. The portion of results of operations attributable to the non-controlling interests is eliminated in other income (expense), net on the consolidated statements of income (loss) and is not presented separately as the amount was not material for the periods presented.

All intercompany transactions and account balances between VMware and its subsidiaries have been eliminated in consolidation. Transactions with Dell and its consolidated subsidiaries are generally settled in cash and are classified on the consolidated statements of cash flows based upon the nature of the underlying transaction.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Use of Accounting Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the reported amounts of revenue and expenses during the reporting periods, and the disclosure of contingent liabilities at the date of the financial statements. Estimates are used for, but not limited to, trade receivable valuation, marketing development funds, expected period of benefit for deferred commissions, useful lives assigned to fixed assets and intangible assets, valuation of goodwill and definite-lived intangibles, income taxes, stock-based compensation and contingencies. Actual results could differ from those estimates.

Revenue Recognition

VMware derives revenue primarily from licensing software under perpetual licenses or consumption-based contracts and related software maintenance and support, training, consulting services and hosted services. VMware accounts for a contract with a customer if all criteria defined by Topic 606 are met, including that collectibility of consideration is probable. Revenue is recognized upon transfer of control of licenses or services to the customer in an amount that reflects the consideration VMware expects to receive in exchange for those licenses or services. Control of a promised good or service may be transferred to a customer either at a point in time or over time, which affects the timing of revenue recognition. VMware's contracts with customers may include a combination of licenses and services that are accounted for as distinct performance obligations. Certain contracts include third-party offerings and revenue that may be recognized net of the third-party costs, based upon an assessment as to whether VMware had control of the underlying third-party offering. Revenue is recognized net of any taxes invoiced to customers, which are subsequently remitted to governmental authorities.

From time to time, VMware may enter into revenue and purchase contracts with the same customer within a short period of time. VMware evaluates the underlying economics and fair value of the consideration payable to the customer to determine if any portion of the consideration payable to the customer exceeds the fair value of the goods and services received and should be accounted for as a reduction of the transaction price of the revenue contract.

License Revenue

VMware generally sells its license software through distributors, resellers, system vendors, systems integrators and its direct sales force. Performance obligations related to license revenue, including the license portion of term licenses, represent functional intellectual property under which a customer has the legal right to the on-premises license. The license provides significant standalone functionality and is a separate performance obligation from the maintenance and support and professional services sold by VMware. On-premises license revenue is recognized at a point in time, upon delivery and transfer of control of the underlying license to the customer.

License revenue from on-premises license software sold to original equipment manufacturers ("OEMs") is recognized when the sale to the end user occurs. Revenue is recognized upon reporting by the OEMs of their sales, and for the period where information of the underlying sales has not been made available, revenue is recognized based upon estimated sales.

VMware Cloud Provider Program ("VCP") partners rent on-premises licenses from VMware, and the rental fee is recognized as license revenue upon consumption. Generally, contracts with VCP partners include cancellation rights. License revenue is based upon reported consumption by VCP partners and includes estimates for the period when consumption information has not been made available.

License revenue also includes an allocated portion of hosted services, which is recognized as revenue over time as the hosted services are consumed.

Services Revenue

VMware's services revenue generally consists of software maintenance and support, professional services and an allocated portion of hosted services. Software maintenance and support offerings entitle customers to receive major and minor product upgrades, on a when-and-if-available basis, and technical support. Maintenance and support services are comprised of multiple performance obligations including updates, upgrades to licenses and technical support. While separate performance obligations are identified within maintenance and support services, the underlying performance obligations generally have a consistent continuous pattern of transfer to a customer during the term of a contract. Maintenance and support services revenue is recognized over time on a ratable basis over the contract duration.

Professional services include design, implementation, training and consulting services. Professional services performed by VMware represent distinct performance obligations as they do not modify or customize licenses sold. These services are not highly interdependent or highly interrelated to licenses sold such that a customer would not be able to use the licenses without the professional services. Revenue from fixed fee professional services engagements is recognized based on progress made

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

toward the total project effort, which can be reasonably estimated. As a practical expedient, VMware recognizes revenue from professional services engagements invoiced on a time and materials basis as the hours are incurred based on VMware's right to invoice amounts for performance completed to date.

VMware's hosted services consist of certain software offerings sold as a service-based technology without the customer's ability to take possession of the software over the subscription term. Currently, hosted services are recognized as revenue equally in both license and services over time as customers consume the services or ratably over the term of the subscription, commencing upon provisioning of the service.

Contracts with Multiple Performance Obligations

VMware enters into revenue contracts with multiple performance obligations in which a customer may purchase combinations of licenses, maintenance and support, training, consulting services, hosted services and rights to future products and services. For contracts with multiple performance obligations, VMware allocates total transaction value to the identified underlying performance obligations based on relative standalone selling price ("SSP"). VMware typically estimates SSP of services based on observable transactions when the services are sold on a standalone basis and those prices fall within a reasonable range. VMware utilizes the residual approach to estimate SSP of license as the licenses are not sold standalone and the same products are sold to different customers at a broad range of prices which are highly variable.

Rebates and Marketing Development Funds

Rebates, which are offered to certain channel partners and represent a form of variable consideration, are accounted for as a reduction to the transaction price on eligible contracts.

Rebates are determined based on eligible sales during the quarter or based on actual achievement to quarterly target sales. The reduction of the aggregate transaction price against eligible contracts is allocated to the applicable performance obligations. The difference between the estimated rebates recognized and the actual amounts paid has not been material to date.

Certain channel partners are also reimbursed for direct costs related to marketing or other services that are defined under the terms of the marketing development programs. Estimated reimbursements for marketing development funds are accounted for as consideration payable to a customer, reducing the transaction price of the underlying contracts. The most likely amount method is used to estimate the marketing fund reimbursements at the end of the quarter and the reduction of transaction price is allocated to the applicable performance obligations. The difference between the estimated reimbursement and the actual amount paid to channel partners has not been material to date.

Returns Reserves

With limited exceptions, VMware's return policy does not allow product returns for a refund. VMware estimates and records reserves for product returns at the time of sale based on historical return rates. Amounts are recorded as a reduction of revenue or unearned revenue. Returns reserves were not material for all periods presented.

Deferred Commissions

Sales commissions, including the employer portion of payroll taxes, earned by VMware's sales force are considered incremental and recoverable costs of obtaining a contract, and are deferred and generally amortized on a straight-line basis over the expected period of benefit. The expected period of benefit is determined using the contract term or underlying technology life, if renewals are expected and the renewal commissions are not commensurate with the initial commissions. Sales commissions related to software maintenance and support renewals are deferred and amortized on a straight-line basis over the contractual renewal period.

Foreign Currency Remeasurement

The United States ("U.S.") dollar is the functional currency of VMware's foreign subsidiaries. VMware records net gains and losses resulting from foreign exchange transactions as a component of foreign currency exchange gains and losses in other income (expense), net on the consolidated statements of income (loss). These gains and losses are net of those recognized on foreign currency forward contracts ("forward contracts") not designated as hedges that VMware enters into to partially mitigate its exposure to foreign currency fluctuations. Net gains and losses recognized during the years ended February 1, 2019 and December 31, 2016 and the Transition Period were not significant. A net gain of \$10 million was recognized during the year ended February 2, 2018.

Cash and Cash Equivalents, Short-Term Investments, and Restricted Cash

VMware invests primarily in money market funds, highly liquid debt instruments of the U.S. government and its agencies and U.S. and foreign corporate debt securities. All highly liquid investments with maturities of 90 days or less from date of

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

purchase are classified as cash equivalents and all highly liquid investments with maturities of greater than 90 days from date of purchase as short-term investments. Short-term investments are classified as available-for-sale securities. VMware may sell these securities at any time for use in current operations or for other purposes, such as consideration for acquisitions and strategic investments.

Fixed income investments are reported at market value and unrealized gains and losses on these investments, net of taxes, are included in accumulated other comprehensive income (loss), a component of stockholders' equity. Realized gains or losses are included on the consolidated statements of income (loss). Gains and losses on the sale of fixed income securities issued by the same issuer and of the same type are determined using the first-in first-out method. When a determination has been made that an other-than-temporary decline in fair value has occurred, the amount of the decline that is related to a credit loss is realized and is included on the consolidated statements of income (loss).

Cash balances that are restricted pursuant to the terms of various agreements are classified as restricted cash and included in other current assets and other assets in the accompanying consolidated balance sheets. Refer to Note G for more information.

Investments in Equity Securities

VMware holds equity securities in publicly and privately held companies. During January 2016, the Financial Accounting Standards Board ("FASB") issued ASU 2016-01, Financial Instruments-Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities ("ASU 2016-01"), which requires equity investments with readily determinable fair values (other than those accounted for under the equity method or those that result in consolidation of the investee) to be measured at fair value with changes in fair value for certain equity investments recognized in other income (expenses), net on the consolidated statements of income (loss). Upon adoption of ASU 2016-01, VMware elected to measure securities in privately held companies at cost less impairment, if any, adjusted for observable price changes in orderly transactions for the identical or a similar security of the same issuer.

Upon adoption of ASU 2016-01, VMware's securities in publicly held companies are generally measured at fair value using quoted prices for identical assets in an active market. For certain investment in equity securities, VMware has elected the fair value option of accounting because it believes that fair value is the most relevant measurement for such investments. Refer to Note I for more information.

Allowance for Doubtful Accounts

VMware maintains an allowance for doubtful accounts for estimated losses on uncollectible accounts receivable. The allowance for doubtful accounts considers such factors as creditworthiness of VMware's customers, historical experience, the age of the receivable, and current economic conditions. The allowance for doubtful accounts was not significant for all periods presented.

Property and Equipment, Net

Property and equipment, net is recorded at cost. Depreciation commences upon placing the asset in service and is recognized on a straight-line basis over the estimated useful life of the assets, as follows:

Buildings	Term of underlying land lease
Land improvements	15 years
Furniture and fixtures	7 years
Equipment	3 to 6 years
Software	3 to 8 years
Leasehold improvements	20 years, not to exceed the shorter of the estimated useful life or remaining lease term

Upon retirement or disposition, the asset cost and related accumulated depreciation are removed with any gain or loss recognized on the consolidated statements of income (loss). Repair and maintenance costs that do not extend the economic life of the underlying assets are expensed as incurred.

Capitalized Software Development Costs

Costs associated with internal-use software systems, including those used to provide hosted services, during the application development stage are capitalized. Capitalization of costs begins when the preliminary project stage is completed, management has committed to funding the project, and it is probable that the project will be completed and the software will be used to

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

perform the function intended. Capitalization ceases at the point when the project is substantially complete and is ready for its intended purpose. The capitalized amounts are included in property and equipment, net on the consolidated balance sheets.

Development costs of software to be sold, leased, or otherwise marketed are subject to capitalization beginning when technological feasibility for the product has been established and ending when the product is available for general release. During the years presented, software development costs incurred for products during the time period between reaching technological feasibility and general release were not material and accordingly were expensed as incurred.

Business Combinations

For business combinations, VMware recognizes the identifiable assets acquired, the liabilities assumed, and any non-controlling interests in an acquiree, which are measured based on the acquisition date fair value. Goodwill is measured as the excess of consideration transferred over the net amounts of the identifiable tangible and intangible assets acquired and the liabilities assumed at the acquisition date.

VMware uses significant estimates and assumptions, including fair value estimates, to determine the fair value of assets acquired and liabilities assumed and the related useful lives of the acquired assets, when applicable, as of the acquisition date. When those estimates are provisional, VMware refines them as necessary during the measurement period. The measurement period is the period after the acquisition date, not to exceed one year, in which VMware may gather and analyze the necessary information about facts and circumstances that existed as of the acquisition date to adjust the provisional amounts recognized. Measurement period adjustments are recorded during the period in which the adjustment amount is determined. All other adjustments are recorded to the consolidated statements of income (loss).

Costs to effect an acquisition are recorded in general and administrative expenses on the consolidated statements of income (loss) as the expenses are incurred. Gains recognized for the remeasurement of ownership interest to fair value upon completion of a step acquisition are recorded in other income (expense), net on the consolidated statements of income (loss).

Purchased Intangible Assets and Goodwill

Goodwill is evaluated for impairment during the third quarter of each year or more frequently if events or changes in circumstances indicate that the carrying value of the asset may not be recoverable. VMware elected to perform a quantitative assessment of goodwill with respect to its one reporting unit. In doing so, VMware compared the enterprise fair value to the carrying amount of the reporting unit, including goodwill. VMware concluded that, to date, there have been no impairments of goodwill.

Purchased intangible assets with finite lives are generally amortized over their estimated useful lives using the straight-line method. VMware reviews intangible assets for impairment whenever events or changes in business circumstances indicate that the carrying amounts of the assets may not be fully recoverable or that the useful lives of these assets are no longer appropriate.

Derivative Instruments and Hedging Activities

Derivative instruments are measured at fair value and reported as current assets and current liabilities on the consolidated balance sheets, as applicable.

To manage VMware's exposure to foreign currency fluctuations, VMware enters into forward contracts to hedge a portion of VMware's net outstanding monetary asset or liability positions. These forward contracts are generally entered into on a monthly basis, with a typical contractual term of one month. These forward contracts are not designated as hedging instruments under applicable accounting guidance and therefore are adjusted to fair value through other income (expense), net on the consolidated statements of income (loss).

Additionally, VMware enters into forward contracts which it designates as cash flow hedges to manage the volatility of cash flows that relate to operating expenses denominated in certain foreign currencies. These forward contracts are entered into annually, have maturities of twelve months or less, and are adjusted to fair value through accumulated other comprehensive income (loss), net of tax, on the consolidated balance sheets. When the underlying expense transaction occurs, the gains or losses on the forward contract are subsequently reclassified from accumulated other comprehensive income (loss) to the related operating expense line item on the consolidated statements of income (loss).

The Company does not, and does not intend to, use derivative financial instruments for trading or speculative purposes.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Employee Benefit Plans

The Company has a defined contribution program for U.S. employees that complies with Section 401(k) of the Internal Revenue Code. In addition, the Company offers defined contribution plans to employees in certain countries outside the U.S. During the years ended February 1, 2019, February 2, 2018 and December 31, 2016 and the Transition Period, the Company contributed \$113 million, \$98 million, \$86 million, and \$12 million, respectively, to its defined contribution plans.

Advertising

Advertising costs are expensed as incurred. Advertising expense was \$28 million, \$36 million and \$21 million during the years ended February 1, 2019, February 2, 2018 and December 31, 2016, respectively. Advertising expense during the Transition Period was not significant.

Income Taxes

Income taxes as presented herein are calculated on a separate tax return basis, although VMware is included in the consolidated tax return of Dell. However, under certain circumstances, transactions between VMware and Dell are assessed using consolidated tax return rules. Deferred tax assets and liabilities are recognized for the expected future tax consequences of events that have been included in the financial statements or tax returns. Deferred tax assets and liabilities are determined based on the difference between the tax basis of assets and liabilities and their reported amounts using enacted tax rates in effect for the year in which the differences are expected to reverse. Tax credits are generally recognized as reductions of income tax provisions in the year in which the credits arise. The measurement of deferred tax assets is reduced by a valuation allowance if, based upon available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

The U.S. Tax Cuts and Jobs Act enacted on December 22, 2017 (the "2017 Tax Act") introduced significant changes to U.S. income tax law. During December 2017, the SEC staff issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act ("SAB 118"), which allowed for the recognition of provisional tax amounts during a measurement period not to extend beyond one year of the enactment date. Provisional taxes relating to the effect of the tax law changes, including the estimated transition tax and the remeasurement of U.S. deferred tax assets and liabilities, among others, were recognized during fiscal 2018. The Company completed its analysis of the impact of the 2017 Tax Act and recorded immaterial adjustments during the fourth quarter of fiscal 2019.

The Global Intangible Low-Taxed Income ("GILTI") provisions of the 2017 Tax Act require VMware to include in its U.S. income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary's tangible assets. GAAP allows the Company to choose between an accounting policy which treats the U.S. tax under GILTI provisions as either a current expense, as incurred, or as a component of the Company's measurement of deferred taxes. VMware has elected to record impacts of GILTI as period costs and recognized the tax impacts associated with GILTI as a current expense on its consolidated statements of income (loss) beginning with the year ended February 1, 2019.

The difference between the income taxes payable or receivable that is calculated on a separate return basis and the amount paid to or received from Dell pursuant to VMware's tax sharing agreement is presented as a component of additional paid-in capital, generally in the period in which the consolidated return is filed. Refer to Note O for further information.

Net Income (Loss) Per Share

Basic net income (loss) per share is calculated using the weighted-average number of shares of VMware's common stock outstanding during the period. Diluted net income (loss) per share is calculated using the weighted-average number of common shares, including the dilutive effect of equity awards as determined under the treasury stock method. VMware has two classes of common stock, Classes A and B. For purposes of calculating net income (loss) per share, VMware uses the two-class method. As both classes share the same rights in dividends, basic and diluted net income (loss) per share are the same for both classes.

Concentrations of Risks

Financial instruments, which potentially subject VMware to concentrations of credit risk, consist principally of cash and cash equivalents, short-term investments and accounts receivable. Cash on deposit with banks may exceed the amount of insurance provided on such deposits. These deposits may be redeemed upon demand. VMware places cash and cash equivalents and short-term investments primarily in money market funds and fixed income securities and limits the amount of investment with any single issuer and any single financial institution. VMware held a diversified portfolio of money market funds and fixed income securities, which primarily consisted of various highly liquid debt instruments of the U.S. government and its agencies and U.S. and foreign corporate debt securities. VMware's fixed income investment portfolio was denominated in U.S. dollars and consisted of securities with various maturities.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

VMware manages counterparty risk through necessary diversification of the investment portfolio among various financial institutions and by entering into derivative contracts with financial institutions that are of high credit quality.

VMware provides credit to its customers, including distributors, OEMs, resellers, and end-user customers, in the normal course of business. To reduce credit risk, VMware performs periodic credit evaluations, which consider the customer's payment history and financial stability.

As of February 1, 2019 and February 2, 2018, one distributor accounted for 14% and 18%, respectively, of VMware's accounts receivable balance, and a second distributor accounted for 13% and 16%, respectively, of VMware's accounts receivable balance. Another distributor accounted for 11% of VMware's accounts receivable balance as of February 1, 2019 and February 2, 2018.

One distributor accounted for 14% of revenue during the year ended February 1, 2019, 15% of revenue in each of the years ended February 2, 2018 and December 31, 2016, respectively, and 16% of revenue during the Transition Period. Another distributor accounted for 13% and 11% of revenue in each of the years ended February 1, 2019 and February 2, 2018, respectively, and 12% of revenue for the year ended December 31, 2016 and the Transition Period, respectively. A third distributor accounted for 10% of revenue for each of the years ended February 2, 2018 and December 31, 2016 and the Transition Period.

Accounting for Stock-Based Compensation

VMware restricted stock, including performance stock unit ("PSU") awards, are valued based on the Company's stock price on the date of grant. For those awards expected to vest which only contain a service vesting feature, compensation cost is recognized on a straight-line basis over the awards' requisite service periods.

PSU awards will vest if certain VMware-designated performance targets, including in certain cases a time-based or market-based vesting component, are achieved. All PSU awards also include a time-based vesting component. If minimum performance thresholds are achieved, each PSU award will convert into VMware's Class A common stock at a defined ratio depending on the degree of achievement of the performance target designated by each individual award. If minimum performance thresholds are not achieved, then no shares will be issued. Based upon the expected levels of achievement, stock-based compensation is recognized on a straight-line basis over the PSUs' requisite service periods. The expected levels of achievement are reassessed over the requisite service periods and, to the extent that the expected levels of achievement change, stock-based compensation is adjusted and recorded on the consolidated statements of income (loss) and the remaining unrecognized stock-based compensation is recognized over the remaining requisite service period.

The Black-Scholes option-pricing model is used to determine the fair value of VMware's stock option awards and Employee Stock Purchase Plan shares. The Black-Scholes model includes assumptions regarding dividend yields, expected volatility, expected term and risk-free interest rates. These assumptions reflect the Company's best estimates, but these items involve uncertainties based on market and other conditions outside of the Company's control.

New Accounting Pronouncements

ASU 2016-02, Leases

During February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). The updated standard requires the recognition of a liability for lease obligations and corresponding right-of-use assets on the balance sheet, and disclosures of key information regarding leasing arrangements. The standard may be early adopted and is effective for interim and annual periods beginning after December 15, 2018 and requires a modified retrospective adoption with the option of applying the requirements of the standard either (1) retrospectively to each prior comparative reporting period presented, or (2) retrospectively at the beginning of the period of adoption. VMware will adopt this standard beginning with its first quarter of fiscal 2020 and will apply it retrospectively at the beginning of the period of adoption through a cumulative-effect adjustment to retained earnings. Upon adoption, VMware expects to recognize a liability for lease obligations between \$625 million and \$635 million, right-of-use assets between \$660 million and \$670 million and an immaterial cumulative-effect adjustment to retained earnings. VMware does not expect the updated standard to have a material impact on the consolidated statements of income (loss) or net cash provided by or used in operating, investing and financing activities on the consolidated statements of cash flows.

VMware is continuing to evaluate the effect that the updated standard will have on its consolidated financial statements. In preparation for the adoption of the updated standard, VMware implemented a new lease accounting software to facilitate the preparation of financial information related to the standard and is in the process of implementing internal controls. The preliminary impact under the updated standard may differ from the final impact to the consolidated financial statements upon adoption.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

B. Revenue**Full Retrospective Adoption of Topic 606**

The adoption of Topic 606 impacted VMware's previously reported results as follows (tables in millions):

	For the Year Ended February 2, 2018		
	As Reported	Topic 606 Adjustments	As Adjusted
Selected Captions from the Consolidated Statements of Income (Loss)			
Revenue:			
License	\$ 3,195	\$ 5	\$ 3,200
Services	4,727	(65)	4,662
Total revenue	7,922	(60)	7,862
Operating expenses:			
Sales and marketing	2,593	(87)	2,506
Realignment and loss on disposition	90	14	104
Operating income	1,689	13	1,702
Income before income tax	1,801	13	1,814
Income tax provision	1,231	(76)	1,155
Net income	570	89	659

	For the Year Ended December 31, 2016		
	As Reported	Topic 606 Adjustments	As Adjusted
Selected Captions from the Consolidated Statements of Income (Loss)			
Revenue:			
License	\$ 2,794	\$ 5	\$ 2,799
Services	4,299	(25)	4,274
Total revenue	7,093	(20)	7,073
Operating expenses:			
Sales and marketing	2,357	(50)	2,307
Operating income	1,439	30	1,469
Income before income tax	1,473	30	1,503
Income tax provision	287	(7)	280
Net income	1,186	37	1,223

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Selected Captions from the Consolidated Statements of Income (Loss)	Transition Period		
	January 1 to February 3, 2017		
	As Reported	Topic 606 Adjustments	As Adjusted
Revenue:			
License	\$ 125	\$ 9	\$ 134
Services	371	7	378
Total revenue	496	16	512
Operating expenses:			
Sales and marketing	231	17	248
Operating income (loss)	(41)	(1)	(42)
Income (loss) before income tax	(34)	(1)	(35)
Income tax provision (benefit)	(26)	(4)	(30)
Net income (loss)	(8)	3	(5)

Selected Captions from the Consolidated Balance Sheets	February 2, 2018		
	As Reported	Topic 606 Adjustments	As Adjusted
	Accounts receivable, net of allowance for doubtful accounts	\$ 1,312	\$ 82
Other current assets	237	20	257
Total current assets	13,734	102	13,836
Other assets	323	601	924
Deferred tax assets	346	(119)	227
Total assets	20,622	584	21,206
Accrued expenses and other	1,241	116	1,357
Unearned revenue	3,777	(339)	3,438
Total current liabilities	5,033	(223)	4,810
Unearned revenue	2,473	(72)	2,401
Other liabilities	152	31	183
Total liabilities	12,846	(264)	12,582
Retained earnings	6,943	848	7,791
Total stockholders' equity	7,776	848	8,624
Total liabilities and stockholders' equity	20,622	584	21,206

Retained earnings as of January 1, 2016 included a cumulative-effect adjustment of \$719 million resulting from the adoption of Topic 606. The adoption of Topic 606 had no impact to net cash provided by or used in operating, investing and financing activities on VMware's consolidated statements of cash flows during the years ended February 2, 2018 and December 31, 2016 and the Transition Period.

Receivables

VMware records a receivable when an unconditional right to consideration exists and transfer of control has occurred, such that only the passage of time is required before payment of consideration is due. Timing of revenue recognition may differ from the timing of invoicing to customers.

Payment terms vary based on license or service offerings and payment is generally required within 30 to 45 days from date of invoicing. Certain performance obligations may require payment before delivery of the license or service to the customer.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Contract Assets

A contract asset is recognized when a conditional right to consideration exists and transfer of control has occurred. Contract assets include fixed fee professional services where transfer of services has occurred in advance of the Company's right to invoice. Contract assets are classified as accounts receivables upon invoicing. Contract assets are included in other current assets on the consolidated balance sheets. Contract assets were \$24 million and \$27 million as of February 1, 2019 and February 2, 2018, respectively. Contract asset balances will fluctuate based upon the timing of transfer of services, billings and customers' acceptance of contractual milestones.

Contract Liabilities

Contract liabilities consist of unearned revenue, which is generally recorded when VMware has the right to invoice or payments have been received for undelivered products or services. Refer to Note N for further information.

Customer Deposits

Customer deposits include prepayments from customers related to amounts received for contracts that include certain cancellation rights. Purchased credits eligible for redemption of VMware's hosted services ("cloud credits") are included in customer deposits until the cloud credit is consumed or is contractually committed to a specific hosted service. Cloud credits are redeemable by the customer for the gross value of the hosted offering. Upon contractual commitment for a hosted service, the net value of the cloud credits that are expected to be recognized as revenue when the obligation is fulfilled will be classified as unearned revenue.

As of February 1, 2019, customer deposits related to customer prepayments and cloud credits of \$238 million were included in accrued expenses and other and \$60 million were included in other long-term liabilities on the consolidated balance sheets. As of February 2, 2018, customer deposits related to customer prepayments were \$126 million and were included in accrued expenses and other on the consolidated balance sheets.

Deferred Commissions

Deferred commissions are classified as current or non-current based on the duration of the expected period of benefit. Deferred commissions, including the employer portion of payroll taxes, included in other current assets as of February 1, 2019 and February 2, 2018 were not significant. Deferred commissions included in other assets were \$756 million and \$638 million as of February 1, 2019 and February 2, 2018, respectively.

Amortization expense for deferred commissions was included in sales and marketing on the consolidated statements of income (loss) and was \$261 million, \$230 million, \$197 million, and \$17 million during the years ended February 1, 2019, February 2, 2018 and December 31, 2016 and the Transition Period, respectively.

Upon adoption of Topic 606, VMware recognized an impairment on its deferred commissions of approximately \$13 million during the first quarter of fiscal 2018, relating to the sales of VMware vCloud Air offerings. The impairment was included in realignment and loss on disposition on the consolidated statements of income (loss). VMware completed the sale of its vCloud Air business ("vCloud Air") to OVH US LLC ("OVH") during the second quarter of fiscal 2018.

C. Related Parties

The information provided below includes a summary of the transactions entered into with Dell and Dell's consolidated subsidiaries, including EMC (collectively, "Dell") from the effective date of the Dell Acquisition through February 1, 2019. Transactions prior to the effective date of the Dell Acquisition reflect transactions with EMC and its consolidated subsidiaries.

Transactions with Dell

VMware and Dell engaged in the following ongoing related party transactions, which resulted in revenue and receipts, and unearned revenue for VMware:

- Pursuant to OEM and reseller arrangements, Dell integrates or bundles VMware's products and services with Dell's products and sells them to end users. Dell also acts as a distributor, purchasing VMware's standalone products and services for resale to end-user customers through VMware-authorized resellers. Revenue under these arrangements is presented net of related marketing development funds and rebates paid to Dell. In addition, VMware provides professional services to end users based upon contractual agreements with Dell.
- Dell purchases products and services from VMware for its internal use.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

- Pursuant to an ongoing distribution agreement, VMware acts as the selling agent for certain products and services of Pivotal Software, Inc. (“Pivotal”), a subsidiary of Dell, in exchange for an agency fee. Under this agreement, cash is collected from the end user by VMware and remitted to Pivotal, net of the contractual agency fee.
- From time to time, VMware and Dell enter into agreements to collaborate on technology projects, and Dell pays VMware for services or reimburses VMware for costs incurred by VMware, in connection with such projects.

Dell purchases VMware products and services directly from VMware, as well as through VMware’s channel partners. Information about VMware’s revenue and receipts, and unearned revenue from such arrangements, for the periods presented consisted of the following (table in millions):

	Revenue and Receipts				Unearned Revenue	
	For the Year Ended			Transition Period	As of	
	February 1,	February 2,	December 31,	January 1 to	February 1,	February 2,
	2019	2018	2016	February 3, 2017	2019	2018
Reseller revenue	\$ 2,180	\$ 1,315	\$ 612	\$ 44	\$ 2,375	\$ 1,236
Internal-use revenue	22	34	28	7	13	12
Agency fee revenue	5	2	4	—	—	—
Collaborative technology project receipts	4	—	—	—	n/a	n/a

Customer deposits resulting from transactions with Dell were \$85 million and \$37 million as of February 1, 2019 and February 2, 2018, respectively.

VMware and Dell engaged in the following ongoing related party transactions, which resulted in costs to VMware:

- VMware purchases and leases products and purchases services from Dell.
- From time to time, VMware and Dell enter into agreements to collaborate on technology projects, and VMware pays Dell for services provided to VMware by Dell related to such projects.
- In certain geographic regions where VMware does not have an established legal entity, VMware contracts with Dell subsidiaries for support services and support from Dell personnel who are managed by VMware. The costs incurred by Dell on VMware’s behalf related to these employees are charged to VMware with a mark-up intended to approximate costs that would have been incurred had VMware contracted for such services with an unrelated third party. These costs are included as expenses on VMware’s consolidated statements of income (loss) and primarily include salaries, benefits, travel and occupancy expenses. Dell also incurs certain administrative costs on VMware’s behalf in the U.S. that are recorded as expenses on VMware’s consolidated statements of income (loss).
- In certain geographic regions, Dell files a consolidated indirect tax return, which includes value added taxes and other indirect taxes collected by VMware from its customers. VMware remits the indirect taxes to Dell and Dell remits the tax payment to the foreign governments on VMware’s behalf.
- From time to time, VMware invoices end users on behalf of Dell for certain services rendered by Dell. Cash related to these services is collected from the end user by VMware and remitted to Dell.

Information about VMware’s payments from such arrangements during the periods presented consisted of the following (table in millions):

	For the Year Ended			Transition Period
	February 1,	February 2,	December 31,	January 1 to
	2019	2018	2016	February 3, 2017
Purchases and leases of products and purchases of services ⁽¹⁾	\$ 198	\$ 142	\$ 97	\$ 14
Dell subsidiary support and administrative costs	106	123	105	13

⁽¹⁾ Amount includes indirect taxes that were remitted to Dell during the periods presented.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

VMware also purchases Dell products through Dell’s channel partners. Purchases of Dell products through Dell’s channel partners were not significant during the periods presented .

From time to time, VMware and Dell also enter into joint marketing and product development arrangements, for which both parties may incur costs.

During the third quarter of fiscal 2019, VMware acquired technology and employees related to the Dell EMC Service Assurance Suite, which provides root cause analysis management software for communications service providers, from Dell. The purchase of the Dell EMC Service Assurance Suite was accounted for as a transaction by entities under common control. The amount of the purchase price in excess of the historical cost of the acquired assets was recognized as a reduction to retained earnings on the consolidated balance sheets. Transition services are to be provided by Dell over a period of 18 months, starting from the date of the acquisition. Payments for transition services are not expected to be significant.

During the second quarter of fiscal 2018, VMware acquired Wavefront, Inc. (“Wavefront”). Upon closing of the acquisition, Dell was paid \$20 million in cash for its non-controlling ownership interest in Wavefront.

Dell Financial Services (“DFS”)

DFS provided financing to certain of VMware’s end users at the end users’ discretion. Upon acceptance of the financing arrangement by both VMware’s end user and DFS, amounts classified as trade accounts receivable are reclassified to due from related parties, net on the consolidated balance sheets. Revenue recognized on transactions financed through DFS was recorded net of financing fees, which were \$40 million and \$25 million during the year ended February 1, 2019 and February 2, 2018 , respectively. Financing fees during the Transition Period were not significant.

Due To/From Related Parties, Net

Amounts due to and from related parties, net as of the periods presented consisted of the following (table in millions):

	February 1, 2019	February 2, 2018
Due from related parties	\$ 1,079	\$ 638
Due to related parties	142	106
Due from related parties, net	\$ 937	\$ 532

Amounts included in due from related parties, net, excluding DFS and tax obligations, are generally settled in cash within 60 days of each quarter-end.

Special Dividend

On July 1, 2018, VMware’s board of directors declared a conditional \$11 billion one-time special cash dividend (the “Special Dividend”), payable pro-rata to VMware stockholders as of the record date. The Special Dividend was paid on December 28, 2018 to stockholders of record as of the close of business on December 27, 2018 in the amount of \$26.81 per outstanding share of VMware common stock. Dell was paid approximately \$9 billion in cash as a result of its financial interest in VMware’s common stock as of the record date.

The Special Dividend was paid in connection with the closing of a transaction by Dell pursuant to which holders of Dell Class V common stock, which was designed to track the economic performance of VMware, exchanged the Dell Class V common stock for Dell Class C common stock or cash or both, resulting in the elimination of the Dell Class V common stock. Refer to Note P for more information.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Stock Purchase Arrangements with Dell

From time to time, VMware enters into stock purchase arrangements with Dell. The following table summarizes purchases of VMware's Class A common stock from Dell during the periods presented, pursuant to stock purchase agreements entered into on March 29, 2017 (aggregate purchase price in millions, shares in thousands):

	For the Year Ended	
	February 2,	
	2018	
Aggregate purchase price	\$	725
Class A common shares repurchased ⁽¹⁾		7,572
Weighted-average price per share	\$	95.75

⁽¹⁾ The aggregate number of shares purchased was determined based upon a volume-weighted average price during a defined period, less an agreed upon discount.

There were no purchases of VMware's Class A common stock from Dell during the year ended February 1, 2019 and the Transition Period.

Notes Payable to Dell

On January 21, 2014, VMware entered into a note exchange agreement with its parent company providing for the issuance of three promissory notes in the aggregate principal amount of \$1,500 million, which consisted of outstanding principal due on the following dates: \$680 million due May 1, 2018, \$550 million due May 1, 2020 and \$270 million due December 1, 2022.

On August 21, 2017, VMware repaid two of the notes payable to Dell in the aggregate principal amount of \$1,230 million, representing repayment of the note due May 1, 2018 at par value and repayment of the note due May 1, 2020 at a discount. During the year ended February 2, 2018, VMware recognized a gain on extinguishment of debt of \$6 million, which was recorded in other income (expense), net on the consolidated statements of income (loss). The remaining note payable of \$270 million due December 1, 2022 may be prepaid without penalty or premium.

Interest is payable quarterly in arrears, at the annual rate of 1.75%. During the year ended February 1, 2019 and the Transition Period, interest expense on the notes payable to Dell was not significant. Interest expense recognized during the years ended February 2, 2018 and December 31, 2016 was \$16 million and \$26 million, respectively.

Pivotal

As of February 2, 2018, VMware had a 20% ownership interest in Pivotal, and the investment was accounted for using the cost method. The carrying value of the investment was included in other assets on the consolidated balance sheets and was \$20 million as of February 2, 2018. Prior to Pivotal's initial public offering on April 20, 2018, VMware's previously held preferred shares were converted to shares of non-trading Class B common stock, resulting in VMware having a financial interest of 17% and a voting interest of 24% in Pivotal as of February 1, 2019. VMware recognized an unrealized gain of \$813 million during the year ended February 1, 2019 in other income (expense), net on the consolidated statements of income (loss) to adjust its investment in Pivotal to its fair value of \$833 million as of February 1, 2019, including an unrealized gain of \$668 million recognized as a result of Pivotal's initial public offering.

D. Business Combinations, Definite-Lived Intangible Assets, Net and Goodwill**Business Combinations****Fiscal 2019***Acquisition of Heptio Inc.*

During the fourth quarter of fiscal 2019, VMware completed the acquisition of Heptio Inc. ("Heptio"), a provider of products and services that help enterprises deploy and operationalize Kubernetes. VMware acquired Heptio to enhance VMware's Kubernetes portfolio and cloud native strategy. The total purchase price was \$420 million, net of cash acquired of \$15 million. The purchase price primarily included \$27 million of identifiable intangible assets and \$392 million of goodwill that is not expected to be deductible for tax purposes. The identifiable intangible assets primarily consisted of completed technology of \$20 million, with an estimated useful life of five years. Management believes that the goodwill acquired represents the synergies expected from combining VMware's solution offerings related to Kubernetes with those of Heptio.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Merger consideration totaling \$117 million, including \$24 million being held in escrow, is payable to certain employees of Heptio subject to specified future employment conditions and is being recognized as expense over the requisite service period of approximately four years on a straight-line basis. Compensation expense recognized during the year ended February 1, 2019 was not material.

The fair value of assumed unvested equity awards attributed to post-combination services was \$47 million and will be expensed over the remaining requisite service periods of approximately three years on a straight-line basis. The estimated fair value of the stock options assumed by the Company was determined using the Black-Scholes option pricing model.

The initial allocation of the purchase price was based on a preliminary valuation and assumptions and is subject to change within the measurement period. VMware expects to finalize the allocation of the purchase price as soon as practicable and no later than one year from the acquisition date.

Acquisition of CloudHealth Technologies, Inc.

During the third quarter of fiscal 2019, VMware completed the acquisition of CloudHealth Technologies, Inc. (“CloudHealth Technologies”). CloudHealth Technologies delivers a cloud operations platform that enables customers to analyze and manage cloud cost, usage, security, and performance centrally for native public clouds, which expanded VMware’s portfolio of multi-cloud management solutions. The total purchase price was \$495 million, net of cash acquired of \$26 million. The purchase price primarily included \$101 million of identifiable intangible assets and \$394 million of goodwill that is not expected to be deductible for tax purposes. The identifiable intangible assets included completed technology of \$69 million and customer relationships of \$18 million, with estimated useful lives of one to five years.

The fair value of assumed unvested equity awards attributed to post-combination services was \$39 million and will be expensed over the remaining requisite service periods on a straight-line basis. The estimated fair value of the stock options assumed by the Company was determined using the Black-Scholes option pricing model.

The initial allocation of the purchase price was based on a preliminary valuation and assumptions and is subject to change within the measurement period. VMware expects to finalize the allocation of the purchase price as soon as practicable and no later than one year from the acquisition date.

The pro forma financial information assuming the acquisitions of Heptio and CloudHealth Technologies had occurred as of the beginning of the fiscal year prior to the fiscal year of acquisitions, as well as the revenue and earnings generated during the current fiscal year, were not material for disclosure purposes, both individually and in aggregate.

Other Asset Acquisitions

During the first quarter of fiscal 2019, VMware completed four asset acquisitions, in which the Company acquired certain intangible assets classified as completed technology. The aggregate purchase price of the intangible assets acquired was \$26 million.

Fiscal 2018

Acquisition of VeloCloud Networks, Inc.

During the fourth quarter of fiscal 2018, VMware completed the acquisition of VeloCloud Networks, Inc. (“VeloCloud”), a provider of cloud-delivered software-defined wide-area network (SD-WAN) technology for enterprises and service providers. VMware acquired VeloCloud to build on its network virtualization platform, VMware NSX (“NSX”), and to expand its networking portfolio. The total purchase price was \$449 million, net of cash acquired of \$24 million. The purchase price primarily included \$142 million of identifiable intangible assets and \$326 million of goodwill that was not deductible for tax purposes. The identifiable intangible assets primarily include completed technology of \$87 million and customer contracts of \$44 million, with estimated useful lives of six to seven years.

The fair value of assumed unvested equity awards attributed to post-combination services was \$30 million and will be expensed over the remaining requisite service periods on a straight-line basis. The estimated fair value of the stock options assumed by the Company was determined using the Black-Scholes option pricing model.

Prior to the closing of the acquisition, VMware held an ownership interest in VeloCloud. Upon completion of the step acquisition, VMware recognized a gain of \$8 million in other income (expense), net for the remeasurement of its previously held ownership interest to fair value, which was \$12 million.

The pro forma financial information assuming the acquisition had occurred as of the beginning of the fiscal year prior to the fiscal year of acquisition, as well as the revenue and earnings generated during the current fiscal year, were not material for disclosure purposes.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Other 2018 Business Combinations

During the second quarter of fiscal 2018, VMware completed the acquisitions of Wavefront and Aptelligent, Inc., which were not material to the consolidated financial statements. The aggregate purchase price for the two acquisitions was \$238 million, net of cash acquired of \$35 million. The aggregate purchase price included \$36 million of identifiable intangible assets and \$238 million of goodwill that is not expected to be deductible for tax purposes. The identifiable intangible assets primarily relate to purchased technology, with estimated useful lives of five years. The fair value of assumed unvested equity awards attributed to post-combination services was \$37 million and will be expensed over the remaining requisite service periods on a straight-line basis. The estimated fair value of the stock options assumed by the Company was determined using the Black-Scholes option pricing model.

Prior to the closing of the acquisition, VMware held an ownership interest in Wavefront. Upon completion of the step acquisition, VMware recognized a gain of \$34 million in other income (expense), net for the remeasurement of its previously held ownership interest to fair value, which was \$49 million. Upon closing of the acquisition, Dell was paid \$20 million in cash for its non-controlling ownership interest in Wavefront.

The pro forma financial information assuming the acquisition had occurred as of the beginning of the fiscal year prior to the fiscal year of acquisition, as well as the revenue and earnings generated during the current fiscal year, were not material for disclosure purposes.

Fiscal 2016

Acquisition of Arkin Net, Inc.

On June 21, 2016, VMware acquired all of the outstanding shares of Arkin Net, Inc. (“Arkin”) for approximately \$67 million of cash, net of liabilities assumed. VMware acquired Arkin, a provider of software-defined data center security and operations, as part of a strategy to accelerate customers’ adoption of NSX and software-defined data centers. Prior to the closing of the acquisition on June 21, 2016, Dell owned approximately 16% of the outstanding shares of Arkin. As a result of the acquisition, cash paid to Dell was approximately \$13 million.

Definite-Lived Intangible Assets, Net

The following table summarizes the changes in the carrying amount of definite-lived intangible assets during the periods presented (table in millions):

	February 1, 2019	February 2, 2018
Balance, beginning of the year	\$ 548	\$ 507
Additions to intangible assets related to business combinations	154	178
Amortization expense	(161)	(137)
Balance, end of the year	<u>\$ 541</u>	<u>\$ 548</u>

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

As of the periods presented, definite-lived intangible assets consisted of the following (amounts in tables in millions):

February 1, 2019				
	Weighted-Average Useful Lives (in years)	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Purchased technology	6.3	\$ 781	\$ (503)	\$ 278
Leasehold interest	34.9	149	(33)	116
Customer relationships and customer lists	7.5	193	(96)	97
Trademarks and tradenames	7.9	86	(40)	46
Other	3.9	7	(3)	4
Total definite-lived intangible assets		\$ 1,216	\$ (675)	\$ 541

February 2, 2018				
	Weighted-Average Useful Lives (in years)	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Purchased technology	6.4	\$ 750	\$ (466)	\$ 284
Leasehold interest	34.9	149	(29)	120
Customer relationships and customer lists	7.8	177	(74)	103
Trademarks and tradenames	8.4	70	(31)	39
Other	5.7	5	(3)	2
Total definite-lived intangible assets		\$ 1,151	\$ (603)	\$ 548

Amortization expense on definite-lived intangible assets was \$161 million, \$137 million, \$129 million and \$10 million during the years ended February 1, 2019, February 2, 2018 and December 31, 2016 and the Transition Period, respectively.

Based on intangible assets recorded as of February 1, 2019 and assuming no subsequent additions, dispositions or impairment of underlying assets, the remaining estimated annual amortization expense over the next five fiscal years and thereafter is expected to be as follows (table in millions):

2020	\$ 155
2021	97
2022	82
2023	59
2024	42
Thereafter	106
Total	\$ 541

Goodwill

The following table summarizes the changes in the carrying amount of goodwill during the periods presented (table in millions):

	February 1, 2019	February 2, 2018
Balance, beginning of the year	\$ 4,597	\$ 4,032
Increase in goodwill related to business combinations	784	565
Balance, end of the year	\$ 5,381	\$ 4,597

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

E. Realignment and Loss on Disposition**Disposition of VMware vCloud Air Business**

During the second quarter of fiscal 2018, VMware completed the sale of vCloud Air to OVH. The loss recognized in connection with this transaction was \$104 million during the year ended February 2, 2018 and was recorded in realignment and loss on disposition on the consolidated statements of income (loss). Losses recognized on the disposition of vCloud Air included the impairment of fixed assets identified as part of the sale, as well as the costs associated with certain transition services, which primarily included employee-related expenses and costs associated with data-center colocation services. Transition services were performed over a period of 18 months, starting from the date of the sale.

Realignment

On January 22, 2016, VMware approved a plan to streamline its operations, with plans to reinvest the associated savings in field, technical and support resources related to growth products. As a result of these actions, approximately 800 positions were eliminated during the year ended December 31, 2016. VMware recognized \$50 million of severance-related realignment expenses during the year ended December 31, 2016 on the consolidated statements of income (loss). Additionally, VMware consolidated certain facilities as part of this plan, which resulted in the recognition of \$2 million of related expenses during the year ended December 31, 2016 on the consolidated statements of income (loss). Actions associated with this plan were substantially completed by December 31, 2016.

The following table summarizes the activity for the accrued realignment expenses for the year ended December 31, 2016 (table in millions):

	For the Year Ended December 31, 2016			
	Balance as of January 1, 2016	Realignment	Utilization	Balance as of December 31, 2016
Severance-related costs	\$ 3	\$ 50	\$ (52)	\$ 1
Costs to exit facilities	—	2	(1)	1
Total	\$ 3	\$ 52	\$ (53)	\$ 2

F. Net Income (Loss) Per Share

Basic net income (loss) per share is computed by dividing net income (loss) by the weighted-average number of common shares outstanding during the period. Diluted net income (loss) per share is computed by dividing net income by the weighted-average number of common shares outstanding and potentially dilutive securities outstanding during the period, as calculated using the treasury stock method. Potentially dilutive securities primarily include unvested restricted stock units ("RSUs"), including PSUs, and stock options, including purchase options under VMware's employee stock purchase plan. Securities are excluded from the computation of diluted net income (loss) per share if their effect would be anti-dilutive. VMware uses the two-class method to calculate net income (loss) per share as both classes share the same rights in dividends; therefore, basic and diluted earnings per share are the same for both classes.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The following table sets forth the computations of basic and diluted net income (loss) per share during the periods presented (table in millions, except per share amounts and shares in thousands):

	For the Year Ended			Transition Period
	February 1, 2019	February 2, 2018	December 31, 2016	January 1 to February 3, 2017
Net income (loss)	\$ 2,422	\$ 659	\$ 1,223	\$ (5)
Gain on stock purchase with Dell, net of tax	—	—	(8)	—
Net income (loss), as adjusted	\$ 2,422	\$ 659	\$ 1,215	\$ (5)
Weighted-average shares, basic for Classes A and B	407,766	406,738	420,520	408,625
Effect of stock purchase with Dell	—	—	7	—
Effect of other dilutive securities	6,501	6,630	3,467	—
Weighted-average shares, diluted for Classes A and B	414,267	413,368	423,994	408,625
Net income (loss) per weighted-average share, basic for Classes A and B	\$ 5.94	\$ 1.62	\$ 2.91	\$ (0.01)
Net income (loss) per weighted-average share, diluted for Classes A and B	\$ 5.85	\$ 1.59	\$ 2.87	\$ (0.01)

⁽¹⁾ During the Transition Period, VMware incurred a net loss. As a result, all potentially dilutive securities were anti-dilutive and excluded from the computation of diluted net loss per share.

The following table sets forth the weighted-average common share equivalents of Class A common stock that were excluded from the diluted net income (loss) per share calculations during the periods presented because their effect would have been anti-dilutive (shares in thousands):

	For the Year Ended			Transition Period
	February 1, 2019	February 2, 2018	December 31, 2016	January 1 to February 3, 2017
Anti-dilutive securities:				
Employee stock options	50	51	1,817	2,353
Restricted stock units	255	140	652	3,259
Total	305	191	2,469	5,612

G. Cash, Cash Equivalents and Investments

Cash, cash equivalents and investments as of the periods presented consisted of the following (tables in millions):

	February 1, 2019			
	Cost or Amortized Cost	Unrealized Gains	Unrealized Losses	Aggregate Fair Value
Cash	\$ 461	\$ —	\$ —	\$ 461
Cash equivalents:				
Money-market funds	\$ 2,316	\$ —	\$ —	\$ 2,316
Demand deposits and time deposits	53	—	—	53
Total cash equivalents	\$ 2,369	\$ —	\$ —	\$ 2,369

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

	February 2, 2018			
	Cost or Amortized Cost	Unrealized Gains	Unrealized Losses	Aggregate Fair Value
Cash	\$ 423	\$ —	\$ —	\$ 423
Cash equivalents:				
Money-market funds	\$ 5,460	\$ —	\$ —	\$ 5,460
U.S. and foreign corporate debt securities	88	—	—	88
Total cash equivalents	\$ 5,548	\$ —	\$ —	\$ 5,548
Short-term investments:				
U.S. Government and agency obligations	\$ 965	\$ —	\$ (8)	\$ 957
U.S. and foreign corporate debt securities	4,503	1	(31)	4,473
Foreign governments and multi-national agency obligations	99	—	(1)	98
Mortgage-backed securities	123	—	(2)	121
Marketable available-for-sale equity securities	15	18	—	33
Total short-term investments	\$ 5,705	\$ 19	\$ (42)	\$ 5,682

VMware's cash, cash equivalents and short-term investments declined significantly as a result of the Special Dividend paid on December 28, 2018. Upon liquidation of investment securities that were used to fund the Special Dividend, the Company recognized a loss of \$53 million in investment income on its consolidated statements of income (loss) during the year ended February 1, 2019. The realized gains and losses on investments during the years ended February 2, 2018 and December 31, 2016 and the Transition Period were not significant.

Short-term investments on the consolidated balance sheets as of February 1, 2019 includes a marketable equity investment carried at fair value. Refer to Note I for further information.

VMware evaluated its available-for-sale investments as of February 2, 2018 for other-than-temporary declines in fair value and did not consider any to be other-than-temporarily impaired.

Unrealized losses on available-for-sale investments, which have been in a net loss position for less than twelve months as of February 2, 2018, were as follows (table in millions):

	February 2, 2018	
	Fair Value	Unrealized Losses
U.S. and foreign corporate debt securities	\$ 3,100	\$ (22)

As of the periods presented, unrealized losses on available-for-sale investments in the other investment categories, which have been in a net loss position for less than twelve months, were not significant. Unrealized losses on available-for-sale investments, which have been in a net loss position for twelve months or greater, were not significant as of February 1, 2019 and February 2, 2018.

Restricted Cash

During November 2016, the FASB issued ASU 2016-18, for which restricted cash or restricted cash equivalents is included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The updated standard was effective for interim and annual periods beginning after December 15, 2017 and required a full retrospective transition method. VMware adopted ASU 2016-18 during the first quarter of fiscal 2019 and has applied the standard retrospectively to all periods presented. The adoption of ASU 2016-18 did not have a significant impact on the consolidated statements of cash flows during the years ended February 2, 2018 and December 31, 2016 and the Transition Period.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The following table provides a reconciliation of the Company's cash and cash equivalents, current portion of restricted cash and non-current portion of restricted cash reported within the consolidated balance sheets that sum to the total cash, cash equivalents and restricted cash shown in the Company's consolidated statements of cash flows for the periods presented (table in millions):

	February 1, 2019	February 2, 2018
Cash and cash equivalents	\$ 2,830	\$ 5,971
Restricted cash within other current assets	35	22
Restricted cash within other assets	29	10
Total cash, cash equivalents and restricted cash	<u>\$ 2,894</u>	<u>\$ 6,003</u>

Amounts included in restricted cash primarily relate to certain employee-related benefits, as well as amounts related to installment payments to certain employees as part of acquisitions, subject to the achievement of specified future employment conditions.

H. Debt

Long-term Debt

On August 21, 2017, VMware issued three series of unsecured senior notes ("Senior Notes") pursuant to a public debt offering. The proceeds from the issuance were \$3,961 million, net of debt discount of \$9 million and debt issuance costs of \$30 million.

The carrying value of the Senior Notes as of the periods presented were as follows (amounts in millions):

	February 1, 2019	February 2, 2018	Effective Interest Rate
Long-term debt:			
2.30% Senior Note Due August 21, 2020	\$ 1,250	\$ 1,250	2.56%
2.95% Senior Note Due August 21, 2022	1,500	1,500	3.17%
3.90% Senior Note Due August 21, 2027	1,250	1,250	4.05%
Total principal amount	<u>4,000</u>	<u>4,000</u>	
Less: unamortized discount	(7)	(8)	
Less: unamortized debt issuance costs	(21)	(28)	
Net carrying amount	<u>\$ 3,972</u>	<u>\$ 3,964</u>	

Interest is payable semiannually in arrears, on February 21 and August 21 of each year. During the years ended February 1, 2019 and February 2, 2018, interest expense of \$129 million and \$58 million, respectively, which included amortization of discount and issuance costs, was recognized on the consolidated statements of income (loss). The discount and issuance costs are amortized over the term of the Senior Notes on a straight-line basis, which approximates the effective interest method.

The Senior Notes are redeemable in whole at any time or in part from time to time at VMware's option, subject to a make-whole premium. In addition, upon the occurrence of certain change-of-control triggering events and certain downgrades of the ratings on the Senior Notes, VMware may be required to repurchase the notes at a repurchase price equal to 101% of the aggregate principal plus any accrued and unpaid interest on the date of purchase. The Senior Notes rank equally in right of payment with VMware's other unsecured and unsubordinated indebtedness. The Senior Notes also include restrictive covenants that, in certain circumstances, limit VMware's ability to create certain liens, to enter into certain sale and leaseback transactions and to consolidate, merge, sell or otherwise dispose of all or substantially all of VMware's assets.

Refer to Note C for information regarding the notes payable to Dell.

Revolving Credit Facility

On September 12, 2017, VMware entered into an unsecured credit agreement establishing a revolving credit facility ("Credit Facility") with a syndicate of lenders that provides the Company with a borrowing capacity of up to \$1,000 million, which may be used for general corporate purposes. Commitments under the Credit Facility are available for a period of five years, which may be extended, subject to the satisfaction of certain conditions, by up to two one-year periods. As of February 1,

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2019, there were no outstanding borrowings under the Credit Facility. The credit agreement contains certain representations, warranties and covenants. Commitment fees, interest rates and other terms of borrowing under the Credit Facility may vary based on VMware's external credit ratings. The amount paid in connection with the ongoing commitment fee, which is payable quarterly in arrears, was not significant during the years ended February 1, 2019 and February 2, 2018.

I. Fair Value Measurements

Assets and Liabilities Measured and Recorded at Fair Value on a Recurring Basis

Certain financial assets and liabilities are measured at fair value on a recurring basis. VMware determines fair value using the following hierarchy:

- Level 1 - Quoted prices in active markets for identical assets or liabilities;
- Level 2 - Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are noted as being active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

VMware's fixed income securities were primarily classified as Level 2, with the exception of some of the U.S. Government and agency obligations that were classified as Level 1. Additionally, VMware's Level 2 classification included forward contracts, notes payable to Dell and the Senior Notes.

As of February 1, 2019 and February 2, 2018, VMware's Level 2 investment securities were generally priced using non-binding market consensus prices that were corroborated by observable market data, quoted market prices for similar instruments, or pricing models such as discounted cash flow techniques.

VMware did not have any significant assets or liabilities that were classified as Level 3 of the fair value hierarchy for the periods presented, and there have been no transfers between fair value measurement levels during the periods presented.

The following tables set forth the fair value hierarchy of VMware's cash equivalents and short-term investments that were required to be measured at fair value as of the periods presented (tables in millions):

	February 1, 2019		
	Level 1	Level 2	Total
Cash equivalents:			
Money-market funds	\$ 2,316	\$ —	\$ 2,316
Demand deposits and time deposits	—	53	53
Total cash equivalents	\$ 2,316	\$ 53	\$ 2,369
Short-term investments:			
Marketable equity securities	\$ 19	\$ —	\$ 19
Total short-term investments	\$ 19	\$ —	\$ 19

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

	February 2, 2018		
	Level 1	Level 2	Total
Cash equivalents:			
Money-market funds	\$ 5,460	\$ —	\$ 5,460
U.S. and foreign corporate debt securities	—	88	88
Total cash equivalents	\$ 5,460	\$ 88	\$ 5,548
Short-term investments:			
U.S. Government and agency obligations	\$ 684	\$ 273	\$ 957
U.S. and foreign corporate debt securities	—	4,473	4,473
Foreign governments and multi-national agency obligations	—	98	98
Mortgage-backed securities	—	121	121
Marketable available-for-sale equity securities	33	—	33
Total short-term investments	\$ 717	\$ 4,965	\$ 5,682

The notes payable to Dell and the Senior Notes were not adjusted to fair value. The fair value of the notes payable to Dell was approximately \$252 million and \$246 million as of February 1, 2019 and February 2, 2018, respectively. The fair value of the Senior Notes was approximately \$3,862 million and \$3,863 million as of February 1, 2019 and February 2, 2018, respectively. Fair value for both the notes payable to Dell and the Senior Notes was estimated primarily based on observable market interest rates (Level 2 inputs).

VMware offers a deferred compensation plan for eligible employees, which allows participants to defer payment for part or all of their compensation. The net impact to the consolidated statements of income (loss) is not significant since changes in the fair value of the assets substantially offset changes in the fair value of the liabilities. As such, assets and liabilities associated with this plan have not been included in the above tables. Assets associated with this plan were the same as the liabilities at approximately \$77 million and \$60 million as of February 1, 2019 and February 2, 2018, respectively, and are included in other assets and other liabilities on the consolidated balance sheets.

Equity Securities Carried at Fair Value

VMware holds an equity security, which is publicly traded and measured at fair value using quoted prices for identical assets in an active market (Level 1). Prior to the adoption of ASU 2016-01, unrealized gains or losses on this equity security were recognized in accumulated other comprehensive income (loss) on the consolidated balance sheets. Effective February 3, 2018, VMware adopted ASU 2016-01 and reclassified the unrealized gain on this security of \$11 million to retained earnings as a cumulative-effect adjustment on the consolidated balance sheets. Unrealized gains and losses are now recognized in other income (expense), net on the consolidated statements of income (loss). As of February 1, 2019, the fair value of this equity security was \$19 million and was included in short-term investments on the consolidated balance sheets. The unrealized loss recognized on the consolidated statements of income (loss) was \$14 million during the year ended February 1, 2019.

Through its ownership in Class B Common Stock, VMware had a financial interest of 17% and a voting interest of 24% in Pivotal as of February 1, 2019. VMware elected the fair value option of accounting because it believes that fair value is the most relevant measurement for this investment. The fair value of VMware's investment in Pivotal was \$833 million as of February 1, 2019 and was determined using the quoted market price of Pivotal's Class A common stock as of each reporting period, adjusted for the impact of superior voting rights (Level 2).

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Financial information of Pivotal is made publicly available. The following tables include summarized financial information for the third quarter of fiscal 2019 obtained from Pivotal's most recent Form 10-Q filed with the SEC on December 12, 2018 (tables in millions):

	Nine Months Ended	
	November 2,	
	2018	
Results of Operations Data:		
Revenue	\$	488
Gross profit		307
Loss from operations		(105)
Net loss		(103)
Net loss attributable to Pivotal		(103)
	November 2,	
	2018	
Balance Sheet Data:		
Current assets	\$	880
Total assets		1,654
Current liabilities		331
Total liabilities		401
Non-controlling interest		1

Equity Securities Without a Readily Determinable Fair Value

VMware's equity securities also include investments in privately held companies, which do not have a readily determinable fair value. Prior to the adoption of ASU 2016-01, VMware accounted for these equity securities at cost less impairment and recorded realized gains and losses on securities sold or impaired in other income (expense), net on the consolidated statements of income (loss). As of February 2, 2018, investments in privately held companies, which consisted primarily of equity securities accounted for under the cost method, had a carrying value of \$146 million, which included \$20 million related to its investment in Pivotal.

Upon adoption of ASU 2016-01, VMware elected to measure these equity securities at cost less impairment, if any, adjusted for observable price changes in orderly transactions for the identical or a similar security of the same issuer. As of February 1, 2019, investments in privately held companies, which consisted primarily of equity securities, had a carrying value of \$95 million and were included in other assets on the consolidated balance sheets. All gains and losses on these securities, whether realized or unrealized, are recognized in other income (expense), net on the consolidated statements of income (loss).

J. Derivatives and Hedging Activities

VMware conducts business on a global basis in multiple foreign currencies, subjecting the Company to foreign currency risk. To mitigate a portion of this risk, VMware utilizes hedging contracts as described below, which potentially expose the Company to credit risk to the extent that the counterparties may be unable to meet the terms of the agreements. VMware manages counterparty risk by seeking counterparties of high credit quality, by monitoring credit ratings and credit spreads of, and other relevant public information about its counterparties. VMware does not, and does not intend to, use derivative instruments for trading or speculative purposes.

Cash Flow Hedges

To mitigate its exposure to foreign currency fluctuations resulting from certain operating expenses denominated in certain foreign currencies, VMware enters into forward contracts that are designated as cash flow hedging instruments as the accounting criteria for such designation are met. Therefore, the effective portion of gains or losses resulting from changes in the fair value of these instruments is initially reported in accumulated other comprehensive income (loss) on the consolidated balance sheets and is subsequently reclassified to the related operating expense line item on the consolidated statements of

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income (loss) in the same period that the underlying expenses are incurred. During the years ended February 1, 2019 , February 2, 2018 , December 31, 2016 and the Transition Period, the effective portion of gains or losses reclassified to the consolidated statements of income (loss) was not significant. Interest charges or “forward points” on VMware’s forward contracts are excluded from the assessment of hedge effectiveness and are recorded in other income (expense), net on the consolidated statements of income (loss) as incurred.

These forward contracts have contractual maturities of twelve months or less, and as of February 1, 2019 and February 2, 2018 , outstanding forward contracts had a total notional value of \$367 million and \$318 million , respectively. The notional value represents the gross amount of foreign currency that will be bought or sold upon maturity of the forward contract.

During the years ended February 1, 2019 , February 2, 2018 and December 31, 2016 and the Transition Period, all cash flow hedges were considered effective.

Forward Contracts Not Designated as Hedges

VMware has established a program that utilizes forward contracts to offset the foreign currency risk associated with net outstanding monetary asset and liability positions. These forward contracts are not designated as hedging instruments under applicable accounting guidance, and therefore all changes in the fair value of the forward contracts are reported in other income (expense), net on the consolidated statements of income (loss).

These forward contracts have a contractual maturity of one month, and as of February 1, 2019 and February 2, 2018 , outstanding forward contracts had a total notional value of \$1,208 million and \$1,020 million , respectively. The notional value represents the gross amount of foreign currency that will be bought or sold upon maturity of the forward contract.

During the years ended February 1, 2019 and December 31, 2016 , VMware recognized gains of \$69 million and \$23 million , respectively, and losses of \$97 million and \$18 million during the February 2, 2018 and the Transition Period, respectively, related to the settlement of forward contracts. Gains and losses are recorded in other income (expense), net on the consolidated statements of income (loss).

The combined gains and losses related to the settlement of forward contracts and the underlying foreign currency denominated assets and liabilities were not significant during the years ended February 1, 2019 , February 2, 2018 and December 31, 2016 and the Transition Period. Net gains and losses are recorded in other income (expense), net on the consolidated statements of income (loss).

K. Property and Equipment, Net

Property and equipment, net, as of the periods presented consisted of the following (table in millions):

	February 1, 2019	February 2, 2018
Equipment and software	\$ 1,419	\$ 1,262
Buildings and improvements	951	824
Furniture and fixtures	109	101
Construction in progress	55	129
Total property and equipment	2,534	2,316
Accumulated depreciation	(1,401)	(1,242)
Total property and equipment, net	\$ 1,133	\$ 1,074

As of February 2, 2018 , construction in progress primarily represented buildings and site improvements related to VMware’s Palo Alto campus expansion that had not yet been placed into service. As of February 1, 2019 , the construction related to this expansion was substantially complete and was placed in service.

Depreciation expense was \$199 million , \$195 million , \$215 million and \$18 million during the years ended February 1, 2019 , February 2, 2018 and December 31, 2016 and the Transition Period, respectively.

L. Commitments and Contingencies

Litigation

On August 10, 2015, the Company received a subpoena from the California Attorney General’s office (“California AG”), following the Company’s settlement with the Department of Justice and the General Services Administration during June

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

2015. In this matter, the California AG is investigating the accuracy of the Company's sales practices with departments and agencies within the State of California. The Company held an initial meeting with the California AG's representatives on November 5, 2015, and thereafter provided certain requested documents to the California AG. The Company did not receive any further communications from the California AG until the fall of 2017. Since then, the California AG and the Company have exchanged communications regarding the legal bases for the allegations, and the Company has provided additional information requested by the California AG. The Company is unable at this time to reasonably assess whether or to what extent it may be found liable and believes a loss is not considered probable and is not estimable.

On March 4, 2015, Christoph Hellwig, a software developer who alleged that software code he wrote is used in a component of the Company's vSphere product, filed a lawsuit against VMware in the Hamburg Regional Court in Germany alleging copyright infringement for failing to comply with the terms of the open source General Public License v.2 ("GPL v.2"). On July 8, 2016, the German court issued a written decision dismissing Mr. Hellwig's lawsuit. Following Mr. Hellwig's appeal of that decision, on February 28, 2019, the appellate court affirmed the regional court's decision dismissing Mr. Hellwig's lawsuit. The time for Mr. Hellwig to file a further appeal has not yet expired. The Company intends to continue vigorously defending itself against this lawsuit.

While VMware believes that it has valid defenses against each of the above legal matters, given the unpredictable nature of legal proceedings, an unfavorable resolution of one or more legal proceedings, claims, or investigations could have a material adverse effect on VMware's consolidated financial statements.

VMware accrues for a liability when a determination has been made that a loss is both probable and the amount of the loss can be reasonably estimated. If only a range can be estimated and no amount within the range is a better estimate than any other amount, an accrual is recorded for the minimum amount in the range. Significant judgment is required in both the determination that the occurrence of a loss is probable and is reasonably estimable. In making such judgments, VMware considers the impact of negotiations, settlements, rulings, advice of legal counsel and other information and events pertaining to a particular matter. Legal costs are generally recognized as expense when incurred.

VMware is also subject to other legal, administrative and regulatory proceedings, claims, demands and investigations in the ordinary course of business or in connection with business mergers and acquisitions, including claims with respect to commercial, contracting and sales practices, product liability, intellectual property, employment, corporate and securities law, class action, whistleblower and other matters. From time to time, VMware also receives inquiries from and has discussions with government entities and stockholders on various matters. As of February 1, 2019, amounts accrued relating to these other matters arising as part of the ordinary course of business were considered not material. VMware does not believe that any liability from any reasonably foreseeable disposition of such claims and litigation, individually or in the aggregate, would have a material adverse effect on its consolidated financial statements.

Operating Leases and Other Contractual Commitments

VMware leases office facilities and equipment under various operating arrangements. Rent expense for the years ended February 1, 2019, February 2, 2018, and December 31, 2016 was \$145 million, \$116 million and \$112 million, respectively. Rent expense for the Transition Period was not material. VMware's minimum future lease commitments and other contractual commitments at February 1, 2019 were as follows (table in millions):

	Future Lease Commitments ⁽¹⁾	Purchase Obligations	Other Contractual Commitments ⁽²⁾	Total
2020	\$ 109	\$ 143	\$ 5	\$ 257
2021	79	95	3	177
2022	64	93	5	162
2023	54	8	3	65
2024	41	—	3	44
Thereafter	523	—	4	527
Total	\$ 870	\$ 339	\$ 23	\$ 1,232

⁽¹⁾ Amounts in the table above exclude legally binding minimum lease payments for leases signed but not yet commenced of \$164 million, as well as expected sublease income.

⁽²⁾ Consisting of various contractual agreements, which include commitments on the lease for VMware's Washington data center facility and asset retirement obligations.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The amount of the future lease commitments after fiscal 2024 is primarily for the ground leases on VMware's Palo Alto, California headquarter facilities, which expire in fiscal 2047. As several of VMware's operating leases are payable in foreign currencies, the operating lease payments may fluctuate in response to changes in the exchange rate between the U.S. dollar and the foreign currencies in which the commitments are payable.

Guarantees and Indemnification Obligations

VMware enters into agreements in the ordinary course of business with, among others, customers, distributors, resellers, system vendors and systems integrators. Most of these agreements require VMware to indemnify the other party against third-party claims alleging that a VMware product infringes or misappropriates a patent, copyright, trademark, trade secret, and/or other intellectual property right. Certain of these agreements require VMware to indemnify the other party against certain claims relating to property damage, personal injury, or the acts or omissions of VMware, its employees, agents, or representatives.

VMware has agreements with certain vendors, financial institutions, lessors and service providers pursuant to which VMware has agreed to indemnify the other party for specified matters, such as acts and omissions of VMware, its employees, agents, or representatives.

VMware has procurement or license agreements with respect to technology that it has obtained the right to use in VMware's products and agreements. Under some of these agreements, VMware has agreed to indemnify the supplier for certain claims that may be brought against such party with respect to VMware's acts or omissions relating to the supplied products or technologies.

VMware has agreed to indemnify the directors and executive officers of VMware, to the extent legally permissible, against all liabilities reasonably incurred in connection with any action in which such individual may be involved by reason of such individual being or having been a director or executive officer. VMware's by-laws and charter also provide for indemnification of directors and officers of VMware and VMware subsidiaries to the extent legally permissible, against all liabilities reasonably incurred in connection with any action in which such individual may be involved by reason of such individual being or having been a director or executive officer. VMware also indemnifies certain employees who provide services with respect to employee benefits plans, including, for example, the members of the Administrative Committee of the VMware 401(k) Plan, and employees who serve as directors or officers of VMware's subsidiaries.

In connection with certain acquisitions, VMware has agreed to indemnify the former directors and officers of the acquired company in accordance with the acquired company's by-laws and charter in effect immediately prior to the acquisition or in accordance with indemnification or similar agreements entered into by the acquired company and such persons. VMware typically purchases a "tail" directors and officers insurance policy, which should enable VMware to recover a portion of any future indemnification obligations related to the former officers and directors of an acquired company.

It is not possible to determine the maximum potential amount under these indemnification agreements due to the relatively small number of prior indemnification claims and the unique facts and circumstances involved in each particular situation. Historically, payments made by the Company under these agreements have not had a material effect on the Company's consolidated results of operations, financial position, or cash flows.

M. Accrued Expenses and Other

Accrued expenses and other as of the periods presented consisted of the following (table in millions)

	February 1, 2019	February 2, 2018
Accrued employee related expenses	\$ 732	\$ 634
Accrued partner liabilities	207	241
Customer Deposits	238	126
Other	416	356
Total	\$ 1,593	\$ 1,357

Accrued partner liabilities primarily relate to rebates and marketing development fund accruals for channel partners, system vendors and systems integrators. Accrued partner liabilities also include accruals for professional service arrangements for which VMware intends to leverage channel partners to directly fulfill the obligation to its customers.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

N. Unearned Revenue and Remaining Performance Obligations***Unearned Revenue***

Unearned revenue as of the periods presented consisted of the following (table in millions):

	February 1, 2019	February 2, 2018
Unearned license revenue	\$ 255	\$ 184
Unearned software maintenance revenue	5,972	5,082
Unearned professional services revenue	751	573
Total unearned revenue	<u>\$ 6,978</u>	<u>\$ 5,839</u>

Unearned license revenue is primarily related to the allocated portion of VMware's software-as-a-service ("SaaS") offerings and is generally recognized over time as customers consume the services or ratably over the term of the subscription, commencing upon provisioning of the service.

Unearned software maintenance revenue is attributable to VMware's maintenance contracts and is generally recognized over time on a ratably basis over the contract duration. The weighted-average remaining term as of February 1, 2019 was approximately two years. In addition, unearned software maintenance revenue also includes the allocated portion of VMware's SaaS offerings. Unearned professional services revenue results primarily from prepaid professional services and is generally recognized as the services are performed.

The following table summarizes unearned revenue activity during the periods presented:

	Three Months Ended			
	May 4, 2018	August 3, 2018	November 2, 2018	February 1, 2019
Balance, beginning of the period	\$ 5,839	\$ 5,756	\$ 6,030	\$ 6,201
Current period billings	1,210	1,507	1,464	2,094
Revenue recognized from amounts previously classified as unearned revenue ⁽¹⁾	(1,215)	(1,233)	(1,299)	(1,317)
Other	(78)	—	6	—
Balance, end of the period	<u>\$ 5,756</u>	<u>\$ 6,030</u>	<u>\$ 6,201</u>	<u>\$ 6,978</u>

⁽¹⁾ Revenue recognized from amounts previously classified as unearned revenue did not include revenue for performance obligations that were fully satisfied upon delivery, such as on-premises license.

Revenue recognized during the years ended February 2, 2018 and December 31, 2016 and the Transition Period, from amounts previously classified as unearned revenue, was \$4,621 million, \$4,000 million and \$392 million, respectively, and did not include revenue for performance obligations that were fully satisfied upon delivery, such as on-premises license.

Remaining Performance Obligations

Remaining performance obligations represent the aggregate amount of the transaction price in contracts allocated to performance obligations not delivered, or partially undelivered, as of the end of the reporting period. Remaining performance obligations include unearned revenue, multi-year contracts with future installment payments and certain unfulfilled orders against accepted customer contracts at the end of any given period.

As of February 1, 2019, the aggregate transaction price allocated to remaining performance obligations was \$7,749 million. Approximately 56% is expected to be recognized as revenue over the next 12 months and the remainder thereafter. VMware applied the practical expedient to not disclose the amount of transaction price allocated to remaining performance obligations for periods prior to the adoption of Topic 606.

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O. Income Taxes

The domestic and foreign components of income (loss) before provisions (benefits) for income taxes for the periods presented were as follows (table in millions):

	For the Year Ended			Transition Period
	February 1, 2019	February 2, 2018	December 31, 2016	January 1 to February 3, 2017
Domestic	\$ 1,650	\$ 636	\$ 455	\$ (60)
Foreign	1,233	1,178	1,048	25
Total income (loss) before income tax	<u>\$ 2,883</u>	<u>\$ 1,814</u>	<u>\$ 1,503</u>	<u>\$ (35)</u>

VMware's provision (benefit) for income taxes for the periods presented consisted of the following (table in millions):

	For the Year Ended			Transition Period
	February 1, 2019	February 2, 2018	December 31, 2016	January 1 to February 3, 2017
Federal:				
Current	\$ 181	\$ 688	\$ 145	\$ 198
Deferred	103	281	(1)	(225)
	284	969	144	(27)
State:				
Current	31	8	22	25
Deferred	18	22	(9)	(32)
	49	30	13	(7)
Foreign:				
Current	136	152	128	5
Deferred	(8)	4	(5)	(1)
	128	156	123	4
Total provision (benefit) for income taxes	<u>\$ 461</u>	<u>\$ 1,155</u>	<u>\$ 280</u>	<u>\$ (30)</u>

The 2017 Tax Act introduced significant changes to U.S. income tax law including a mandatory one-time transition tax on accumulated earnings of foreign subsidiaries ("Transition Tax") and a reduction of the U.S. statutory corporate income tax rate from 35% to 21%. During December 2017, the SEC staff issued SAB 118, which allowed the Company to record provisional tax amounts during a measurement period not to extend beyond one year of the enactment date. Due to the timing of the enactment and the complexity involved in applying the provisions of the 2017 Tax Act, the Company made reasonable estimates of the effects and recorded provisional amounts in its consolidated financial statements for the year ended February 2, 2018. During the fourth quarter of fiscal 2019, the Company completed its analysis of the effect of the Tax Act and the adjustments recorded on the consolidated statement of income (loss) were not material for the year ended February 1, 2019.

Federal income tax increased during the year ended February 2, 2018, primarily due to the 2017 Tax Act. As a result of the Transition Tax, VMware recorded a provisional estimate for income tax expense of approximately \$800 million that was calculated on a separate tax return basis. In addition, the Company recorded a provisional estimate for tax expense of approximately \$100 million related to the remeasurement of its deferred tax assets and liabilities, which resulted from the reduction of the U.S. statutory corporate income tax rate.

Provision for income taxes decreased during the year ended February 1, 2019, primarily driven by the absence of the Transition Tax. This decrease was partially offset by the discrete tax expense of \$187 million recognized during the year ended February 1, 2019, related to the book and tax basis difference on the Company's investment in Pivotal, net of the reversal of the previously recorded valuation allowance.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

A reconciliation of VMware's income tax rate to the statutory federal tax rate for the periods presented is as follows:

	For the Year Ended			Transition Period
	February 1, 2019	February 2, 2018	December 31, 2016	January 1 to February 3, 2017
Statutory federal tax rate ⁽¹⁾	21 %	34 %	35 %	35%
State taxes, net of federal benefit	2 %	1 %	1 %	14%
Tax rate differential for non-U.S. jurisdictions	(5)%	(13)%	(16)%	9%
U.S. tax credits	(7)%	(4)%	(3)%	—%
Excess tax benefits from stock-based compensation ⁽²⁾	(3)%	(6)%	— %	—%
Transition Tax due to 2017 Tax Act ⁽³⁾	— %	44 %	— %	—%
Rate Change due to 2017 Tax Act ⁽³⁾	— %	6 %	— %	—%
Permanent items	8 %	2 %	3 %	27%
Other	— %	— %	(1)%	2%
Effective tax rate	16 %	64 %	19 %	87%

⁽¹⁾ The 2017 Tax Act reduced the U.S. statutory corporate income tax rate from 35% to 21%, effective January 1, 2018, which resulted in a blended U.S. statutory corporate tax rate of 34% during the year ended February 2, 2018 .

⁽²⁾ VMware adopted ASU 2016-09 during the first quarter of fiscal 2018. As a result, net excess tax benefits recognized in connection with stock-based awards are included in the income tax provision on the consolidated statements of income (loss). Prior to adopting the updated standard, such amounts were recognized in additional paid-in capital on the Company's consolidated balance sheets.

⁽³⁾ The effective tax rate during the year ended February 2, 2018 was impacted by key components of the 2017 Tax Act, including the Transition Tax, and the remeasurement of VMware's deferred tax assets and liabilities due to the reduction in the U.S. statutory corporate tax rate.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Deferred tax assets and liabilities are recognized for future tax consequences resulting from differences between the carrying amounts of assets and liabilities and their respective tax bases using enacted tax rates in effect for the year in which the differences are expected to be reversed. Significant deferred tax assets and liabilities as of the periods presented consisted of the following (table in millions):

	February 1, 2019	February 2, 2018
Deferred tax assets:		
Accruals and other	\$ 78	\$ 48
Unearned revenue	287	187
Stock-based compensation	64	52
Tax credit and net operating loss carryforwards	273	254
Other assets, net	32	27
Basis difference on investment in business	—	13
Gross deferred tax assets	734	581
Valuation allowance	(229)	(200)
Total deferred tax assets	505	381
Deferred tax liabilities:		
Deferred commissions	(129)	(115)
Property, plant and equipment, net	(89)	(67)
Intangibles and other assets, net	(28)	(4)
Basis difference on investment in business	(187)	—
Total deferred tax liabilities	(433)	(186)
Net deferred tax assets	\$ 72	\$ 195

Net deferred tax assets was comprised of deferred tax assets of \$103 million and \$227 million as of February 1, 2019 and February 2, 2018, respectively, partially offset by deferred tax liabilities of \$31 million and \$32 million as of February 1, 2019 and February 2, 2018, respectively. Deferred tax liabilities were included in other liabilities on the consolidated balance sheets for the periods presented.

The decrease in net deferred tax assets from February 2, 2018 to February 1, 2019 was primarily driven by the book and tax basis difference on the Company's investment in Pivotal, partially offset by an increase in unearned revenue as of February 1, 2019 as compared to February 2, 2018.

VMware has U.S. federal net operating loss carryforwards of \$201 million and \$195 million as of February 1, 2019 and February 2, 2018, respectively, from acquisitions made since 2007. These operating loss carryforwards expire at different periods through 2038. Portions of these carryforwards are subject to annual limitations. VMware expects to be able to fully utilize these net operating losses against future income. VMware also has state net operating loss carryforwards of \$142 million and \$187 million as of February 1, 2019 and February 2, 2018, respectively, resulting from acquisitions made since 2007, expiring at different periods through 2038.

VMware has California research and development ("R&D") credit carryforwards for income tax purposes of \$199 million and \$168 million as of February 1, 2019 and February 2, 2018, respectively, that can be carried over indefinitely. VMware also has R&D credit carryforwards for Georgia of \$12 million as of February 1, 2019. The R&D credit carryforwards for Massachusetts as of February 1, 2019 and for Massachusetts and Georgia as of February 2, 2018 were not material. The R&D credit carryforwards for Georgia and Massachusetts expire at different periods through 2033. In addition, VMware had no foreign tax credit carryforwards as of February 1, 2019, and the amount of foreign tax credit carryforwards as of February 2, 2018 was not significant. There were no non-U.S. net operating losses as of February 1, 2019, and the non-U.S. net operating losses were not material as of February 2, 2018. These net operating losses have various carryforward periods, including certain portions that can be carried over indefinitely.

VMware determined that the realization of deferred tax assets relating to portions of the state net operating loss carryforwards, state R&D tax credits and capital losses did not meet the more-likely-than-not threshold. Accordingly, a valuation allowance of \$225 million and \$183 million was recorded as of February 1, 2019 and February 2, 2018, respectively.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

If, in the future, new evidence supports the realization of the deferred tax assets related to these items, the valuation allowance will be reversed and a tax benefit will be recorded accordingly.

VMware believes it is more-likely-than-not that the net deferred tax assets as of February 1, 2019 and February 2, 2018, will be realized in the foreseeable future as VMware believes that it will generate sufficient taxable income in future years. VMware's ability to generate sufficient taxable income in future years in appropriate tax jurisdictions will determine the amount of net deferred tax asset balances to be realized in future periods. During the year ended February 1, 2019, the total change in the valuation allowance was \$29 million, which was primarily due to California R&D credits generated during the year ended February 1, 2019, partially offset by the reversal of the previously recorded valuation allowance related to the Company's investment in Pivotal.

For the periods presented, VMware's rate of taxation in non-U.S. jurisdictions was lower than the U.S. tax rate. VMware's non-U.S. earnings are primarily earned by its subsidiaries organized in Ireland, where the statutory rate is 12.5%. Prior to the year ended February 2, 2018, the Company did not recognize a deferred tax liability related to undistributed foreign earnings of its subsidiaries because such earnings were considered to be indefinitely reinvested in its foreign operations, or were remitted substantially free of U.S. tax. Under the 2017 Tax Act, all foreign earnings are subject to U.S. taxation. As a result, the Company repatriated, and expects to continue to repatriate, a substantial portion of its foreign earnings over time, to the extent that the foreign earnings are not restricted by local laws or result in significant incremental costs associated with repatriating the foreign earnings. As of February 1, 2019, the amount of deferred tax liability related to the potential repatriation of foreign earnings was not material. Further developments in non-U.S. tax jurisdictions and unfavorable changes in non-U.S. tax laws and regulations, such as foreign tax laws enacted in response to the 2017 Tax Act, could result in adverse changes to global taxation and materially affect VMware's financial position, results of operations, or annual effective tax rate.

Tax Sharing Agreement with Dell

On September 6, 2016, VMware entered into an amended tax sharing agreement with Dell, in connection with, and effective as of, the Dell Acquisition.

Although VMware's results are included in the Dell consolidated return for U.S. federal income tax purposes, VMware's income tax provision is calculated primarily as though VMware were a separate taxpayer. However, under certain circumstances, transactions between VMware and Dell are assessed using consolidated tax return rules.

VMware has made payments to Dell pursuant to the tax sharing agreement. The following table summarizes the payments made during the periods presented (table in millions):

	For the Year Ended			Transition Period
	February 1,	February 2,	December 31,	January 1 to
	2019	2018	2016	February 3, 2017
Payments from VMware to Dell, net	\$ 243	\$ 54	\$ 373	\$ —

Payments from VMware to Dell under the tax sharing agreement relate to VMware's portion of federal income taxes on Dell's consolidated tax return as well as state tax payments for combined states. The timing of the tax payments due to and from related parties is governed by the tax sharing agreement. The amounts that VMware pays to Dell for its portion of federal income taxes on Dell's consolidated tax return differ from the amounts VMware would owe on a separate tax return basis and the difference is recognized as a component of additional paid-in capital, generally in the period in which the consolidated tax return is filed. The difference between the amount of tax calculated on a separate tax return basis and the amount of tax calculated pursuant to the tax sharing agreement that was recorded in additional paid-in capital during the years ended February 1, 2019 and February 2, 2018 and the Transition Period was not significant. During the year ended December 31, 2016, the difference between the amount of tax calculated on a separate return basis and the amount of tax calculated pursuant to the tax sharing agreement was recorded in additional paid-in capital as an increase of \$15 million.

As a result of the activity under the tax sharing agreement with Dell, amounts due to and from Dell, net as of the periods presented consisted of the following (table in millions):

	February 1, 2019	February 2, 2018
Income tax due to Dell	\$ 646	\$ 781

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Income tax due to Dell as of February 1, 2019 and February 2, 2018 primarily related to VMware's estimated tax obligation resulting from the Transition Tax. The 2017 Tax Act included a deferral election for an eight-year installment payment method on the Transition Tax. The Company expects to pay the remainder of its Transition Tax over a period of seven years.

Unrecognized Tax Benefits

A reconciliation of the beginning and ending amount of gross unrecognized tax benefits, excluding interest and penalties associated with unrecognized tax benefits, for the periods presented is as follows (table in millions):

	For the Year Ended			Transition Period
	February 1,	February 2,	December 31,	January 1 to
	2019	2018	2016	February 3, 2017
Balance, beginning of the year/period	\$ 302	\$ 263	\$ 245	\$ 260
Tax positions related to current year/period:				
Additions	57	63	45	3
Tax positions related to prior years/period:				
Additions	43	1	9	—
Reductions	—	(2)	(8)	(1)
Settlements	(4)	(9)	(16)	—
Reductions resulting from a lapse of the statute of limitations	(8)	(24)	(14)	—
Foreign currency effects	(8)	10	(1)	1
Balance, end of the year/period	\$ 382	\$ 302	\$ 260	\$ 263

Of the net unrecognized tax benefits, including interest and penalties, of \$296 million and \$208 million as of February 1, 2019 and February 2, 2018, respectively, approximately \$266 million and \$185 million, respectively, would, if recognized, benefit VMware's annual effective income tax rate. The \$296 million and \$208 million of net unrecognized tax benefits were included in income tax payable on the consolidated balance sheets as of February 1, 2019 and February 2, 2018, respectively. VMware includes interest expense and penalties related to income tax matters in the income tax provision. VMware had accrued \$56 million and \$41 million of interest and penalties associated with unrecognized tax benefits as of February 1, 2019 and of February 2, 2018, respectively. Income tax expense included interest and penalties associated with uncertain tax positions of \$15 million and \$10 million during the years ended February 1, 2019 and December 31, 2016, respectively. Interest and penalties associated with uncertain tax positions included in income tax expense were not significant during the year ended February 2, 2018 and the Transition Period.

The Dell-owned EMC consolidated group is routinely under audit by the Internal Revenue Service ("IRS"). All U.S. federal income tax matters have been concluded for years through 2011, except for any matters under appeal. In addition, VMware is under corporate income tax audits in various states and non-U.S. jurisdictions. Consistent with the Company's historical practices under the tax sharing agreement with EMC, when VMware becomes subject to federal tax audits as a member of Dell's consolidated group, the tax sharing agreement provides that Dell has authority to control the audit and represent Dell's and VMware's interests to the IRS.

Open tax years subject to examinations for larger non-U.S. jurisdictions vary beginning in 2008. Open tax years for Ireland, the largest non-U.S. jurisdiction, begin in 2010. Audit outcomes and the timing of audit settlements are subject to significant uncertainty. When considering the outcomes and the timing of tax examinations, the expiration of statutes of limitations for specific jurisdictions, or the timing and result of ruling requests from taxing authorities, it is reasonably possible that total unrecognized tax benefits could be potentially reduced by approximately \$84 million within the next 12 months.

P. Stockholders' Equity

Special Dividend

On July 1, 2018, VMware's board of directors declared a conditional \$11 billion Special Dividend, payable pro-rata to VMware stockholders as of the record date. During the fourth quarter of fiscal 2019, the conditions of the Special Dividend

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were met. The Special Dividend was paid on December 28, 2018 to stockholders of record as of the close of business on December 27, 2018 in the amount of \$26.81 per outstanding share of VMware common stock.

Stock awards that were outstanding at the time of the Special Dividend were adjusted pursuant to anti-dilution provisions in the Company's stock plan documents that provide for equitable adjustments to be determined by VMware's Compensation and Corporate Governance Committee in the event of an extraordinary cash dividend. A conversion ratio based on the per share dividend amount and VMware's closing stock price on December 28, 2018 was used to adjust the stock awards outstanding at the time of the Special Dividend. The adjustments to awards included increasing the number of outstanding restricted stock units and stock options, as well as reducing the exercise prices of outstanding stock options. The adjustments did not result in incremental stock-based compensation expense as the anti-dilutive adjustments were required by the Company's equity incentive plan.

VMware Class B Common Stock Conversion Rights

Each share of Class B common stock is convertible into one share of Class A common stock. If VMware's Class B common stock is distributed to security holders of Dell in a qualified distribution, the Class B shares will no longer be convertible into shares of Class A common stock unless a stockholder vote is obtained after certain conditions are satisfied. Prior to any such distribution, all Class B shares automatically convert into shares of Class A common stock if Dell transfers such shares to a third party that is not a successor or a Dell subsidiary or at such time as the number of shares of common stock owned by Dell or its successor falls below 20% of the outstanding shares of VMware's common stock. As of February 1, 2019, 300.0 million shares of Class A common stock were reserved for conversion.

VMware Equity Plan

In June 2007, VMware adopted its 2007 Equity and Incentive Plan (the "2007 Plan"). As of February 1, 2019, the number of authorized shares under the 2007 Plan was 132.2 million, including 6.1 million shares automatically added to the share reserve pursuant to anti-dilution provisions of the 2007 Plan triggered by payment of the Special Dividend (the "Anti-Dilution Adjustment"). The number of shares underlying outstanding equity awards that VMware assumes in the course of business acquisitions are also added to the 2007 Plan reserve on an as-converted basis. VMware has assumed 6.5 million shares, which accordingly have been added to authorized shares under the 2007 Plan reserve.

Awards under the 2007 Plan may be in the form of stock-based awards, such as restricted stock units, or stock options. VMware's Compensation and Corporate Governance Committee determines the vesting schedule for all equity awards. Generally, restricted stock grants made under the 2007 Plan have a three- to four-year period over which they vest and vest 25% the first year and semi-annually thereafter. The per share exercise price for a stock option awarded under the 2007 Plan shall not be less than 100% of the per share fair market value of VMware Class A common stock on the date of grant. Most options granted under the 2007 Plan vest 25% after the first year and monthly thereafter over the following three years and expire between six and seven years from the date of grant. VMware utilizes both authorized and unissued shares to satisfy all shares issued under the 2007 Plan. As of February 1, 2019, there was an aggregate of 11.8 million shares of common stock available for issuance pursuant to future grants under the 2007 Plan, including 2.5 million shares included in the Anti-Dilution Adjustment.

VMware Stock Repurchases

VMware purchases stock from time to time in open market transactions, subject to market conditions. The timing of any repurchases and the actual number of shares repurchased will depend on a variety of factors, including VMware's stock price, cash requirements for operations and business combinations, corporate, legal and regulatory requirements and other market and economic conditions. VMware is not obligated to purchase any shares under its stock repurchase programs. Purchases can be discontinued at any time VMware believes additional purchases are not warranted. From time to time, VMware also purchases stock in private transactions, such as those with Dell. All shares repurchased under VMware's stock repurchase programs are retired.

During August 2017, VMware's board of directors authorized the repurchase of up to \$1,000 million of Class A common stock through August 31, 2018. On July 1, 2018, VMware's board of directors extended authorization of the existing stock repurchase program through August 31, 2019. As of February 1, 2019, the cumulative authorized amount remaining for stock repurchases was \$834 million.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The following table summarizes stock repurchase authorizations approved by VMware's board of directors, which were open or completed during the years ended February 1, 2019, February 2, 2018 and December 31, 2016 (amounts in table in millions):

Announcement Date	Amount Authorized	Expiration Date	Status
August 14, 2017	\$1,000	August 31, 2019	Open
January 26, 2017	1,200	February 2, 2018	Completed in fiscal 2018
April 18, 2016	1,200	December 31, 2016	Completed in fiscal 2016
January 27, 2015	1,000	December 31, 2017	Completed in fiscal 2016

The following table summarizes stock repurchase activity, including shares purchased from Dell, during the periods presented (aggregate purchase price in millions, shares in thousands):

	For the Year Ended		
	February 1, 2019	February 2, 2018	December 31, 2016
Aggregate purchase price ⁽¹⁾	\$ 42	\$ 1,449	\$ 1,575
Class A common shares repurchased	286	13,977	21,281
Weighted-average price per share	\$ 148.07	\$ 103.66	\$ 73.99

⁽¹⁾The aggregate purchase price of repurchased shares is classified as a reduction to additional paid-in capital.

There were no repurchases of VMware's Class A common stock during the Transition Period.

VMware Restricted Stock

VMware's restricted stock primarily consists of RSU awards, which have been granted to employees. The value of an RSU grant is based on VMware's stock price on the date of grant. The shares underlying the RSU awards are not issued until the RSUs vest. Upon vesting, each RSU converts into one share of VMware's Class A common stock.

VMware's restricted stock also includes PSU awards, which have been granted to certain VMware executives and employees. The PSU awards include performance conditions and, in certain cases, a time-based or market-based vesting component. Upon vesting, PSU awards convert into VMware's Class A common stock at various ratios ranging from 0.5 to 2.0 shares per PSU, depending upon the degree of achievement of the performance or market-based target designated by each award. If minimum performance thresholds are not achieved, then no shares are issued.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The following table summarizes restricted stock activity since January 1, 2016 (units in thousands):

	Number of Units	Weighted-Average Grant Date Fair Value (per unit)
Outstanding, January 1, 2016	18,693	\$ 77.29
Granted	12,742	60.90
Vested	(7,188)	77.18
Forfeited	(3,381)	75.93
Outstanding, December 31, 2016	20,866	67.54
Vested	(256)	77.07
Forfeited	(159)	68.11
Outstanding, February 3, 2017	20,451	67.41
Granted	7,838	93.84
Vested	(9,070)	67.89
Forfeited	(1,859)	72.68
Outstanding, February 2, 2018	17,360	78.62
Granted	6,663	146.61
Special Dividend adjustment	3,236	n/a
Vested	(7,370)	75.45
Forfeited	(1,674)	86.90
Outstanding, February 1, 2019 ⁽¹⁾	18,215	90.06

⁽¹⁾ The weighted-average grant date fair value of outstanding RSU awards as of February 1, 2019 reflects the adjustments to the awards as a result of the Special Dividend.

As of February 1, 2019, the 18.2 million units outstanding included 17.1 million of RSUs and 1.1 million of PSUs. The above table includes RSUs issued for outstanding unvested RSUs in connection with business combinations.

Restricted stock that is expected to vest as of February 1, 2019 was as follows (units in thousands, aggregate intrinsic value in millions):

	Number of Units	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value ⁽¹⁾
Expected to vest	16,196	2.30	\$ 2,438

⁽¹⁾The aggregate intrinsic value represents the total pre-tax intrinsic values based on VMware's closing stock price of \$150.51 as of February 1, 2019, which would have been received by the RSU holders had the RSUs been issued as of February 1, 2019.

The aggregate vesting date fair value of VMware's restricted stock that vested during the years ended February 1, 2019, February 2, 2018 and December 31, 2016 and the Transition Period was \$1,061 million, \$946 million, \$468 million and \$21 million, respectively. As of February 1, 2019, restricted stock representing 18.2 million shares of VMware's Class A common stock were outstanding, with an aggregate intrinsic value of \$2,742 million based on VMware's closing stock price as of February 1, 2019.

VMware Employee Stock Purchase Plan

In June 2007, VMware adopted its 2007 Employee Stock Purchase Plan (the "ESPP"), which is intended to be qualified under Section 423 of the Internal Revenue Code. As of February 1, 2019, the number of authorized shares under the ESPP was a total of 23.3 million shares. Under the ESPP, eligible VMware employees are granted options to purchase shares at the lower of 85% of the fair market value of the stock at the time of grant or 85% of the fair market value at the time of exercise. The option period is generally twelve months and includes two embedded six-month option periods. Options are exercised at the end of each embedded option period. If the fair market value of the stock is lower on the first day of the second embedded

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option period than it was at the time of grant, then the twelve-month option period expires and each enrolled participant is granted a new twelve-month option. As of February 1, 2019, 6.8 million shares of VMware Class A common stock were available for issuance under the ESPP.

The following table summarizes ESPP activity during the periods presented (cash proceeds in millions, shares in thousands):

	For the Year Ended			Transition Period
	February 1,	February 2,	December 31,	January 1 to
	2019	2018	2016	February 3, 2017
Cash proceeds	\$ 161	\$ 65	\$ 103	\$ 60
Class A common shares purchased	1,895	903	2,657	1,468
Weighted-average price per share	\$ 84.95	\$ 72.40	\$ 38.78	\$ 40.65

As of February 1, 2019, \$79 million of ESPP withholdings were recorded as a liability in accrued expenses and other on the consolidated balance sheets for the purchase that occurred on February 28, 2019.

VMware Stock Options

The following table summarizes stock option activity since January 1, 2016 (shares in thousands):

	VMware Stock Options		EMC Stock Options	
	Number of Shares	Weighted-Average Exercise Price (per share)	Number of Shares	Weighted-Average Exercise Price (per share)
Outstanding, January 1, 2016	3,164	\$ 64.56	1,063	\$ 16.54
Options relating to employees transferred (to) from EMC	—	—	19	15.90
Granted	66	6.53	—	—
Forfeited	(259)	77.42	—	—
Expired	(476)	80.52	(17)	14.44
Exercised	(418)	13.41	(1,065)	16.56
Outstanding, December 31, 2016	2,077	67.75	—	—
Forfeited	(9)	79.45	—	—
Exercised	(77)	23.72	—	—
Outstanding, February 3, 2017	1,991	69.38	—	—
Granted	745	13.79	—	—
Forfeited	(36)	55.44	—	—
Expired	(3)	93.87	—	—
Exercised	(1,050)	53.50	—	—
Outstanding, February 2, 2018	1,647	54.63	—	—
Granted	574	16.07	—	—
Special Dividend adjustment	348	n/a	—	—
Forfeited	(31)	24.44	—	—
Exercised	(569)	46.73	—	—
Outstanding, February 1, 2019 ⁽¹⁾	1,969	36.50	—	—

⁽¹⁾ The weighted-average exercise price of options outstanding as of February 1, 2019 reflects the adjustments to the options as a result of the Special Dividend.

The above table includes stock options granted in conjunction with unvested stock options assumed in business combinations. As a result, the weighted-average exercise price per share may vary from the VMware stock price at time of grant.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

The stock options outstanding as of February 1, 2019 had an aggregate intrinsic value of \$224 million based on VMware's closing stock price as of February 1, 2019.

Options outstanding that are exercisable and that have vested and are expected to vest as of February 1, 2019 were as follows (outstanding options in thousands, aggregate intrinsic value in millions):

VMware Stock Options					
	Outstanding Options	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term (in years)		Aggregate Intrinsic Value ⁽¹⁾
Exercisable	1,084	\$ 55.49	3.15	\$	103
Vested and expected to vest	1,969	36.50	5.55		224

⁽¹⁾The aggregate intrinsic values represent the total pre-tax intrinsic values based on VMware's closing stock price of \$150.51 as of February 1, 2019, which would have been received by the option holders had all in-the-money options been exercised as of that date.

The total fair value of VMware stock options that vested during the years ended February 1, 2019, February 2, 2018 and December 31, 2016 was \$35 million, \$32 million, \$29 million, respectively, and was not material during the Transition Period.

The options exercised during the years ended February 1, 2019, February 2, 2018 and December 31, 2016 had a pre-tax intrinsic value of \$56 million, \$62 million, and \$22 million, respectively, and was not material during the Transition Period.

The pre-tax intrinsic value of EMC stock options held by VMware employees that were exercised during the year ended December 31, 2016 was \$13 million.

VMware Shares Repurchased for Tax Withholdings

During the years ended February 1, 2019, February 2, 2018 and December 31, 2016, VMware repurchased 2.6 million, 3.3 million, 2.6 million, respectively, of Class A common stock, for \$373 million, \$348 million, \$167 million, respectively, to cover tax withholding obligations in connection with such equity awards. Shares repurchased to cover tax withholding obligations during the Transition Period were not material. These amounts may differ from the amounts of cash remitted for tax withholding obligations on the consolidated statements of cash flows due to the timing of payments. Pursuant to the respective award agreements, these shares were withheld in conjunction with the net share settlement upon the vesting of restricted stock and restricted stock units (including PSUs) during the period. The value of the withheld shares, including restricted stock units, was classified as a reduction to additional paid-in capital.

Net excess tax benefits

VMware adopted ASU 2016-09, Compensation—Stock Compensation (Topic 718), on a prospective basis, effective February 4, 2017. Net excess tax benefits recognized in connection with stock-based awards are included in income tax provision on the consolidated statements of income (loss). Net excess tax benefits recognized were \$103 million and \$106 million during the years ended February 1, 2019 and February 2, 2018, respectively.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Stock-Based Compensation

The following table summarizes the components of total stock-based compensation included in VMware's consolidated statements of income (loss) during the periods presented (table in millions):

	For the Year Ended			Transition Period
	February 1, 2019	February 2, 2018	December 31, 2016	January 1 to February 3, 2017
Cost of license revenue	\$ 1	\$ 2	\$ 2	\$ —
Cost of services revenue	51	50	52	5
Research and development	371	355	305	31
Sales and marketing	203	197	195	19
General and administrative	105	79	82	7
Stock-based compensation	731	683	636	62
Income tax benefit	(228)	(232)	(183)	(19)
Total stock-based compensation, net of tax	\$ 503	\$ 451	\$ 453	\$ 43

As of February 1, 2019, the total unrecognized compensation cost for stock options and restricted stock was \$1,294 million and will be recognized through fiscal 2023 with a weighted-average remaining period of 1.5 years. Stock-based compensation related to VMware equity awards held by VMware employees is recognized on VMware's consolidated statements of income (loss) over the awards' requisite service periods.

Fair Value of VMware Options

The fair value of each option to acquire VMware Class A common stock granted during the periods presented was estimated on the date of grant using the Black-Scholes option-pricing model with the following weighted-average assumptions:

	For the Year Ended		
	February 1, 2019	February 2, 2018	December 31, 2016
VMware Stock Options			
Dividend yield	None	None	None
Expected volatility	31.9%	29.1%	31.9%
Risk-free interest rate	2.9%	1.7%	0.9%
Expected term (in years)	3.2	3.3	3.1
Weighted-average fair value at grant date	\$ 143.01	\$ 83.62	\$ 49.64

	For the Year Ended			Transition Period
	February 1, 2019	February 2, 2018	December 31, 2016	January 1 to February 3, 2017
VMware Employee Stock Purchase Plan				
Dividend yield	None	None	None	None
Expected volatility	33.5%	22.6%	38.3%	25.0%
Risk-free interest rate	2.0%	1.2%	0.5%	0.8%
Expected term (in years)	0.8	0.9	0.7	0.8
Weighted-average fair value at grant date	\$ 34.72	\$ 21.93	\$ 13.57	\$ 21.18

There were no options to acquire VMware Class A common stock granted during the Transition Period.

The weighted-average grant date fair value of VMware stock options can fluctuate from period to period primarily due to higher valued options assumed through business combinations with exercise prices lower than the fair market value of VMware's stock on the date of grant.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

For equity awards granted during the years ended February 1, 2019, February 2, 2018 and December 31, 2016, volatility was based on an analysis of historical stock prices and implied volatilities of VMware's Class A common stock. The expected term is based on historical exercise patterns and post-vesting termination behavior, the term of the option period for grants made under the ESPP, or the weighted-average remaining term for options assumed in acquisitions. VMware's expected dividend yield input was zero as the Company has not historically paid, nor expects in the future to pay, regular dividends on its common stock. The risk-free interest rate was based on a U.S. Treasury instrument whose term is consistent with the expected term of the stock options.

Accumulated Other Comprehensive Income (Loss)

The changes in components of accumulated other comprehensive income (loss) during the periods presented were as follows (tables in millions):

	Unrealized Gain (Loss) on Available-for-Sale Securities	Unrealized Gain (Loss) on Forward Contracts	Total
Balance, February 3, 2017	\$ (6)	\$ 2	\$ (4)
Unrealized gains (losses), net of tax provision (benefit) of (\$5), \$— and (\$5)	(12)	1	(11)
Amounts reclassified from accumulated other comprehensive income (loss) to the consolidated statements of income (loss), net of tax (provision) benefit of \$2, \$— and \$2	3	(3)	—
Other comprehensive income (loss), net	(9)	(2)	(11)
Balance, February 2, 2018	(15)	—	(15)
Adjustments related to adoption of ASU 2016-01 and 2018-02	(15)	—	(15)
Unrealized gains (losses), net of tax (benefit) of \$—, \$—, and \$—	—	2	2
Amounts reclassified from accumulated other comprehensive income (loss) to the consolidated statements of income (loss), net of tax (provision) benefit of \$10, \$— and \$10	31	(1)	30
Other comprehensive income (loss), net	31	1	32
Balance, February 1, 2019	<u>\$ 1</u>	<u>\$ 1</u>	<u>\$ 2</u>

Unrealized gains and losses on VMware's available-for-sale securities are reclassified to investment income on the consolidated statements of income (loss) in the period that such gains and losses are realized.

The effective portion of gains or losses resulting from changes in the fair value of forward contracts designated as cash flow hedging instruments is reclassified to its related operating expense line item on the consolidated statements of income (loss) in the same period that the underlying expenses are incurred. The amounts recorded to their related operating expense functional line items on the consolidated statements of income (loss) were not significant to the individual functional line items during the periods presented.

Effective February 3, 2018, VMware adopted ASU 2016-16, Income Taxes: Intra-Entity Transfers of Assets Other Than Inventory (Topic 740), on a modified retrospective basis. The standard requires entities to recognize at the transaction date the income tax consequences of intra-entity asset transfers. VMware recorded a cumulative-effect adjustment of \$27 million to retained earnings on the consolidated balance sheets as of the beginning of the period of adoption. Subsequent to the adoption, any transfers of intellectual property between VMware's legal entities will be recorded on the consolidated statements of income (loss) in the period that the transfer occurs.

Effective February 3, 2018, VMware early adopted ASU 2018-02, Income Statement-Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income, which allows companies to reclassify stranded tax effects resulting from the 2017 Tax Act from accumulated other comprehensive income (loss) to retained earnings. VMware elected to reclassify income tax effects due to the 2017 Tax Act from accumulated other comprehensive income (loss) to retained earnings on the consolidated balance sheets in the period of adoption. The impact of the reclassification of stranded tax effects was not significant.

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

Q. Segment Information

VMware operates in one reportable operating segment, thus all required financial segment information is included in the consolidated financial statements. Operating segments are defined as components of an enterprise for which separate financial information is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and assessing performance. VMware's chief operating decision maker allocates resources and assesses performance based upon discrete financial information at the consolidated level.

Revenue by type during the periods presented was as follows (table in millions):

	For the Year Ended			Transition Period
	February 1, 2019	February 2, 2018	December 31, 2016	January 1 to February 3, 2017
Revenue:				
License	\$ 3,788	\$ 3,200	\$ 2,799	\$ 134
Services:				
Software maintenance	4,506	4,032	3,722	353
Professional services	680	630	552	25
Total services	5,186	4,662	4,274	378
Total revenue ⁽¹⁾	\$ 8,974	\$ 7,862	\$ 7,073	\$ 512

⁽¹⁾Includes revenue derived from VMware's Hybrid Cloud Computing subscription and SaaS offerings, which was \$922 million, \$704 million, \$583 million and \$75 million during the years ended February 1, 2019, February 2, 2018 and December 31, 2016 and the Transition Period, respectively. Revenue from Hybrid Cloud Computing offerings consisted primarily of VCPP revenue.

Revenue by geographic area during the periods presented was as follows (table in millions):

	For the Year Ended			Transition Period
	February 1, 2019	February 2, 2018	December 31, 2016	January 1 to February 3, 2017
United States	\$ 4,205	\$ 3,834	\$ 3,538	\$ 250
International	4,769	4,028	3,535	262
Total	\$ 8,974	\$ 7,862	\$ 7,073	\$ 512

Revenue by geographic area is based on the ship-to addresses of VMware's customers. No individual country other than the U.S. accounted for 10% or more of revenue during the years ended February 1, 2019, February 2, 2018, December 31, 2016 and the Transition Period.

Long-lived assets by geographic area, which primarily include property and equipment, net, as of the periods presented were as follows (table in millions):

	February 1, 2019	February 2, 2018
United States	\$ 831	\$ 784
International	106	117
Total	\$ 937	\$ 901

No individual country other than the U.S. accounted for 10% or more of these assets as of February 1, 2019 and February 2, 2018.

VMware's product and service solutions are organized into three main product groups:

- Software-Defined Data Center
- Hybrid Cloud Computing
- End-User Computing

VMware, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

VMware develops and markets product and service offerings within each of these three product groups. Additionally, synergies are leveraged across these three product areas. VMware's products and service solutions from each of its product groups may also be bundled as part of an enterprise agreement arrangement or packaged together and sold as a suite. Accordingly, it is not practicable to determine revenue by each of the three product groups described above.

R. Transition Period

Comparable Financial Information

In conjunction with VMware's change in fiscal year end, the Company had a Transition Period of 34 days that began on January 1, 2017 and ended on February 3, 2017. The most comparable prior-year period, the one month ended January 31, 2016, had a duration of 31 days.

The following table presents certain financial information during the periods presented (table in millions, except per share amounts and shares in thousands):

	Transition Period January 1 to February 3, 2017	Comparable Period January 1 to January 31, 2016 (Unaudited)
Total revenue	\$ 512	\$ 469
Operating income (loss)	(42)	25
Income tax provision (benefit)	(30)	5
Net income (loss)	(5)	24
Net income (loss) per weighted-average share, basic for Classes A and B	\$ (0.01)	\$ 0.05
Net income (loss) per weighted-average share, diluted for Classes A and B	\$ (0.01)	\$ 0.05
Weighted-average shares, basic for Classes A and B	408,625	422,067
Weighted-average shares, diluted for Classes A and B ⁽¹⁾	408,625	423,092

⁽¹⁾During the Transition Period, VMware incurred a net loss. As a result, all potentially dilutive securities were anti-dilutive and excluded from the computation of diluted net loss per share.

S. Selected Quarterly Financial Data (unaudited)

Quarterly financial data for fiscal 2019 and 2018 were as follows (tables in millions, except per share amounts):

Fiscal 2019	Q1 2019	Q2 2019	Q3 2019	Q4 2019
Total Revenue	\$ 2,008	\$ 2,174	\$ 2,200	\$ 2,591
Net income	942	664	334	502
Net income per share, basic	\$ 2.33	\$ 1.58	\$ 0.82	\$ 1.22
Net income per share, diluted	\$ 2.29	\$ 1.56	\$ 0.81	\$ 1.21
Fiscal 2018	Q1 2018	Q2 2018	Q3 2018	Q4 2018
Total Revenue	\$ 1,765	\$ 1,932	\$ 1,938	\$ 2,226
Net income (loss)	245	406	395	(387)
Net income (loss) per share, basic	\$ 0.60	\$ 0.99	\$ 0.97	\$ (0.96)
Net income (loss) per share, diluted	\$ 0.59	\$ 0.98	\$ 0.96	\$ (0.96)

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We carried out an evaluation required by the Securities Exchange Act of 1934, amended (the “Exchange Act”), under the supervision and with the participation of our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rule 13a-15(e) of the Exchange Act, as of the end of the period covered by this report. Based on this evaluation, our principal executive officer and principal financial officer concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission’s rules and forms and to provide reasonable assurance that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosures.

Management’s Annual Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) of the Exchange Act. Management has assessed the effectiveness of our internal control over financial reporting as of February 1, 2019 based on criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. As a result of this assessment, management concluded that, as of February 1, 2019, our internal control over financial reporting was effective in providing reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. The effectiveness of our internal control over financial reporting as of February 1, 2019 has been audited by PricewaterhouseCoopers, LLP, an independent registered public accounting firm, as stated in their report which appears in Item 8 of this Annual Report on Form 10-K.

Changes in Internal Controls Over Financial Reporting

There were no changes in our internal control over financial reporting during the most recent fiscal quarter ended February 1, 2019 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Controls

Our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving their objectives as specified above. Our management, including our principal executive officer and principal financial officer, conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Management does not expect, however, that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and fraud. Any control system, no matter how well designed and operated, is based upon certain assumptions and can provide only reasonable, not absolute, assurance that its objectives will be met. Further, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within the Company have been detected.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

We will furnish to the Securities and Exchange Commission a definitive Proxy Statement no later than 120 days after the close of the fiscal year ended February 1, 2019. The information required by this item is incorporated herein by reference to the Proxy Statement. Also see “Executive Officers of the Registrant” in Part I of this Annual Report on Form 10-K.

We have a code of ethics that applies to all of our employees, including our executive officers. Our Business Conduct Guidelines (available on our website) satisfy the requirements set forth in Item 406 of Regulation S-K and apply to all relevant persons set forth therein. We intend to disclose on our website at www.vmware.com amendments to, and, if applicable, waivers of, our code of ethics.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated herein by reference to the section of the Company’s Proxy Statement entitled “Compensation of Executive Officers.”

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT, AND RELATED STOCKHOLDER MATTERS

The information required by this item is incorporated herein by reference to the section of the Company’s Proxy Statement entitled “Security Ownership of Certain Beneficial Owners and Management.”

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated herein by reference to the section of the Company’s Proxy Statement entitled “Our Board of Directors and Nominees” and “Transactions with Related Persons.”

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item is incorporated herein by reference to the section of the Company’s Proxy Statement entitled “Ratification of Selection of Independent Auditor.”

PART IV**ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES**

The following documents are filed as a part of this Annual Report on Form 10-K:

1. *Financial Statements* : The information relating to our financial statements, and Report of Independent Registered Public Accounting Firm required by this Item is filed as part of this Annual Report on Form 10-K in Item 8, entitled “Financial Statements and Supplementary Data.”
2. *Financial Statement Schedule* : Schedule II Valuation and Qualifying Accounts is filed as part of this Annual Report on Form 10-K and should be read in conjunction with the Consolidated Financial Statements and Notes thereto.
3. *Exhibits*: The exhibits listed below are filed or incorporated by reference as part of this Annual Report on Form 10-K.

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
3.1	Amended and Restated Certificate of Incorporation	10-Q	001-33622	3.1	6/9/17
3.2	Amended and Restated Bylaws	8-K	001-33622	3.1	2/23/17
4.1	Form of Specimen Common Stock Certificate	S-1/A-4	333-142368	4.1	7/27/07
4.2	Indenture by and between VMware and The Bank of New York Mellon Trust Company, N.A., as trustee, dated August 21, 2017	8-K	001-33622	4.1	8/21/17
4.3	First Supplemental Indenture by and between VMware and The Bank of New York Mellon Trust Company, N.A., as trustee, dated August 21, 2017	8-K	001-33622	4.2	8/21/17
4.4	Second Supplemental Indenture by and between VMware and The Bank of New York Mellon Trust Company, N.A., as trustee, dated August 21, 2017	8-K	001-33622	4.3	8/21/17
4.5	Third Supplemental Indenture by and between VMware and The Bank of New York Mellon Trust Company, N.A., as trustee, dated August 21, 2017	8-K	001-33622	4.4	8/21/17
10.1	Amended and Restated Master Transaction Agreement between VMware, Inc., Dell Technologies Inc. and EMC Corporation dated January 9, 2018	10-K	001-33622	10.1	3/29/18
10.2*	Second Amended and Restated Administrative Services Agreement between VMware, Inc., Dell Technologies Inc. and EMC Corporation dated January 18, 2019				
10.3	Amended and Restated Tax Sharing Agreement between VMware, Inc. and Dell Technologies Inc. effective as of September 6, 2016	10-Q	001-33622	10.32	11/7/16
10.4	Form of Intellectual Property Agreement between VMware, Inc. and EMC Corporation	S-1/A-1	333-142368	10.4	6/11/07
10.5	Amended and Restated Real Estate License Agreement between VMware, Inc. and EMC Corporation dated September 21, 2015	10-Q	001-33622	10.5	11/9/15
10.6*+	2007 Equity and Incentive Plan, as amended and restated March 12, 2019				
10.7+	Form of Indemnification Agreement for VMware, Inc. Directors and Executive Officers, as approved April 5, 2017	10-Q	001-33622	10.7	6/9/17
10.8	Amended and Restated Insurance Matters Agreement between VMware, Inc., Dell Technologies Inc. and EMC Corporation dated January 9, 2018	10-K	001-33622	10.8	3/29/18
10.9+	Form of Stock Option Agreement, as amended May 13, 2015	10-Q	001-33622	10.9	8/5/15
10.10+	Form of Restricted Stock Unit Agreement, as amended June 2017	10-Q	001-33622	10.10	9/7/17
10.11+	2007 Employee Stock Purchase Plan, as amended and restated June 8, 2017	10-Q	001-33622	10.11	6/9/17
10.12+	Executive Bonus Program, as amended and restated April 16, 2018	10-Q	001-33622	10.12	6/11/18

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
10.13	Agreement of Purchase and Sale between Roche Palo Alto LLC and VMware, Inc. dated March 16, 2011	10-Q	001-33622	10.24	8/3/11
10.14	Amended and Restated Ground Lease between VMware, Inc. and the Board of Trustees of the Leland Stanford Junior University dated June 13, 2011 (3431 Hillview Campus)	10-Q	001-33622	10.25	8/3/11
10.15	Ground Lease between 3401 Hillview LLC. and the Board of Trustees of the Leland Stanford Junior University dated as of February 2, 2006	10-Q	001-33622	10.26	8/3/11
10.16+	Form of Performance Stock Unit Agreement, as amended June 2017	10-Q	001-33622	10.16	9/7/17
10.17+	Non-Qualified Deferred Compensation Plan, effective as of January 1, 2014	10-K	001-33622	10.26	2/25/14
10.18+	Non-Qualified Deferred Compensation Plan Adoption Agreement, amended and restated as of January 1, 2018	10-Q	001-33622	10.18	12/10/18
10.19+	Letter Agreement between VMware, Inc. and Sanjay Poonen effective as of October 26, 2016	10-K	001-33622	10.19	2/24/17
10.20	Third Amendment to Ground Lease by and between the Board of Trustees of the Leland Stanford Junior University and 3401 Hillview LLC dated as of January 1, 2014	10-Q	001-33622	10.30	5/1/14
10.21	Promissory Note for \$270 million due and payable on December 1, 2022, issued to EMC Corporation dated January 31, 2014	10-Q	001-33622	10.34	5/1/14
10.22+	Change in Control Retention Plan, as amended and restated September 14, 2018	10-Q	001-33622	10.22	12/10/18
10.23+	Letter Agreement between VMware, Inc. and Maurizio Carli effective as of May 1, 2018	10-Q	001-33622	10.23	6/11/18
10.24+	Form of Restricted Stock Unit Agreement for U.K. Participants, as amended June 2017	10-Q	001-33622	10.30	9/7/17
10.25+	Letter Agreement between VMware, Inc. and Raghu Raghuram effective as of October 26, 2016	10-K	001-33622	10.32	2/24/17
10.26+	Letter Agreement between VMware, Inc. and Rajiv Ramaswami effective as of October 26, 2016	10-K	001-33622	10.33	2/24/17
10.27	Stock Purchase Agreement, dated as of March 29, 2017, by and among Dell Technologies Inc., EMC Equity Assets LLC and VMware, Inc.	8-K	001-33622	10.1	3/30/17
10.28+	Form of Performance Stock Unit Agreement for Non-U.S. Participants	10-Q	001-33622	10.34	9/7/17
10.29	Governance Letter Agreement, dated as of July 1, 2018, by and between VMware, Inc. and Dell Technologies Inc.	8-K	001-33622	10.1	7/2/18
10.30+	Executive Severance Plan, adopted September 14, 2018	8-K	001-33622	99.1	9/18/18
10.31	Waiver dated as of November 14, 2018, by and between VMware, Inc. and Dell Technologies	8-K	001-33622	10.1	11/15/18
21*	List of subsidiaries				
23*	Consent of PricewaterhouseCoopers LLP				
31.1*	Certification of Principal Executive Officer required by Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				
31.2*	Certification of Principal Financial Officer required by Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
32.1†	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002				
32.2†	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002				
101.INS*	XBRL Instance Document				
101.SCH*	XBRL Taxonomy Extension Schema				
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase				
101.DEF*	XBRL Taxonomy Extension Definition Linkbase				
101.LAB*	XBRL Taxonomy Extension Label Linkbase				
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase				

+ Indicates management contract or compensatory plan or arrangement

* Filed herewith

† Furnished herewith

ITEM 16. FORM 10-K SUMMARY

Not applicable.

VMWARE, INC.
SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS
(in millions)

Tax Valuation Allowance	Balance at Beginning of Period	Tax Valuation Allowance Charged to Income Tax Provision	Tax Valuation Allowance Credited to Income Tax Provision	Balance at End of Period
Year ended February 1, 2019 income tax valuation allowance	\$ 200	\$ 56	\$ (27)	\$ 229
Year ended February 2, 2018 income tax valuation allowance	161	68	(29)	200
Transition Period from January 1, 2017 to February 3, 2017 income tax valuation allowance	166	1	(6)	161
Year ended December 31, 2016 income tax valuation allowance	144	31	(9)	166

**SECOND AMENDED AND RESTATED
ADMINISTRATIVE SERVICES AGREEMENT**

dated as of January 18, 2019

among

EMC CORPORATION,

DELL TECHNOLOGIES INC.

and

VMWARE, INC.

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**SECOND AMENDED AND RESTATED
ADMINISTRATIVE SERVICES AGREEMENT**

This Second Amended and Restated Administrative Services Agreement is dated as of January 18, 2019 by and among VMware, Inc., a Delaware corporation (“**VMware**”), EMC Corporation, a Massachusetts corporation (“**EMC**”), and Dell Technologies Inc., a Delaware corporation and EMC’s parent company (“**Dell Technologies**”). Capitalized terms used herein and not otherwise defined shall have the meanings ascribed to them in Article I hereof.

RECITALS

WHEREAS, EMC directly or indirectly provided various services to the VMware Entities (as defined below) under the terms of the Administrative Services Agreement dated as of August 17, 2007 (the “**Original Agreement**”);

WHEREAS, Dell Technologies acquired 100% of the capital stock of EMC upon the closing of the Agreement and Plan of Merger dated as of October 12, 2015 among EMC, Dell Technologies and certain other parties;

WHEREAS, VMware EMC amended and restated the Original Agreement and added Dell Technologies as a Party in that certain Amended & Restated Administrative Services Agreement dated as of January 9, 2018 (the “**Amended and Restated Agreement**”); and

WHEREAS, the Parties desire to amend certain provisions in the Amended and Restated Agreement as set forth herein.

The Parties therefore amend and restate the Amended and Restated Agreement to read in its entirety as follows:

**ARTICLE I
DEFINITIONS**

Section 1.01 Definitions. As used in this Agreement, the following terms shall have the following meanings, applicable both to the singular and the plural forms of the terms described:

“**Agreement**” means this Administrative Services Agreement, as the same may be amended and supplemented from time to time in accordance with the provisions hereof.

“**Dell Technologies Employee**” means an employee of a Dell Technologies Entity that provides Services.

“**Dell Technologies Entity**” means Dell Technologies or one of its Subsidiaries (including entities that become a Subsidiary of Dell Technologies after the date hereof but excluding the VMware Entities).

“**Insurance Matters Agreement**” means the Amended and Restated Insurance Matters Agreement between the Parties of even date herewith.

“ **Intellectual Property Agreement** ” means the Intellectual Property Agreement between EMC and VMware dated August 13, 2007, as it may be amended from time to time.

“ **Master Transaction Agreement** ” means the Amended and Restated Master Transaction Agreement between the Parties of even date herewith.

“ **Overseas Entity Services** ” means various administrative, financial, legal, tax and other services provided by a Dell Technologies Entity to or on behalf of the VMware Entities with respect to countries where VMware does not have an existing legal entity or branch office including services provided pursuant to a Marketing Services Agreement between a VMware Entity and a Dell Technologies Entity.

“ **Party** ” means Dell Technologies and EMC, together, on the one hand, or VMware, on the other hand, and “ **Parties** ” means Dell Technologies, EMC and VMware collectively.

“ **Person** ” means any individual, partnership, limited liability company, joint venture, corporation, trust, unincorporated organization, government (including any department or agency thereof) or other entity.

“ **Real Estate License Agreement** ” means the Amended and Restated Real Estate License Agreement between VMware and EMC dated September 21, 2015, as it may be amended from time to time.

“ **Services** ” means various services provided by a Dell Technologies Entity to or on behalf of the VMware Entities pursuant to this Agreement, including without limitation Overseas Entity Services.

“ **Subsidiary** ” means, as to any Person, a corporation, limited liability company, joint venture, partnership, trust, association or other entity in which such Person: (1) beneficially owns, either directly or indirectly, more than fifty percent (50%) of (A) the total combined voting power of all classes of voting securities of such entity, (B) the total combined equity interests, or (C) the capital or profits interest, in the case of a partnership; or (2) otherwise has the power to vote, either directly or indirectly, sufficient securities to elect a majority of the board of directors or similar governing body.

“ **Tax Sharing Agreement** ” means the Amended and Restated Tax Sharing Agreement by and among the Parties dated September 6, 2016.

“ **VMware Entity** ” means VMware or one of its Subsidiaries (including entities that become a Subsidiary of VMware after the date hereof).

Section 1.02 Internal References. Unless the context indicates otherwise, references to Articles, Sections and paragraphs shall refer to the corresponding articles, sections and paragraphs in this Agreement and references to the parties shall mean the parties to this Agreement.

**ARTICLE II
PURCHASE AND SALE OF SERVICES**

Section 2.01 Purchase and Sale of Overseas Entity Services.

(a) Subject to the terms and conditions of this Agreement and in consideration of the costs for Services described below, Dell Technologies agrees to provide or cause to be provided to the VMware Entities, and VMware agrees to purchase from Dell Technologies, the Overseas Entity Services, until such Overseas Entity Services are terminated in accordance with the provisions hereof.

(b) Dell Technologies may satisfy its obligation to provide or to procure the Services hereunder by causing one or more of its Subsidiaries to provide or to procure such services. With respect to the Overseas Entity Services provided to, or procured on behalf of, any Subsidiary of VMware, VMware agrees to pay on behalf of such Subsidiary all amounts payable by or in respect of such Overseas Entity Services pursuant to this Agreement.

Section 2.02 Additional Services. In addition to the Overseas Entity Services to be provided or procured by Dell Technologies in accordance with Section 2.01, if requested by a Party, and to the extent that Dell Technologies and VMware may mutually agree in writing, Dell Technologies or VMware shall provide additional Services to the other Party. The scope of any such additional Services, as well as the costs and other terms and conditions applicable to such services, shall be as mutually agreed by Dell Technologies and VMware prior to the provision of such Services.

Section 2.03 Dell Technologies Employees. Dell Technologies Employees providing Services pursuant to this Agreement shall be subject to applicable Dell Technologies terms and conditions of employment, including without limitation Dell Technologies' Code of Conduct. Where necessary or appropriate, Services will be provided pursuant to a local intercompany agreement between a VMware Entity and a Dell Technologies Entity.

**ARTICLE III
SERVICE COSTS; OTHER CHARGES**

Section 3.01 Service Costs.

(a) Each Overseas Entity Service will be provided at the price per Dell Technologies Employee calculated based on the fully-burdened compensatory cost for each such Dell Technologies Employee calculated as a percentage of such Dell Technologies Employee's time spent on VMware matters plus any mark-up required by applicable transfer pricing laws, regulations or rules. For purposes of this Agreement, "**fully-burdened compensatory cost**" means the total cost of employment compensation to Dell Technologies with respect to each Dell Technologies Employee, including such individual's salary, bonus, equity and other compensation and employment-related insurance, benefits and taxes.

(b) Any additional Services provided by Dell Technologies to VMware or by VMware to Dell Technologies shall be provided at rates mutually agreed to by the parties in writing.

Section 3.02 Payment.

(a) Charges for Services shall be paid in any manner mutually agreed to by Dell Technologies and VMware.

(b) During the term of this Agreement, each Party shall keep such books, records and accounts as are reasonably necessary to verify the calculation of the fees and related expenses for Services provided hereunder. Each Party shall provide documentation supporting any amounts invoiced pursuant to this Section 3.02 as the other Party may from time to time reasonably request. Each Party shall have the right to review such books, records and accounts at any time upon reasonable notice, and each Party agrees to conduct any such review in a manner so as not to unreasonably interfere with the other Party's normal business operations.

Section 3.03 Financial Responsibility for Dell Technologies Personnel. Dell Technologies will pay for all personnel and other related expenses, including salary or wages, of its employees performing the Overseas Entity Services, except that VMware may elect, in its sole discretion, to grant equity awards for VMware common stock to such personnel. No Person providing Services to a VMware Entity pursuant to the terms of this Agreement shall be deemed to be, or shall have any rights as, an employee of any VMware Entity.

**ARTICLE IV
STANDARD OF PERFORMANCE AND INDEMNIFICATION**

Section 4.01 General Standard of Service. Except as otherwise agreed to in writing by the Parties or as described in this Agreement, the Parties agree that the nature, quality, degree of skill and standard of care applicable to the delivery of the Services hereunder, and the skill levels of the employees providing such Services, shall be substantially the same as or consistent with those which such Party exercises or employs in providing similar services provided within or to itself or its Subsidiaries.

Section 4.02 Limitation of Liability.

(a) The Receiving Party agrees that none of the Provider Entities and their respective directors, officers, agents and employees (each of the Provider Entities and their respective directors, officers, agents and employees, a “ **Provider Indemnified Person** ”) shall have any liability, whether direct or indirect, in contract or tort or otherwise, to any Receiving Entity or any other Person under the control of such Receiving Entity for or in connection with the Services rendered or to be rendered by any Provider Indemnified Person pursuant to this Agreement, the transactions contemplated hereby or any Provider Indemnified Person's actions or inactions in connection with any Services or such transactions, except for damages which have resulted from such Provider Indemnified Person's breach, gross negligence, bad faith or willful misconduct in connection with the foregoing. If the Dell Technologies Entities are providing Services, “ **Providing Party** ” means Dell Technologies, “ **Provider Entities** ” means the Dell Technologies Entities, “ **Receiving Party** ” means VMware and “ **Receiving Entities** ” means the VMware Entities. If the VMware Entities are providing Services, “ **Providing Party** ” means VMware, “ **Provider Entities** ” means the VMware Entities, “ **Receiving Party** ” means Dell Technologies and “ **Receiving Entities** ” means the Dell Technologies Entities.

(b) Notwithstanding the provisions of this Section 4.03, none of the Parties shall be liable for any special, indirect, incidental, or consequential damages of any kind whatsoever (including, without limitation, attorneys' fees) in any way due to, resulting from or arising in connection with any of the Services or the performance of or failure to perform a Party's obligations under this Agreement. This disclaimer applies without limitation (1) to claims arising from the provision of the Services or any failure or delay in connection therewith; (2) to claims for lost profits; (3) regardless of the form of action, whether in contract, tort (including negligence), strict liability, or otherwise; and (4) regardless of whether such damages are foreseeable or whether such Party has been advised of the possibility of such damages.

(c) None of the Provider Entities shall have any liability to any Receiving Entity or any other Person for failure to perform a Provider Entity's obligations under this Agreement or otherwise, where such failure to perform similarly affects the Provider Entities receiving the same or similar services and does not have a disproportionately adverse effect on the Receiving Entities, taken as a whole.

(d) In addition to the foregoing, the Receiving Party agrees that, in all circumstances, it shall use commercially reasonable efforts to mitigate and otherwise minimize damages to the Receiving Entities, individually and collectively, whether direct or indirect, due to, resulting from or arising in connection with any failure by the Providing Party to comply fully with its obligations under this Agreement.

Section 4.03 Indemnification.

(a) The Receiving Party agrees to indemnify and hold harmless each Provider Indemnified Person from and against any damages related to, and to reimburse each Provider Indemnified Person for all reasonable expenses (including, without limitation, attorneys' fees) as they are incurred in connection with, pursuing or defending any claim, action or proceeding, (collectively, "**Actions**"), arising out of or in connection with Services rendered or to be rendered by any Provider Indemnified Person pursuant to this Agreement, the transactions contemplated hereby or any Provider Indemnified Person's actions or inactions in connection with any such Services or transactions; *provided, however*, that the Receiving Party shall not be responsible for any damages incurred by any Provider Indemnified Person that have resulted from such Provider Indemnified Person's gross negligence or willful misconduct in connection with any of the advice, actions, inactions, or Services referred to in this Section 4.04(a).

(b) The Providing Party agrees to indemnify and hold harmless each director, officer, agent and employee of the Receiving Party from and against any damages related to, and to reimburse each such individual for all reasonable expenses (including, without limitation, attorneys' fees) as they are incurred in connection with, pursuing or defending any Action arising out of or related to the gross negligence or willful misconduct of any Provider Indemnified Person in connection with the Services rendered or to be rendered pursuant to this Agreement; *provided, however*, that, the Providing Party shall not be responsible for any damages incurred by any Receiving Party director, officer, agent or employee that have resulted from any Receiving Entity's, or any Receiving Entity's director's, officer's, agent's or employee's, gross negligence or willful misconduct in connection with the Services rendered or to be rendered pursuant to this Agreement.

ARTICLE V
TERM AND TERMINATION

Section 5.01 Term. Except as otherwise provided in this Article V or as otherwise agreed in writing by the Parties, this Agreement shall continue until terminated by a Party in writing with not less than one hundred eighty (180) days' notice.

Section 5.02 Termination.

(a) The Parties may by mutual agreement from time to time terminate this Agreement with respect to one or more of the Services, in whole or in part.

(b) A Receiving Party may terminate any Service at any time (i) upon at least thirty (30) days prior written notice of such termination by the Receiving Party to the Providing Party, effective as of such 30th day, and (ii) if the Providing Party shall have failed to perform any of its material obligations under this Agreement relating to such Service, the Receiving Party shall have notified the Providing Party in writing of such failure, and such failure shall have continued for a period of at least thirty (30) days after receipt by the Providing Party of written notice of such failure from the Receiving Party, effective as of such 30th day.

Section 5.03 Effect of Termination.

(a) Other than as required by law, upon the effective date of the termination of any Service pursuant to Section 5.02, or upon termination of this Agreement in accordance with its terms, the Providing Party shall have no further obligation to provide the terminated Service (or any Service, in the case of termination of this Agreement) and the Receiving Party shall have no obligation to pay any fees relating to such terminated Services or to make any other payments hereunder; *provided, however*, that, notwithstanding such termination, (i) the Receiving Party shall remain liable to the Providing Party for fees owed and payable in respect of Services provided prior to the effective date of the termination; (ii) the Providing Party shall continue to charge the Receiving Party for administrative and program costs relating to benefits paid after but incurred prior to the termination of any Service, and the Receiving Party shall be obligated to pay such expenses in accordance with the terms of this Agreement, provided that (A) the Providing Party makes reasonable efforts to obtain available refunds of such costs and (B) if the Providing Party obtains a refund of any such costs already paid by the Receiving Party, the Providing Party shall return such portion of the costs to the Receiving Party; and (iii) the provisions of Articles IV, V, and VI shall survive any such termination indefinitely.

(b) Following termination of this Agreement with respect to any Service, the Parties agree to cooperate with each other in providing for an orderly transition of such Service to the Receiving Party or to a successor service provider as designated by the Receiving Party.

**ARTICLE VI
MISCELLANEOUS**

Section 6.01 Ownership.

(a) Neither Party will gain, by virtue of this Agreement or the Services provided hereunder, by implication or otherwise, any rights of ownership of any property or intellectual property rights owned by the other or their respective Subsidiaries.

(b) VMware shall own all property or intellectual property rights created in the performance of Services by Dell Technologies Entities solely on behalf of VMware Entities, as well as any changes, additions or improvements to VMware's property and intellectual property made by the Dell Technologies Entities solely on behalf of the VMware Entities in the performance of the Services. In addition, VMware will own any data with respect to VMware and any other VMware Entity to the extent such data is developed solely by Dell Technologies Entities on behalf of VMware and any other VMware Entity. To the extent that data provided by a VMware Entity to a Dell Technologies Entity is owned by a VMware Entity and such data is processed or used by Dell Technologies in performance of the Services, such data and any modifications to that data shall remain the property of VMware. The provisions of this Section 6.01(b) do not grant VMware any rights to any data concerning Dell Technologies, any other Dell Technologies Entity or Dell Technologies' business.

(c) Dell Technologies shall own all property or intellectual property rights created in the performance of Services by VMware Entities solely on behalf of Dell Technologies Entities, as well as any changes, additions or improvements to the Dell Technologies Entities' property and intellectual property made by the VMware Entities solely on behalf of the Dell Technologies Entities in the performance of the Services. In addition, Dell Technologies will own any data with respect to any Dell Technologies Entities, to the extent such data is developed solely by VMware Entities on behalf of Dell Technologies or any Dell Technologies Entity. To the extent that data provided by a Dell Technologies Entity to a VMware Entity is owned by a Dell Technologies Entity and such data is processed or used by VMware in performance of the Services, such data and any modifications to that data shall remain the property of Dell Technologies. The provisions of this Section 6.01(c) do not grant Dell Technologies any rights to any data concerning VMware, any other VMware Entity or VMware's business.

Section 6.02 Other Agreements. In the event there is any inconsistency between the provisions of this Agreement and the respective provisions of the Insurance Matters Agreement, the Tax Sharing Agreement, the Real Estate License Agreement, the Master Transaction Agreement and the Intellectual Property Agreement, respectively, the respective provisions of the Insurance Matters Agreement, Tax Sharing Agreement, the Real Estate License Agreement, the Master Transaction Agreement and the Intellectual Property Agreement shall govern. In the event there is any inconsistency between the provisions of this Agreement and the respective provisions of any other agreements entered into by the Parties with respect to the provision of additional Services, then the respective provisions of such other agreements shall govern, provided that such other agreements make express reference to this Agreement.

Section 6.03 No Agency. Nothing in this Agreement shall constitute or be deemed to constitute a partnership or joint venture between the Parties hereto or constitute or be deemed to constitute any Party the agent or employee of the other Party for any purpose whatsoever, and neither Party shall have authority or power to bind the other Party or to contract in the name of, or create a liability against, the other Party in any way or for any purpose.

Section 6.04 Subcontractors. The Providing Party may hire or engage one or more third-party subcontractors (each, a “**Subcontractor**”) to perform all or any of its obligations under this Agreement; *provided, however*, that, subject to Section 4.03, the Providing Party shall pay for all fees due each such Subcontractor and shall in all cases remain primarily responsible for all obligations undertaken by each such Subcontractor on the Providing Party’s behalf pursuant to the terms of this Agreement with respect to the scope, quality, degree of skill and nature of the Services provided to the Receiving Party; and *provided, further*, that without the prior written consent of the Receiving Party, the Providing Party may only hire or engage Subcontractors to perform the Services to the extent that any such Subcontractor is a natural person performing similar services for the Providing Party. The Providing Party shall cause any Subcontractor performing Services under this Agreement to execute a customary nondisclosure agreement.

Section 6.05 Force Majeure.

(a) For purposes of this Section 6.05, “**Force Majeure**” means an event beyond the control of either Party, which by its nature could not have been foreseen by such Party, or, if it could have been foreseen, was unavoidable, and includes without limitation, acts of God, storms, floods, riots, fires, sabotage, civil commotion or civil unrest, interference by civil or military authorities, acts of war (declared or undeclared) and failure of energy sources.

(b) Continued performance of a Service may be suspended immediately to the extent caused by Force Majeure. The Party claiming suspension of a Service due to Force Majeure will give prompt notice to the other of the occurrence of the event giving rise to the suspension and of its nature and anticipated duration. The Parties shall cooperate with each other to find alternative means and methods for the provision of the suspended Service.

(c) Without limiting the generality of Section 4.03, neither Party shall be under any liability for failure to fulfill any obligation under this Agreement, so long as and to the extent to which the fulfillment of such obligation is prevented, frustrated, hindered, or delayed as a consequence of circumstances of Force Majeure.

Section 6.06 Entire Agreement. This Agreement (including the Schedules constituting a part of this Agreement) and any other writing signed by the Parties that specifically references or is specifically related to this Agreement constitute the entire agreement among the Parties with respect to the subject matter hereof and supersede all prior agreements, understandings and negotiations, both written and oral, between the Parties with respect to the subject matter hereof. This Agreement is not intended to confer upon any Person other than the Parties hereto any rights or remedies hereunder.

Section 6.07 Information. Subject to applicable law and privileges, each Party hereto covenants with and agrees to provide to the other Party all information regarding itself and transactions under this Agreement that the other Party reasonably believes is required to comply with all applicable federal, state, county and local laws, ordinances, regulations and codes, including, but not limited to,

securities laws and regulations.

Section 6.08 Notices. Notices, offers, requests or other communications required or permitted to be given by either party pursuant to the terms of this Agreement shall be given in writing to the respective Parties to the following addresses:

if to Dell Technologies or EMC:

Dell Inc.
One Dell Way, RR1-33
Round Rock, TX 78682
Attention: General Counsel

if to VMware:

VMware, Inc.
3401 Hillview Avenue
Palo Alto, CA 94304
Attention: General Counsel

or to such other address as the party to whom notice is given may have previously furnished to the other in writing as provided herein. All notices shall be sent by hand delivery, recognized overnight courier or, within the United States, may also be sent via certified mail, return receipt requested. All notices shall be deemed to have been given when received, if hand delivered; one working day after it is sent, if sent by recognized overnight courier; and three days after it is postmarked, if mailed first class mail or certified mail, return receipt requested, with postage prepaid.

Section 6.09 Governing Law. This Agreement, including the validity hereof and the rights and obligations of the Parties hereunder, shall be construed in accordance with and shall be governed by the laws of the state of Delaware applicable to contracts made and to be performed entirely in such state (without giving effect to the conflicts of laws provisions thereof).

Section 6.10 Severability. If any terms or other provision of this Agreement or the Schedules or exhibits hereto shall be determined by a court, administrative agency or arbitrator to be invalid, illegal or unenforceable, such invalidity or unenforceability shall not render the entire Agreement invalid. Rather, this Agreement shall be construed as if not containing the particular invalid, illegal or unenforceable provision, and all other provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to either Party. Upon such determination that any term or other provision is invalid, illegal or unenforceable, the Parties shall negotiate in good faith to modify this Agreement so as to effect the original intent of the Parties as closely as possible in an acceptable manner to the end that the transactions contemplated hereby are fulfilled to the fullest extent permitted under applicable law.

Section 6.11 Third Party Beneficiary. None of the provisions of this Agreement shall be for the benefit of or enforceable by any third party, including any creditor of any Person. No such third party shall obtain any right under any provision of this Agreement or shall by reasons of any such provision

make any claim in respect of any liability (or otherwise) against either Party hereto.

Section 6.12 Amendment. This Agreement may only be amended by a written agreement executed by both Parties hereto.

Section 6.13 Counterparts. This Agreement may be executed in separate counterparts, each of which shall be deemed an original and all of which, when taken together, shall constitute one and the same agreement.

Section 6.14 Authority. Each of the Parties represent to the other Party that (a) it has the corporate or other requisite power and authority to execute, deliver and perform this Agreement, (b) the execution, delivery and performance of this Agreement by it have been duly authorized by all necessary corporate or other actions, (c) it has duly and validly executed and delivered this Agreement, and (d) this Agreement is its legal, valid and binding obligation, enforceable against it in accordance with its terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general equity principles.

Section 6.15 Data Protection.

(a) Each Party may from time to time receive information that relates to identified or identifiable individuals from, or receive, create, transmit or maintain such information on behalf of, the other Party in connection with its provision of Services under this Agreement (“**Personal Information**”). Each Party may collect, access, use, transfer and disclose (“**Process**”) such Personal Information as necessary to perform the Services but shall not transfer or otherwise disclose the other Party's Personal Information to any third parties without the other Party's prior consent unless required to by, or in connection with, law enforcement action, subpoena or other litigation or applicable law or in connection with a prospective or actual sale, merger, transfer or other reorganization of all or part of its business. Each Party agrees to comply with all privacy, security and data protection laws that are applicable to such Party in connection with its Processing of the other Party's Personal Information. Each Party represents, warrants and covenants that it has all necessary rights and authorities to provide or make available its Personal Information to the other Party under this Agreement and to authorize the other Party to Process that Personal Information in accordance with this Agreement. Each Party shall Process the other Party's Personal Information in accordance with the other Party's instructions. Each Party shall implement and maintain technical and organizational measures to protect the Personal Information against accidental or unlawful destruction, accidental loss, alteration, unauthorized disclosure or access (each, a “**Data Breach**”). If a Party discovers a Data Breach involving the other Party's Personal Information, such Party agrees to provide prompt notice to the other Party and to investigate such Data Breach and put in place measures designed to address the Data Breach to the extent reasonably practicable. Each Party shall take reasonable steps to ensure the reliability of its personnel that may have access to the other Party's Personal Information and that they are appropriately trained in the handling and care of personal data. Each Party shall fully assist the other Party with all information requests that may be received from data subjects of the other Party's Personal Information.

(b) Upon written request, each Party agrees to meet with the other Party to review and discuss information regarding its systems, security procedures, business continuity, business controls and procedures undertaken by such Party in respect of the other Party's Personal Information. Each Party agrees to cooperate with the other Party to resolve any reasonable concerns regarding its processing of the other Party's Personal Information under this Agreement.

(c) A Party may subcontract the Processing of the other Party's Personal Information to Third Parties (including without limitation its affiliates and subcontractors) if required in order to provide the Services; provided that such Party: (i) remains responsible for compliance by such Third Party with the applicable obligations imposed upon the Parties under this Section 6.15 as if that Third Party were such Party; (ii) will require each such Third Party to provide sufficient assurances regarding the security measures it is required to take for the processing of the other Party's Personal Information, which shall be materially equivalent to those measures that the Parties are required to take under this Section 6.15 and take reasonable steps to ensure the Third Party complies with such measures; and (iii) puts in place a contract in writing with the Third Party to govern the Processing of the other Party's Personal Information and which requires the Third Party to comply with substantially similar obligations in respect of the Processing of Personal Information as the obligations imposed upon the Parties under this Section 6.15.

(d) As soon as practicable upon execution of this Agreement, the Parties shall execute Standard Contractual Clauses (controller to controller 2004/91/EC and controller to processor 2010/87/EU as appropriate) in compliance with Article 25 of the EU Data Protection Directive 95/46/EC or any successor legislation pursuant thereto designed to permit the Parties to transfer the Personal Information internationally (the "**Data Transfer Agreement**"). Upon execution of the Data Transfer Agreement, Dell Technologies and VMware, respectively, may transfer Personal Information to each other and each other's affiliates and subcontractors that are outside the European Economic Area where such transfer is required under or in connection with the provision of the Services or as otherwise permitted under applicable laws. With respect to personnel subject to Article 25 of the EU Data Protection Directive 95/46/EC or any successor legislation pursuant thereto designed to permit the Parties to transfer the Personal Information internationally, Dell Technologies and VMware will not transfer Personal Information internationally to one another or to the other Party's affiliates and subcontractors until after the Data Transfer Agreement is executed.

[Signature Page Follows]

IN WITNESS WHEREOF , the Parties have caused this Agreement to be signed by their duly authorized representatives.

DELL TECHNOLOGIES INC.

By: /s/ Janet Bawcom
Name: Janet M. Bawcom
Title: SVP and Assistant Secretary

EMC CORPORATION

By: /s/ Janet Bawcom
Name: Janet M. Bawcom
Title: SVP and Assistant Secretary

VMWARE, INC.

By: /s/ Craig Norris
Name: Craig Norris
Title: VP and Assistant Secretary

VMWARE, INC.
AMENDED AND RESTATED 2007 EQUITY AND INCENTIVE PLAN

1. PURPOSE; TYPES OF AWARDS; CONSTRUCTION.

The purpose of the VMware, Inc. Amended and Restated 2007 Equity and Incentive Plan is to attract, motivate and retain employees and independent contractors of the Company and any Subsidiary and Affiliate and non-employee directors of the Company, any Subsidiary or any Affiliate. The Plan is also designed to encourage stock ownership by such persons, thereby aligning their interest with those of the Company's shareholders and to permit the payment of compensation that qualifies as performance-based compensation under Section 162(m) of the Code. Pursuant to the provisions hereof, there may be granted Options (including "incentive stock options" and "non-qualified stock options"), and Other Stock-Based Awards, including but not limited to Restricted Stock, Restricted Stock Units, Stock Appreciation Rights (payable in shares) and Other Cash-Based Awards.

2. DEFINITIONS . For purposes of the Plan, the following terms are defined as set forth below:

- (a) "Adoption Date" means June 5, 2017, the date approved by the Board as the adoption date of the Plan, including the extension of its term as set forth in Section 7(f) below.
- (b) "Affiliate" means an affiliate of the Company, as defined in Rule 12b-2 promulgated under Section 12 of the Exchange Act.
- (c) "Award" means individually or collectively, a grant under the Plan of Options, Restricted Stock, Restricted Stock Units, Stock Appreciation Rights or Other Stock-Based Awards or Other Cash-Based Awards.
- (d) "Award Terms" means any written agreement, contract, notice or other instrument or document evidencing an Award.
- (e) "Beneficial Owner" has the meaning ascribed to such term in Rule 13d-3 of the Exchange Act.
- (f) "Board" means the Board of Directors of the Company.
- (g) "Cause," unless otherwise defined in the Award Terms for a particular Award or in any employment or other agreement between the Grantee and the Company, any Subsidiary or any Affiliate, means:
 - (i) willful neglect, failure or refusal by the Grantee to perform his or her employment duties (except resulting from the Grantee's incapacity due to illness) as reasonably directed by his or her employer;
 - (ii) willful misconduct by the Grantee in the performance of his or her employment duties;
 - (iii) the Grantee's indictment for a felony (other than traffic related offense) or a misdemeanor involving moral turpitude; or
 - (iv) the Grantee's commission of an act involving personal dishonesty that results in financial, reputational, or other harm to the Company, any Affiliate or any Subsidiary, including, but not limited to, an act constituting misappropriation or embezzlement of property.

(h) “Code” means the Internal Revenue Code of 1986, as amended from time to time.

(i) “Committee” means the Compensation and Corporate Governance Committee of the Board or such other Board committee delegated authority by the Board to administer and oversee this Plan. Unless otherwise determined by the Board, the Committee will be comprised solely of directors who are (a) “non-employee directors” under Rule 16b-3 of the Exchange Act, (b) “outside directors” under Section 162(m) of the Code and (c) who otherwise meet the definition of “independent directors” pursuant to the applicable requirements of any national stock exchange upon which the Stock is listed. Any director appointed to the Committee who does not meet the foregoing requirements should recuse himself or herself from all determinations pertaining to Rule 16b-3 of the Exchange Act and Section 162(m) of the Code.

(j) “Company” means VMware, Inc., a corporation organized under the laws of the State of Delaware, or any successor corporation.

(k) “Covered Employee” has the meaning set forth in Section 162(m)(3) of the Code.

(l) “Exchange Act” means the Securities Exchange Act of 1934, as amended from time to time, and as now or hereafter construed, interpreted and applied by regulations, rulings and cases.

(m) “Fair Market Value” means the closing sales price per share of Stock on the principal securities exchange on which the Stock is traded (i) on the date of grant or (ii) on such other date on which the fair market value of Stock is required to be calculated pursuant to the terms of an Award, provided that if there is no such sale on the relevant date, then on the last previous day on which a sale was reported; if the Stock is not listed for trading on a national securities exchange, the fair market value of Stock will be determined in good faith by the Committee.

(n) “Grantee” means a person who, as an employee, independent contractor or non-employee director of the Company, a Subsidiary or an Affiliate, has been granted an Award under the Plan.

(o) “ISO” means any Option designated as and intended to be and which qualifies as an incentive stock option within the meaning of Section 422 of the Code.

(p) “NQSO” means any Option that is designated as a nonqualified stock option or which does not qualify as an ISO.

(q) “Option” means a right, granted to a Grantee under Section 6(b)(i), to purchase shares of Stock. An Option may be either an ISO or an NQSO.

(r) “Other Cash-Based Award” means a cash-based Award granted to a Grantee under Section 6(b)(iv) hereof, including cash awarded as a bonus or upon the attainment of Performance Goals or otherwise as permitted under the Plan.

(s) “Other Stock-Based Award” means an Award granted to a Grantee pursuant to Section 6(b)(iv) hereof, that may be denominated or payable in, valued in whole or in part by reference to, or otherwise based on, or related to, Stock, each of which may be subject to the attainment of Performance Goals or a period of continued employment or other terms and conditions as permitted under the Plan.

(t) “Parent” means Dell Technologies Inc., a Delaware corporation.

(u) “Performance Goals” means an objective formula or standard determined by the Committee with respect to each performance period utilizing one or more of the following factors and any objectively verifiable adjustment(s) thereto permitted and pre-established by the Committee: (i) (A) earnings including operating income, (B) earnings before or after (1) taxes, (2) interest, (3) depreciation, (4) amortization, or (5) special items or book value per share (which may exclude nonrecurring items), or (C) growth in earnings before

interest, tax, depreciation or amortization; (ii) pre-tax income or after-tax income; (iii) earnings per common share (basic or diluted); (iv) operating profit; (v) revenue, revenue growth or rate of revenue growth; (vi) return on assets (gross or net), return on investment, return on capital, return on invested capital or return on equity; (vii) returns on sales or revenues; (viii) operating expenses; (ix) stock price appreciation; (x) cash flow, free cash flow, cash flow from operations, cash flow return on investment (discounted or otherwise), net cash provided by operations, or cash flow in excess of cost of capital; (xi) implementation or completion of critical projects or processes; (xii) economic value created; (xiii) cumulative earnings per share growth; (xiv) operating margin or profit margin; (xv) common stock price or total stockholder return; (xvi) cost targets, reductions, savings, productivity or efficiencies; (xvii) strategic business criteria, consisting of one or more objectives based on meeting specified market penetration, geographic business expansion, customer satisfaction, employee satisfaction, human resources management, supervision of litigation, information technology, goals relating to acquisitions, divestitures, joint ventures or similar transactions, research or development collaborations or budget comparisons; (xviii) personal professional objectives, including any of the foregoing performance goals, the implementation of policies and plans, the negotiation of transactions and the development of long term business goals; and (xix) any combination of, subset or component of, or a specified increase in, any of the foregoing. Where applicable, the Performance Goals may be expressed in terms of attaining a specified level of the particular criteria or the attainment of a percentage increase or decrease in the particular criteria, and may be applied to one or more of the Company, a Subsidiary or Affiliate, or a division or strategic business unit of the Company, or may be applied to the performance of the Company relative to a market index, a group of other companies or a combination thereof, all as determined by the Committee. The Performance Goals may include a threshold level of performance below which no payment will be made (or no vesting will occur), levels of performance at which specified payments will be made (or specified vesting will occur), and a maximum level of performance above which no additional payment will be made (or at which full vesting will occur). Objectively verifiable adjustment(s) to Performance Goals can include but are not limited to adjustment(s) to reflect: (1) the impact of specific corporate transactions; (2) accounting or tax law changes; (3) asset write-downs; (4) significant litigation or claim adjustment; (5) foreign exchange gains and losses; (6) disposal of a segment of a business; (7) discontinued operations; (8) refinancing or repurchase of bank loans or debt securities; or (9) unbudgeted capital expenditures. Each of the foregoing Performance Goals will be subject to certification by the Committee; provided that, to the extent an Award is intended to satisfy the performance-based compensation exception to the limits of Section 162(m) of the Code and then to the extent consistent with such exception, the Committee has the authority to make equitable adjustments to the Performance Goals in recognition of unusual or non-recurring events affecting the Company or any Subsidiary or Affiliate or the financial statements of the Company or any Subsidiary or Affiliate, in response to changes in applicable laws or regulations or related to the disposal of a segment of a business or related to a change in generally accepted accounting principles.

(v) "Plan" means this Amended and Restated VMware, Inc. 2007 Equity and Incentive Plan, as amended from time to time.

(w) "Restricted Stock" means an Award of shares of Stock to a Grantee under Section 6(b)(ii) that is subject to certain restrictions and to a risk of forfeiture.

(x) "Restricted Stock Unit" means a right granted to a Grantee under Section 6(b)(iii) of the Plan to receive shares of Stock subject to certain restrictions and to a risk of forfeiture.

(y) "Rule 16b-3" means Rule 16b-3, as from time to time in effect promulgated by the Securities and Exchange Commission under Section 16 of the Exchange Act, including any successor to such Rule.

(z) "Stock" means shares of Class A common stock, par value \$0.01 per share, of the Company.

(aa) "Stock Appreciation Right" means an Award that entitles a Grantee upon exercise to the excess of the Fair Market Value of the Stock underlying the Award over the base price established in respect of such Stock.

(bb) "Subsidiary" means any entity in an unbroken chain of entities beginning with the Company if, at the time of granting of an Award, each of the entities (other than the last entity in the unbroken chain) owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other entities in the chain.

3. ADMINISTRATION .

(a) The Plan will be administered by the Committee or, at the discretion of the Board, the Board. In the event the Board is the administrator of the Plan, references herein to the Committee will be deemed to include the Board. The Board may from time to time appoint a member or members of the Committee in substitution for or in addition to the member or members then in office and may fill vacancies on the Committee however caused. Subject to applicable law, the Board or the Committee may delegate to a sub-committee or individual the ability to grant Awards to employees who are not subject to potential liability under Section 16(b) of the Exchange Act with respect to transactions involving equity securities of the Company at the time any such delegated authority is exercised.

(b) The decision of the Committee as to all questions of interpretation and application of the Plan will be final, binding and conclusive on all persons. The Committee has the authority in its discretion, subject to and not inconsistent with the express provisions of the Plan, to administer the Plan and to exercise all the power and authority either specifically granted to it under the Plan or necessary or advisable in the administration of the Plan, including without limitation, the authority to grant Awards; determine the persons to whom and the time or times at which Awards will be granted; determine the type and number of Awards to be granted, the number of shares of Stock to which an Award may relate and the terms, conditions, restrictions and Performance Goals relating to any Award; determine Performance Goals no later than such time as is required to ensure that an underlying Award which is intended to comply with the requirements of Section 162(m) of the Code so complies; determine whether, to what extent, and under what circumstances an Award may be settled, cancelled, forfeited, accelerated, exchanged, or surrendered (including upon a "change in control" or similar transaction); to make adjustments in the terms and conditions (including Performance Goals) applicable to Awards; construe and interpret the Plan and any Award; prescribe, amend and rescind rules and regulations relating to the Plan; to determine the terms and provisions of the Award Terms (which need not be identical for each Grantee); and make all other determinations deemed necessary or advisable for the administration of the Plan. The Committee may correct any defect or supply any omission or reconcile any inconsistency in the Plan or in any Award Terms granted hereunder in the manner and to the extent it deems expedient to carry the Plan into effect and will be the sole and final judge of such expediency. No Committee member will be liable for any action or determination made with respect to the Plan or any Award.

4. ELIGIBILITY .

(a) Awards may be granted to officers, employees, independent contractors and non-employee directors of the Company or of any of the Subsidiaries and Affiliates; *provided*, that (i) ISOs may be granted only to employees (including officers and directors who are also employees) of the Company or any of its "related corporations" (as defined in the applicable regulations promulgated under the Code) and (ii) Awards may be granted only to eligible persons who are not employed by the Company or a Subsidiary if such persons perform substantial services for the Company or a Subsidiary.

(b) No ISO may be granted to any employee of the Company or any of its Subsidiaries if such employee owns, immediately prior to the grant of the ISO, stock representing more than 10% of the voting power or more than 10% of the value of all classes of stock of the Company or Parent or a Subsidiary, unless the purchase price for the stock under such ISO is at least 110% of its Fair Market Value at the time such ISO is granted and the ISO, by its terms, will not be exercisable more than five years from the date it is granted. In determining the stock ownership under this paragraph, the provisions of Section 424(d) of the Code will control.

(c) No Award, except for Restricted Stock, may be granted to any employee or independent contractor who is subject to Section 409A of the Code if such person is an employee or independent contractor of an Affiliate that is not a Subsidiary, unless such Award conforms to the requirements of Section 409A.

5. STOCK SUBJECT TO THE PLAN .

(a) The maximum number of shares of Stock reserved for the grant or settlement of Awards under the Plan (the “Share Limit”) is 132,137,890 , subject to adjustment as provided herein, not including shares of stock added to the Share Limit pursuant to Section 5(c).

(b) Shares issued pursuant to Awards under the Plan may, in whole or in part, be authorized but unissued shares or shares that have been or may be reacquired by the Company in the open market, in private transactions or otherwise. If any shares subject to an Award (other than Awards substituted or assumed pursuant to Section 5(c) herein) are forfeited, cancelled, exchanged or surrendered or if an Award otherwise terminates or expires without a distribution of shares to the Grantee, the shares of stock with respect to such Award will, to the extent of any such forfeiture, cancellation, exchange, surrender, termination or expiration, again be available for Awards under the Plan.

(c) The Company may substitute or assume equity awards of acquired entities in connection with mergers, reorganizations, separations, or other transactions to which Section 424(a) of the Code applies. The number of shares of Stock reserved pursuant to Section 5 will be increased by the corresponding number of equity awards assumed and, in the case of a substitution, by the net increase in the number of shares of Stock subject to equity awards before and after the substitution.

(d) Subject to the Share Limit and Section 5(g), the aggregate maximum number of shares of Stock that may be issued pursuant to the exercise of ISOs will be 132,137,890 shares of Stock.

(e) Subject to the Share Limit and Section 5(g), the aggregate number of shares of Stock that may be issued pursuant to Awards granted during any fiscal year to any single individual may not exceed 3,611,400 shares of Stock.

(f) The maximum value of Awards granted during a single fiscal year under this Plan or under any other equity plan maintained by the Company, taken together with any cash fees paid during such fiscal year for services on the Board, will not exceed \$1,000,000 in total value for any non-employee director, except that such limit will be \$1,250,000 for any non-employee director serving as the lead director of the Board or chair of the Board. Such applicable limit will include the value of any stock awards that are received in lieu of all or a portion of any annual committee cash retainers or other similar cash based payments.

(g) Except as provided in an Award Term or as otherwise provided in the Plan, in the event of any extraordinary dividend or other extraordinary distribution (whether in the form of cash, Stock, or other property), recapitalization, stock split, reverse split, reorganization, merger, consolidation, spin-off, recapitalization, combination, repurchase, or share exchange, or other similar corporate transaction or event, the Committee will make such equitable changes or adjustments as it deems necessary or appropriate to any or all of (i) the number and kind of shares of Stock or other property (including cash) that may thereafter be issued in connection with Awards (including, but not limited to changes or adjustments to the limits specified in Sections 5(d) and (e)) or the total number of Awards issuable under the Plan, (ii) the number and kind of shares of Stock or other property issued or issuable in respect of outstanding Awards, (iii) the exercise price, grant price or purchase price relating to any Award, (iv) the Performance Goals, and (v) the individual limitations applicable to Awards; provided that, with respect to ISOs, any adjustment will be made in accordance with the provisions of Section 424(h) of the Code and any regulations or guidance promulgated thereunder, and provided further that no such adjustment will cause any Award hereunder which is or becomes subject to Section 409A of the Code to fail to comply with the requirements of such section.

6. SPECIFIC TERMS OF AWARDS .

(a) *General* . Subject to the terms of the Plan and any applicable Award Terms, (i) the term of each Award will be for such period as may be determined by the Committee, and (ii) payments to be made by the Company or a Subsidiary or Affiliate upon the grant, maturation, or exercise of an Award may be made in such forms as the Committee determines at the date of grant or thereafter, including, without limitation, cash, Stock or other property, and may be made in a single payment or transfer, in installments, or, subject to the requirements of Section 409A of the Code on a deferred basis.

(b) *Awards*. The Committee is authorized to grant to Grantees the following Awards, as deemed by the Committee to be consistent with the purposes of the Plan. The Committee will determine the terms and conditions of such Awards, consistent with the terms of the Plan. Options and Stock Appreciation Rights (“SARs”) are subject to a minimum one-year vesting period following grant, with the exception that up to 5% of the available shares of Stock reserved for grant may be subject to such Awards without such minimum vesting period. Subject to compliance with the requirements of Section 409A of the Code, an Award may provide the Grantee with the right to receive dividend or dividend equivalent payments with respect to Stock actually or notionally subject to the Award, which payments will be credited to an account for the Grantee, and may be settled in cash or Stock, as determined by the Committee. Any such dividend or dividend equivalents will be settled in cash or Stock to the Grantee only if, when and to the extent the related Award vests. The value of dividend or dividend equivalent payments payable with respect to any Award that does not vest will be forfeited.

(i) *Options* . The Committee is authorized to grant Options to Grantees on the following terms and conditions:

(A) The Award Terms evidencing the grant of an Option under the Plan will designate the Option as an ISO or an NQSO.

(B) The exercise price per share of Stock purchasable under an Option will be determined by the Committee, but in no event may the exercise price of an Option per share of Stock be less than the Fair Market Value of a share of Stock as of the date of grant of such Option. The purchase price of Stock as to which an Option is exercised must be paid in full at the time of exercise; payment may be made in cash, which may be paid by check, or other instrument acceptable to the Company, or, with the consent of the Committee, in shares of Stock, valued at the Fair Market Value on the date of exercise (including shares of Stock that otherwise would be distributed to the Grantee upon exercise of the Option), or if there were no sales on such date, on the next preceding day on which there were sales or (if permitted by the Committee and subject to such terms and conditions as it may determine) by surrender of outstanding Awards under the Plan, or the Committee may permit such payment of exercise price by any other method it deems satisfactory in its discretion. In addition, subject to applicable law and pursuant to procedures approved by the Committee, payment of the exercise price may be made pursuant to a broker-assisted cashless exercise procedure. Any amount necessary to satisfy applicable federal, state or local tax withholding requirements must be paid promptly upon notification of the amount due. The Committee may permit the amount of tax withholding to be paid in shares of Stock previously owned by the employee, or a portion of the shares of Stock that otherwise would be distributed to such employee upon exercise of the Option, or a combination of shares of such Stock and other property, except that the amount of tax withholding to be satisfied by withholding shares of Stock and other property will be limited to the extent necessary to avoid adverse accounting consequences, including but not limited to the Award being classified as a liability award.

(C) Options will be exercisable over the exercise period (which may not exceed ten years from the date of grant), at such times and upon such conditions as the Committee may determine, as reflected in the Award Terms; provided that, the Committee has the authority to accelerate the exercisability of any outstanding Option at such time and under such circumstances as it, in its sole discretion, deems appropriate.

(D) Upon the termination of a Grantee’s employment or service with the Company and its Subsidiaries or Affiliates, the Options granted to such Grantee, to the extent that they are exercisable at the time of such termination, will remain exercisable for such period as may be provided in the

applicable Award Terms, but in no event following the expiration of their term. The treatment of any Option that is unexercisable as of the date of such termination will be as set forth in the applicable Award Terms.

(E) Options may be subject to such other conditions, as the Committee may prescribe in its discretion or as may be required by applicable law.

(ii) *Restricted Stock* .

(A) The Committee may grant Awards of Restricted Stock under the Plan, subject to such restrictions, terms and conditions, as the Committee may determine in its sole discretion and as evidenced by the applicable Award Terms (provided that any such Award is subject to the vesting requirements described herein). The vesting of a Restricted Stock Award granted under the Plan may be conditioned upon the completion of a specified period of employment or service with the Company, any Subsidiary or an Affiliate, upon the attainment of specified Performance Goals or upon such other criteria as the Committee may determine in its sole discretion.

(B) The Committee will determine the purchase price, which, to the extent required by law, may not be less than par value of the Stock, to be paid by the Grantee for each share of Restricted Stock or unrestricted Stock or stock units subject to the Award. The Award Terms with respect to such Award will set forth the amount (if any) to be paid by the Grantee with respect to such Award and when and under what circumstances such payment is required to be made.

(C) Except as provided in the applicable Award Terms, no shares of Stock underlying a Restricted Stock Award may be assigned, transferred, or otherwise encumbered or disposed of by the Grantee until such shares of Stock have vested in accordance with the terms of such Award.

(D) Upon the termination of a Grantee's employment or service with the Company and its Subsidiaries or Affiliates, the Restricted Stock granted to such Grantee will be subject to the terms and conditions specified in the applicable Award Terms.

(iii) *Restricted Stock Units* . The Committee is authorized to grant Restricted Stock Units to Grantees, subject to the following terms and conditions:

(A) At the time of the grant of Restricted Stock Units, the Committee may impose such restrictions or conditions to the vesting of such Awards as it, in its discretion, deems appropriate, including, but not limited to, the achievement of Performance Goals. The Committee has the authority to accelerate the settlement of any outstanding award of Restricted Stock Units at such time and under such circumstances as it, in its sole discretion, deems appropriate, subject compliance with the requirements of Section 409A of the Code.

(B) Unless otherwise provided in the applicable Award Terms or except as otherwise provided in the Plan, upon the vesting of a Restricted Stock Unit there will be delivered to the Grantee, as soon as practicable following the date on which such Award (or any portion thereof) vests, that number of shares of Stock equal to the number of Restricted Stock Units becoming so vested.

(C) Upon the termination of a Grantee's employment or service with the Company and its Subsidiaries or Affiliates, the Restricted Stock Units granted to such Grantee will be subject to the terms and conditions specified in the applicable Award Terms.

(iv) *Other Stock-Based or Cash-Based Awards* .

(A) The Committee is authorized to grant Awards to Grantees in the form of Other Stock-Based Awards or Other Cash-Based Awards, as deemed by the Committee to be consistent with the purposes of the Plan. The Committee will determine the terms and conditions of such Awards, consistent with the terms of the Plan, at the date of grant or thereafter, including the Performance Goals and performance periods.

Stock or other securities or property delivered pursuant to an Award in the nature of a purchase right granted under Section 6(iv) may be purchased for such consideration, paid for at such times, by such methods, and in such forms, including, without limitation, Stock, other Awards, notes or other property, as the Committee will determine, subject to any required corporate action.

(B) With respect to a Covered Employee, the maximum value of the aggregate payment that any Grantee may receive with respect to Other Cash-Based Awards pursuant to this Section 6(b)(iv) in respect of any annual performance period is \$5,000,000 and for any other performance period in excess of one year, such amount multiplied by a fraction, the numerator of which is the number of months in the performance period and the denominator of which is twelve. No payment may be made to a Covered Employee prior to the certification by the Committee that the Performance Goals have been attained. The Committee may establish such other rules applicable to the Other Stock- or Cash-Based Awards to the extent not inconsistent with Section 162(m) of the Code.

(C) Payments earned in respect of any Cash-Based Award may be decreased or, with respect to any Grantee who is not a Covered Employee, increased in the sole discretion of the Committee based on such factors as it deems appropriate.

7. GENERAL PROVISIONS .

(a) *Nontransferability, Deferrals and Settlements* . Unless otherwise determined by the Committee or provided in an Award Term or set forth below, but in accordance with the Code and any applicable laws, Awards will not be transferable by a Grantee except by will or the laws of descent and distribution and will be exercisable during the lifetime of a Grantee only by such Grantee or his guardian or legal representative. Any attempted assignment or transfer of an Award will be null and void and without effect, except as herein provided, including without limitation any purported assignment, whether voluntary or by operation of law, pledge, hypothecation or other disposition, attachment, divorce, trustee process or similar process, whether legal or equitable, upon such Award. The Committee may permit Grantees to elect to defer the issuance of shares of Stock or the settlement of Awards in cash under such rules and procedures as established under the Plan to the extent that such deferral complies with Section 409A of the Code and any regulations or guidance promulgated thereunder.

(b) *Leave of Absence; Reduction in Service Level* . The Committee may determine, in its discretion (i) whether, and the extent to which, an Award will vest during a leave of absence, (ii) whether, and the extent to which, a reduction in service level (for example, from full-time to part-time employment), will cause a reduction, or other change, in an Award, and (iii) whether a leave of absence or reduction in service will be deemed a termination of employment or service for the purpose of the Plan and the Award Terms. The Committee will also determine all other matters relating to whether the employment or service of a recipient of an Award is continuous for purposes of the Plan and the Award Terms.

(c) *No Right to Continued Employment, etc* . Nothing in the Plan or in any Award granted or any Award Terms, promissory note or other agreement entered into pursuant hereto confers upon any Grantee the right to continue in the employ or service of the Company, any Subsidiary or any Affiliate or to be entitled to any remuneration or benefits not set forth in the Plan or the applicable Award Terms or to interfere with or limit in any way the right of the Company or any such Subsidiary or Affiliate to terminate such Grantee's employment or service.

(d) *Clawback/Recoupment*

(i) All Awards granted under the Plan will be subject to recoupment in accordance with any clawback policy that the Company determines to adopt pursuant to the listing standards of any national securities exchange or association on which the Company's securities are listed or as is otherwise required by the Dodd-Frank Wall Street Reform and Consumer Protection Act or other applicable law. In addition, the Committee may impose additional clawback, recovery or recoupment provisions in an Award agreement as the Committee

determines necessary or appropriate, including but not limited to a reacquisition right in respect of previously acquired shares of Stock or other cash or property upon the occurrence of Cause as determined by the Committee.

(ii) In the event of a restatement of incorrect financial results, the Committee will review all Awards held by executive officers (within the meaning of Rule 3b-7 of the Exchange Act) of the Company that (i) were earned based on performance or were vesting during the course of the financial period subject to such restatement or (ii) were granted during or within one year following such financial period. If any Award would have been lower or would not have vested, been earned or been granted based on such restated financial results, the Committee will, if it determines appropriate in its sole discretion and to the extent permitted by governing law, (a) cancel such Award, in whole or in part, whether or not vested, earned or payable or (b) require the Grantee to repay to the Company an amount equal to all or any portion of the value of any gains from the grant, vesting or payment of the Award that would not have been realized had the restatement not occurred.

(iii) If a Grantee's employment or service is terminated for Cause, all unvested (and, to the extent applicable, unexercised) portions of Awards will terminate and be forfeited immediately without consideration. In addition, the Committee may in its sole discretion and to the extent permitted by applicable law cause the cancellation of all or a portion of any outstanding vested Awards held by such Grantee or payable to such Grantee or require such Grantee to reimburse the Company for all or a portion of the gains from the exercise of, settlement or payment of any of the Grantee's Awards realized after the event giving rise to Cause first occurred.

(e) *Taxes* . The Company, any Subsidiary and any Affiliate is authorized to withhold from any Award granted, any payment relating to an Award under the Plan, including from a distribution of Stock, or any other payment to a Grantee, amounts of withholding and other taxes due in connection with any transaction involving an Award, and to take such other action as the Committee may deem advisable to enable the Company and Grantees to satisfy obligations for the payment of withholding taxes and other tax obligations relating to any Award. This authority includes authority to withhold or receive Stock or other property and to make cash payments in respect thereof in satisfaction of a Grantee's tax obligations; provided, however, that the amount of tax withholding to be satisfied by withholding Stock or other property will be limited to the extent necessary to avoid adverse accounting consequences, including but not limited to the Award being classified as a liability award.

(f) *Stockholder Approval; Amendment and Termination* . The Board may amend, alter or discontinue the Plan and outstanding Awards thereunder, but no amendment, alteration, or discontinuation may be made that would impair the rights of a Grantee under any Award theretofore granted without such Grantee's consent, or that without the approval of the stockholders (as described below) would, except in the case of an adjustment as provided in Section 5, increase the total number of shares of Stock reserved for the purpose of the Plan. In addition, stockholder approval will be required with respect to any amendment with respect to which shareholder approval is required under the Code, the rules of any stock exchange on which Stock is then listed or any other applicable law. Unless earlier terminated by the Board pursuant to the provisions of the Plan, the Plan will terminate on the tenth anniversary of the Adoption Date. No Awards may be granted under the Plan after such termination date.

(g) *No Rights to Awards; No Stockholder Rights* . No Grantee has any claim to be granted any Award under the Plan, and there is no obligation for uniformity of treatment of Grantees. No Grantee has any right to payment or settlement under any Award unless and until the Committee or its designee determines that payment or settlement is to be made. Except as provided specifically herein, a Grantee or a transferee of an Award has no rights as a stockholder with respect to any shares covered by the Award until the date of the issuance of such shares.

(h) *Unfunded Status of Awards* . The Plan is intended to constitute an "unfunded" plan for incentive and deferred compensation. With respect to any payments not yet made to a Grantee pursuant to an Award, nothing contained in the Plan or any Award will give any such Grantee any rights that are greater than those of a general creditor of the Company.

(i) *No Fractional Shares* . No fractional shares of Stock will be issued or delivered pursuant to the Plan or any Award. The Committee will determine whether cash, other Awards, or other property will be

issued or paid in lieu of such fractional shares or whether such fractional shares or any rights thereto will be forfeited or otherwise eliminated.

(j) *Regulations and Other Approvals* .

(i) The obligation of the Company to sell or deliver Stock or pay cash with respect to any Award granted under the Plan is subject to all applicable laws, rules and regulations, including all applicable federal and state securities laws, and the obtaining of all such approvals by governmental agencies as may be deemed necessary or appropriate by the Committee.

(ii) Each Award is subject to the requirement that, if at any time the Committee determines, in its absolute discretion, that the listing, registration or qualification of Stock issuable pursuant to the Plan is required by any securities exchange or under any state or federal law, or the consent or approval of any governmental regulatory body is necessary or desirable as a condition of, or in connection with, the grant of an Award or the issuance of Stock, no such Award may be granted or payment made or Stock issued, in whole or in part, unless listing, registration, qualification, consent or approval has been effected or obtained free of any conditions not acceptable to the Committee.

(iii) In the event that the disposition of Stock acquired pursuant to the Plan is not covered by a then current registration statement under the Securities Act of 1933, as amended (the "Securities Act"), and is not otherwise exempt from such registration, such Stock will be restricted against transfer to the extent required by the Securities Act or regulations thereunder, and the Committee may require a Grantee receiving Stock pursuant to the Plan, as a condition precedent to receipt of such Stock, to represent to the Company in writing that the Stock acquired by such Grantee is acquired for investment only and not with a view to distribution.

(iv) *Section 409A*. This Plan is intended to comply and will be administered in a manner that is intended to comply with Section 409A of the Code and will be construed and interpreted in accordance with such intent. To the extent that an Award, issuance or payment is subject to Section 409A of the Code, it will be awarded or issued or paid in a manner that will comply with Section 409A of the Code, including proposed, temporary or final regulations or any other guidance issued by the Secretary of the Treasury and the Internal Revenue Service with respect thereto. Any provision of this Plan that would cause an Award, issuance or payment to fail to satisfy Section 409A of the Code will have no force and effect until amended to comply with Section 409A of the Code (which amendment may be retroactive to the extent permitted by applicable law). Notwithstanding anything to the contrary in this Plan (and unless the Award Terms specifically provides otherwise), if the shares of Stock are publicly traded and a Grantee is a "specified employee" for purposes of Section 409A of the Code and holds an Award that provides for "deferred compensation" under Section 409A of the Code, no distribution or payment of any amount shall be made upon a "separation from service" before a date that is six months following the date of such Grantee's "separation from service" (as defined in Section 409A of the Code without regard to alternative definitions thereunder) except that in case of the Grantee's death, such distribution or payment will be made as soon as practicable following the Grantee's death or as otherwise set forth in an agreement with the Grantee.

(k) *Governing Law* . The Plan and all determinations made and actions taken pursuant hereto is governed by the laws of the State of Delaware without giving effect to the conflict of laws principles thereof. Notwithstanding anything to the contrary herein, the Committee, in order to conform with provisions of local laws and regulations in foreign countries in which the Company or its Subsidiaries operate, has sole discretion to (i) modify the terms and conditions of Awards made to Grantees employed outside the United States, (ii) establish sub-plans with modified exercise procedures and such other modifications as may be necessary or advisable under the circumstances presented by local laws and regulations, and (iii) take any action which it deems advisable to obtain, comply with or otherwise reflect any necessary governmental regulatory procedures, exemptions or approvals with respect to the Plan or any sub-plan established hereunder.

(l) *Merger or Consolidation* . If the Company is the surviving corporation in any merger or consolidation (other than a merger or consolidation in which the Company survives but in which a majority of its

outstanding shares are converted into securities of another corporation or are exchanged for other consideration), any Award granted hereunder will pertain and apply to the securities which a holder of the number of shares of stock of the Company then subject to the Award is entitled to receive. In the event of a (i) dissolution or liquidation of the Company, (ii) sale or transfer of all or substantially all of the Company's assets or (iii) merger or consolidation in which the Company is not the surviving corporation or in which a majority of its outstanding shares are converted into securities of another corporation or are exchanged for other consideration, the Company must, contingent upon consummation of such transaction, either (a) arrange for any corporation succeeding to the business and assets of the Company to (x) assume each outstanding Award, or (y) issue to the Grantees replacement Awards (which, in the case of Incentive Stock Options, satisfy, in the determination of the Committee, the requirements of Section 424 of the Code), for such corporation's stock that will preserve the value, liquidity and material terms and conditions of the outstanding Awards; or (b) make the outstanding Awards fully exercisable or cause all of the applicable restrictions to which outstanding Stock Awards are subject to lapse, in each case, on a basis that gives the holder of the Award a reasonable opportunity, as determined by the Committee, following the exercise of the Award or the issuance of shares of Common Stock, as the case may be, to participate as a stockholder in any such dissolution, liquidation, asset sale or transfer, merger or consolidation, and the Award will terminate immediately following consummation of any such transaction. The existence of the Plan will not prevent any such change or other transaction, and no Participant hereunder has any right except as herein expressly set forth. Notwithstanding the foregoing provisions of this Section 7(m), Awards subject to and intended to satisfy the requirements of Section 409A of the Code will be construed and administered consistent with such intent.

SUBSIDIARIES OF VMWARE, INC.

SUBSIDIARIES	STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION
3401 Hillview LLC	Delaware
A.W.S. Holding, LLC	Delaware
AetherPal (INDIA) Private Limited	India
AetherPal Inc.	Delaware
AirWatch LLC	Delaware
Arkinnet Software Private Limited	India
CloudHealth Technologies (Singapore) Pte. Ltd.	Singapore
CloudHealth Technologies Australia Pty. Ltd	Australia
CloudHealth Technologies France SARL	France
CloudHealth Technologies Germany GmbH	Germany
CloudHealth Technologies UK Ltd.	United Kingdom
CloudHealth Technologies, LLC	Delaware
Heptio LLC	Delaware
Heptio UK Limited	United Kingdom
Nicira, Inc.	Delaware
Taiwan VMware Information Technology LLC	Taiwan
VeloCloud Networks Private Limited	India
Velocloud Networks, LLC	Delaware
VMware Australia Pty Ltd	Australia
VMware Belgium	Belgium
VMware Bermuda Unlimited	Ireland
VMware Bulgaria EOOD	Bulgaria
VMware Canada Inc.	Canada
VMware Costa Rica Ltda.	Costa Rica
VMware Denmark ApS	Denmark
VMware Eastern Europe	Armenia
VMware France SAS	France
VMware Global, Inc.	Delaware
VMware Hong Kong Limited	Hong Kong
VMware Information Technology (China) Co. Ltd	China
VMware International Limited	Ireland
VMware International Marketing Limited	Ireland
VMware Israel Ltd.	Israel
VMware Italy S.r.l.	Italy
VMware Korea Co., Ltd.	South Korea
VMware Malaysia SDN. BHD.	Malaysia
VMware Marketing Austria GmbH	Austria
VMware Mexico S. de R.L. de C.V.	Mexico
VMware Middle East FZ-LLC	Dubai
VMware Netherlands B.V.	Netherlands
VMware NZ Company	New Zealand

VMware Rus LLC	Russia
VMware Saudi Limited	Saudi Arabia
VMware Singapore Pte. Ltd.	Singapore
VMware Software e Serviços Brasil Ltda.	Brazil
VMware Software India Private Limited	India
VMware South Africa (Pty) Ltd	South Africa
VMware Spain, S.L.	Spain
VMware Sweden AB	Sweden
VMware Switzerland GmbH	Switzerland
VMware (Thailand) Co., Ltd.	Thailand
VMware Turkey Software Solutions and Services Company Limited	Turkey
VMware UK Limited	United Kingdom
VMware, K.K.	Japan

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-227273, 333-145402, 333-159747, 333-179680, 333-189491, 333-194148, 333-206114, and 333-218640) and Form S-3 (No. 333-219940) of VMware, Inc. of our report dated March 29, 2019 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

San Jose, California
March 29, 2019

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Patrick P. Gelsinger, certify that:

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

Date: March 29, 2019

By: /s/ Patrick P. Gelsinger

Patrick P. Gelsinger
Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Zane Rowe, certify that:

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

Date: March 29, 2019

By: /s/ Zane Rowe

Zane Rowe
Chief Financial Officer and Executive Vice President
(Principal Financial Officer)

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Patrick P. Gelsinger, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge, the Annual Report of VMware, Inc. on Form 10-K for the fiscal year ended February 1, 2019 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and the information contained in such Form 10-K fairly presents, in all material respects, the financial condition and results of operations of VMware, Inc.

Date: March 29, 2019

By: /s/ Patrick P. Gelsinger

Patrick P. Gelsinger
Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Zane Rowe, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge, the Annual Report of VMware, Inc. on Form 10-K for the fiscal year ended February 1, 2019 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and the information contained in such Form 10-K fairly presents, in all material respects, the financial condition and results of operations of VMware, Inc.

Date: March 29, 2019

By: /s/ Zane Rowe

Zane Rowe
Chief Financial Officer and Executive Vice President
(Principal Financial Officer)