

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 December 31, 2016

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting 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"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>

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

At June 30, 2016, 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 June 30, 2016) was approximately \$4,718,141,304. 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 June 30, 2016 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 February 17, 2017, the number of shares of common stock, par value \$0.01 per share, of the registrant outstanding was 408,641,159, of which 108,641,159 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 2017. 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

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VMware, vSphere, NSX, vSAN, vCloud, vCloud Air, vCloud Air Network, vCloud Suite, vSphere with Operations Management, vSphere Replication, vCenter, vCenter Site Recovery Manager, vRealize, vRealize Suite, Cross-Cloud Architecture, Horizon, AirWatch, VMworld, VMware View, vMotion, vFabric, Horizon Suite and Workspace ONE 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, including, without limitation, statements regarding expectations of, or our plans for: filing of financial reports for our revised fiscal calendar; continued growth in sales of our NSX, vSAN, VMware vCloud Air Network and end-user computing offerings; expected benefits to customers of our product and service offerings; availability and anticipated benefits to customers of VMware Cloud on AWS and VMware Cross-Cloud Services; anticipated significant investments in research and development and related product opportunities; the extent to which our revenue is derived from our server virtualization products; a decline in sales and the portion of overall business derived from VMware vSphere; slowing demand for on-premises information technology (“IT”) resources and the increasing need for our products and services to compete with off-premises public cloud and SaaS-based offerings; the impact of a growing number of partnerships among our competitors; plans to further expand our international activities; anticipated investments in privacy and data protection compliance; acquisitions of other businesses, products, technologies; the impact of changes in tax laws in Ireland; the impact on our business, financial statements and results of operations of changes in accounting rules, including Topic 606 and ASU 2016-02; synergies and benefits resulting from the acquisition of EMC by Dell and the strategic alignment we have with Dell; continuing to be included in the consolidated tax group of Dell; our intention to add or expand facilities and our expectation that such facilities will be available as needed; our lack of intent to declare cash dividends; the IT industry transformation and our related strategic positioning; continued strong renewals resulting in additional license sales of both our existing and newer products and solutions; continued operation as a publicly traded company; a decline in compute license sales; the impact on professional services revenue of expanding our ecosystem of third-party professionals with expertise in our offerings; increases in employee-related expenses; indefinitely reinvesting our overseas earnings outside of the United States and not repatriating them to the United States; the sufficiency of our liquidity and capital reserves to fund our normal operating requirements; our ability to generate positive cash flows from operations; our ability to obtain liquidity, arrange debt financing or enter into credit facilities, should additional liquidity be required; the sufficiency of our director and officer insurance policy planning; the timing and amount of our total unrecognized tax benefits; intended uses of derivative financial instruments and investments in fixed income securities; deductibility of goodwill; the anticipated impact of contingent liabilities; the realizability of net deferred tax assets and likelihood of generating sufficient taxable income in future years.

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”) pioneered the development and application of virtualization technologies with x86 server-based computing, separating application software from the underlying hardware. We are a leader in virtualization and cloud infrastructure solutions that enable businesses to transform the way they build, deliver and consume information technology (“IT”) resources in a manner that is based on their specific needs.

Over the years, we have increased our product offerings beyond compute virtualization to include offerings that allow organizations to manage IT resources across private clouds and complex multi-cloud, multi-device environments by leveraging synergies across three product categories: Software-Defined Data Center (“SDDC”), Hybrid Cloud Computing and End-User Computing (“EUC”). Our portfolio supports and addresses the four key IT priorities of our customers: modernizing data centers, integrating public clouds, empowering digital workspaces and transforming security. We create solutions that enable digital transformation for our customers as they transform 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 VMware became an indirectly-held, majority-owned subsidiary of Dell. As of December 31, 2016, Dell controlled approximately 82.8% of our outstanding common stock, including 38 million shares of our Class A common stock and all of our Class B common stock, and we are considered a “controlled company” under the rules of the New York Stock Exchange.

On October 25, 2016, our Board of Directors approved a change to our fiscal year 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 to align with Dell’s. The change in our fiscal year was effective January 1, 2017. As a result of the change, we had a transition period that began on January 1, 2017 and ended on February 3, 2017, and our first full fiscal year under the revised fiscal calendar began on February 4, 2017 and will end on February 2, 2018. We plan to include our unaudited financial statements for the approximately one-month transition period in our Quarterly Report on Form 10-Q filed for the fiscal quarter ended May 5, 2017.

Total revenue in 2016 increased 8% to \$7,093 million. Total revenue is comprised of license revenue of \$2,794 million and services revenue of \$4,299 million. While sales of our VMware vSphere (“vSphere”) product have remained strong, the majority of our license sales originate from products and services solutions across our portfolio beyond our compute products. We continue to experience growth in sales of VMware NSX (“NSX”), our network virtualization solution, VMware vSAN (“vSAN”) products, our VMware vCloud Air Network offering and our EUC solutions.

We operate in one reportable operating segment, thus all required financial segment information can be found in our consolidated financial statements. For financial information on our business, including by geographic area, refer to Note O to the consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

Our corporate headquarters are located at 3401 Hillview Avenue, Palo Alto, California, and we have 116 offices worldwide.

Products and Technology Solutions

Software-Defined Data Center

We were the first company to articulate a vision for the SDDC, whereby increasingly infrastructure is 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 the data center infrastructure have been increasing because the data center environment has become divergent, leading to higher complexity. The increasing complexity of the data center demands constantly increasing resources to manage and maintain the IT infrastructure. The 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 promises to dramatically simplify data center operations and lower costs.

Our SDDC architecture consists of four main product categories:

- Compute
- Storage and Availability

- Network and Security
- Management and Automation

Compute

vSphere, our flagship data center platform, 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 purchase vSphere, Cloud Foundation or suite versions that include vSphere, such as VMware vCloud Suites and vSphere with Operations Management (“vSOM”).

We have continued to develop vSphere solutions for compatibility with new technologies and tools utilized by software developers and enterprises. In 2016, we introduced our VMware vSphere Integrated Containers solution that allows customers to deploy containerized and traditional applications side-by-side on a common platform, without re-architecting their existing infrastructure. In addition, our OpenStack solution, VMware Integrated OpenStack, is an OpenStack distribution that enables organizations to provide developers with open, cloud-style application program interfaces (“APIs”) to access VMware’s enterprise-class infrastructure.

VMware also introduced a new developer ready, cloud native application solution in 2016 called Photon Platform. Primarily focused on modern application development and container frameworks like Pivotal Cloud Foundry and Kubernetes, Photon Platform leverages key VMware SDDC technologies such as our hypervisor, NSX and vSAN to help enterprise customers meet their digital transformation objectives.

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 serve as hyper-converged infrastructure solutions designed to enable customers to deploy a broad range of hardware solutions. Key hyper-converged infrastructure solutions in this area include:

- **vSAN**— clusters server disks to create radically simple, shared storage designed for virtual machines.
- **VxRail**— a fully integrated and pre-configured Dell EMC Appliance powered by vSAN and vSphere software that extends the VMware environment.
- **vSphere Replication**— provides a cost-efficient and simple way to manage replication.
- **vCenter Site Recovery Manager**— leverages vSphere and vSphere Replication to protect applications against site failures and to streamline planned migrations.

We experienced growth in both customer count and sales of vSAN during 2016.

Network and Security

Network virtualization abstracts physical networks and greatly simplifies the provisioning and consumption of networking resources. In addition, security services are built in, do not require purpose-built hardware and can scale with the network which transforms security. Our network virtualization solution, NSX, was launched in 2013. Sales of NSX continued to grow during 2016.

Management and Automation

Our management and automation products move beyond core compute infrastructure to manage and automate overarching IT processes involved in provisioning IT services and resources to users from initial infrastructure deployment to retirement. These IT processes manage virtualized and non-virtualized infrastructure resources and private and public cloud infrastructures, including hybrid cloud services. Examples of products in the management and automation product portfolio include:

- **vRealize Operations**— provides performance, capacity and configuration management for virtual or physical infrastructure.
- **vRealize Automation**— enables customers to rapidly deploy and provision cloud services.
- **vRealize Business**— provides transparency and control over the costs and quality of IT services.

Software-Defined Data Center Suites

Our SDDC products are available separately or our compute and management and automation products may be acquired as part of a broader offering. The VMware vCloud Suite, vSOM 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**— designed to fulfill the promise of the software-defined data center by pooling industry-standard hardware and running compute and management functions in the data center as software-defined services.
- **vSOM**— allows users to optimize capacity and monitor the workload performance of their vSphere environments.

- **VMware vRealize Suite**— cloud management platform that extends vCloud Suite capabilities beyond a vSphere private cloud environment to both heterogeneous and hybrid cloud environments.

Software-Defined Data Center Platform

Our SDDC products can also be delivered through a unified platform. In 2016, we introduced Cloud Foundation, our unified platform that brings together our compute, storage and networking technologies into a natively integrated stack to deliver enterprise-ready cloud infrastructure for the private and public clouds. In addition, the combined offering includes lifecycle management capabilities to span the full stack. Cloud Foundation is a delivery independent platform that can be deployed on-premises or run as-a-service. Customers can choose a hybrid combination of on-premises and as-a-service platforms.

Primary solutions include:

- **On-Premises**— available through major compatible hardware solutions such as VxRack and HPE ProLiant. VxRack is a fully tested and pre-configured Dell EMC rack-scale system, powered by Cloud Foundation for VMware-centric data centers, or by vSphere for traditional architectures.
- **As-a-Service**— available through major online service providers, such as IBM Cloud (through our VMware vCloud Air Network offering) and VMware vCloud Air (“vCloud Air”). In addition, it is expected to be available in 2017 on Amazon Web Services (“AWS”) through an integrated hybrid offering, VMware Cloud on AWS.

Hybrid Cloud Computing

In 2016, we re-articulated our cloud strategy and introduced our Cross-Cloud Architecture that enables consistent deployment models, security policies, visibility, and governance for all applications, running on-premises and off-premises, regardless of the underlying cloud, hardware platform or hypervisor. Our Cross-Cloud Architecture builds on our private and hybrid cloud capabilities by offering customers the freedom to innovate in multiple clouds, and is delivered through Cloud Foundation, the VMware vRealize cloud management platform, and a new set of Cross-Cloud Services which VMware is 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 all devices.

We currently enable our customers to utilize off-premises vSphere-based hybrid cloud computing capacity through two offerings: VMware vCloud Air Network (“vCAN”) and vCloud Air. In addition, during 2016, we announced a strategic alliance with AWS to build and deliver an integrated hybrid offering, VMware Cloud on AWS, which will enable customers to run applications across vSphere-based private, public and hybrid cloud environments, furthering our strategic priority of integrating public clouds. VMware Cloud on AWS is expected to become available in 2017.

vCAN, a key component of our strategic priority to integrate with public clouds, is a global ecosystem of over 4,300 cloud providers in more than 100 countries providing VMware-based cloud services. Our vCAN program is directed at hosting and cloud computing vendors, enabling organizations to choose between running applications in virtual machines on their own private clouds inside their data center or on public clouds hosted by a service provider. For example, IBM, OVH and Rackspace are vCAN partners who leverage our SDDC technologies to create cloud services addressing the needs of customers around the world. IBM was our first vCAN partner to offer Cloud Foundation as a service, which enables their customers to leverage our SDDC technologies on IBM’s Cloud in their worldwide cloud data centers.

vCloud Air, built on the foundation of vSphere, is a public cloud operated by VMware that includes infrastructure and disaster recovery, while providing customers with a common platform to seamlessly extend their data center to the cloud. vCloud Air enables customers to extend the same skills, tools, networking and security models across both on- and off-premises environments.

In addition, Cross-Cloud Services are new Software-as-a-Service (“SaaS”) offerings under development to enable visibility into cloud usage and costs, enhance consistent networking and security policies, and automate the deployment, management, and migration of applications and data across vSphere and non-vSphere private and public clouds. The Cross-Cloud Services we previewed at VMworld and expect to make available in 2017 include discovery and analytics, compliance and security and deployment and migration. Cross-Cloud will enable our customers to run, manage, connect and secure their applications across private and public clouds, including AWS, Azure, Google Cloud Platform and IBM Cloud, as well as all devices in a common operating environment, regardless of whether the underlying infrastructure is VMware-based.

End-User Computing

Our EUC portfolio enables our customers to securely deliver access to applications and data for their end users from any device of the user’s choice, empowering digital workspaces. Our EUC solutions are designed to optimize simplicity and choice

for end users, while providing security and control to corporate IT organizations. With our EUC solutions, end users receive a consumer-like experience via a digital workspace that gives them the ability to access any application from any device of their choice, from any location. IT organizations are able to enhance their enterprise security for corporate applications and data utilizing our EUC solutions.

Our complete EUC solution consists of VMware Workspace ONE (“Workspace ONE”), our digital workspace platform which includes VMware AirWatch (“AirWatch”) unified endpoint management and VMware Horizon (“Horizon”) application and desktop virtualization:

- **AirWatch**— provides an enterprise mobility platform built to manage and secure endpoints from a single platform, enabling deployment of native, web or remote applications through an application catalog across every device with built-in single sign-on. It provides the core foundation to support an increasingly mobile workforce and customer base, enabling customers to take advantage of “bring your own device” initiatives.
- **Horizon**— 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 AirWatch 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. These technologies leverage our SDDC solutions, allowing customers to extend the value of virtualization and management from their data center to their devices. While many of these technologies are in use today, they are deployed in silos across enterprise IT. Workspace ONE, which is offered as both an on-premises installed platform or as-a-service, integrates these silos to streamline the delivery of new applications and experiences.

Technology Alliances

We have more than 1,200 technology partners with whom we bring joint offerings to the marketplace and over 4,300 active service 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 NEC for joint certification and co-development, and we continue to work closely with Dell, now our controlling stockholder. We also work closely with AMD, Intel 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 market leaders to deliver value-added products that integrate with our products.

VMware Service Providers We have established partnerships with over 4,300 active service providers in our vCAN program, including CenturyLink, Claranet, Fujitsu, IBM, KPN, Macquarie, Navisite, Nifty, NTT, OVH, Rackspace, Telefonica, Tieto, T-Systems and UOL Diveo, 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 service provider partnerships, during 2016, we announced a strategic alliance with AWS to build and deliver an integrated hybrid offering, VMware Cloud on AWS, which will enable customers to run applications across vSphere-based private, public and hybrid cloud environments. VMware Cloud on AWS is expected to become available in 2017.

Our Technology Alliance Partner program facilitates joint solution creation and coordinated go-to-market activities with our partners. Over 4,600 of the most widely used applications from ISVs support the vSphere platform. These applications include business solutions for enterprise resource planning, human resource management, electronic medical records management, financial processing and middleware, such as application servers and databases.

Our ISVs and other alliance partners, developers and additional VMware community members have distributed more than 2,900 software applications as virtual appliances. We invest significant capital in testing and certification of infrastructure to rigorously ensure our software works well 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 system level, systems management, desktop, mobile devices, security, application development, collaborative applications, networking, storage 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 VMware employees hold a variety of standards organization leadership positions.

Our R&D expenses totaled \$1,503 million, \$1,300 million and \$1,239 million in 2016, 2015 and 2014, respectively.

Sales and Marketing

We have a highly leveraged go-to-market strategy that includes a direct sales force that is complementary to our channel. Our renewals team is focused on extending customer relationships and renewing customer contracts with us.

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 (“VPN”), which offers resellers sales and product training, pricing incentives, rebates and access to the worldwide network of VMware distributors and the VMware Partner Central Web portal. 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 obtain licenses to our products 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 in their data centers. 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 and end-user computing 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 APJ vForum events are held in the Asia Pacific and Japan region. We also offer management presentations, seminars and webinars on our products of virtualization, end-user computing and cloud services. We believe the combination of these activities strengthens our brand and enhances our leading position in our industry.

During 2016, we continued joint marketing, sales, branding and product development efforts with Dell and other Dell Technologies companies to enhance the collective value we deliver to our customers. We also announced 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.

Backlog

Backlog is comprised of unfulfilled orders against purchase orders or executed agreements received at the end of the period. While we generally ship products immediately upon receipt of purchase orders or executed agreements from customers, we sometimes have orders with unshipped products. As of December 31, 2016, our backlog was \$80 million consisting of licenses, maintenance, and services. Backlog was not significant as of December 31, 2015. We do not believe that the amount of backlog, as of any particular date, is indicative of future sales.

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 2016, three 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., Tech Data Corporation and Ingram Micro, Inc. accounted for 15%, 12% and 10%, respectively, of our consolidated revenue in 2016. 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.

Competition

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. 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 we fail to develop products and services that address evolving customer requirements and that complement and or compete with off-premises compute resources offered by competitors, the demand for our virtualization products and services may decline, and we could experience lower growth. Additionally, vCAN offerings from our partners and certain vCloud Air offerings may compete directly with infrastructure-as-a-service ("IaaS") offerings from various public cloud providers such as AWS and Microsoft. In October 2016, we announced a strategic alliance with AWS to deliver a vSphere-based cloud service running on AWS. Although we expect our strategic alliance to provide significant advantages to customers when it is generally available, our strategic alliance with Amazon and our vCAN offerings from our other partners may not prevent or completely offset a decline in demand for our virtualization products and services. Our strategic alliance with Amazon may also be seen as competitive with vCAN offerings and adversely affect our relationship with vCAN partners.

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, and Microsoft offers its own server, network and storage virtualization software packaged with its Windows Server product and offers built-in virtualization in the client version of Windows. 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, Rocket and OpenStack appear to provide pricing competition and enable competing vendors to leverage these open source technologies to compete directly with our SDDC initiative. Enterprises and service providers have shown interest in building their own clouds based on open source projects such as OpenStack, and other companies have indicated their intention to expand offerings of virtual management and cloud computing solutions as well. Additionally, a number of enterprise IT hardware vendors have released solutions based on OpenStack including IBM and Cisco.

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. 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 December 31, 2016, over 1,300 patents issued by the United States 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. The granted U.S. patents expire beginning in 2018, with the last of the expiration dates being in 2035. 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 United States for “VMWARE,” “VMWORLD,” “VSPHERE,” “VMWARE VCLOUD,” “VMWARE VIEW,” “VMOTION,” “HORIZON,” “AIRWATCH,” “VREALIZE,” “VFABRIC,” “VCLOUD,” “VMWARE NSX” and numerous other trademarks. We have also registered trademarks in a number of foreign countries.

We rely on a combination of patent, trademark, copyright and trade secret laws in the United States 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 United States and a number of 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 December 31, 2016, we had approximately 19,900 employees in 116 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 to utilize personnel who are dedicated to work for VMware 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.

EXECUTIVE OFFICERS OF THE REGISTRANT

The names of our executive officers and their ages as of February 17, 2017, are as follows:

Name	Age	Position(s)
Patrick Gelsinger	55	Chief Executive Officer and Director
Zane Rowe	46	Chief Financial Officer and Executive Vice President
Maurizio Carli	58	Executive Vice President, Worldwide Sales
Sanjay Poonen	47	Chief Operating Officer, Customer Operations
Rangarajan (Raghu) Raghuram	54	Chief Operating Officer, Products and Cloud Services
Rajiv Ramaswami	51	Chief Operating Officer, Products and Cloud Services
S. Dawn Smith	53	Senior Vice President, Chief Legal Officer and Secretary

Patrick Gelsinger has been the 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, a designer and manufacturer of advanced integrated digital technology platforms, where he was 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 this, 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 in 1993. Mr. Rowe currently serves on the boards of Sabre Corporation and Pivotal Software, Inc., an indirect majority-owned subsidiary of VMware's parent company, Dell Technologies, and in which VMware has an ownership interest.

Maurizio Carli has served as VMware's Executive Vice President, Worldwide Sales, since April 2016. Mr. Carli previously served as VMware's 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., an internet search and advertising company, where he served as Managing Director, Enterprise Business, EMEA from June 2008 to November 2008; Business Objects S.A., a provider of business intelligence solutions, where he served as Senior Vice President & General Manager, EMEA from December 2002 to December 2007; and at International Business Machines Corporation, a provider of integrated business solutions, 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.

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 includes 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 Networking. Prior to joining VMware he was Executive Vice President and General Manager of the Infrastructure and 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.

S. Dawn Smith has served as VMware's Senior Vice President, Chief Legal Officer and Secretary at VMware since December 2015. She joined VMware as Senior Vice President, General Counsel and Secretary in September 2009, and she served as Chief Compliance Officer from August 2010 through January 2017. Prior to joining VMware, Ms. Smith was a partner at Morrison & Foerster LLP, a law firm. Prior to joining Morrison & Foerster LLP, she was an attorney at Wilson Sonsini Goodrich & Rosati P.C.

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 Technologies Inc. ("Dell") following Dell's acquisition of our former majority stockholder EMC Corporation ("EMC") on September 7, 2016 (the "Dell Acquisition"), including, among other things, 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 emerging 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 our vSphere hypervisor product 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 software-defined data center ("SDDC") products such as our management and automation and network virtualization ("NSX") offerings, our Horizon client virtualization offerings, VMware AirWatch ("AirWatch") mobile device management offerings and VMware vSAN ("vSAN") storage virtualization offerings. We have also been introducing software-as-a-service ("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 into the public cloud and to introduce cross-cloud products and services by investing in cross-cloud and SaaS initiatives and partnering with public cloud providers such as Amazon Web Services ("AWS") and IBM. These initiatives present new and difficult technological and compliance challenges, and significant investments will 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 has increased, our rate of revenue growth increasingly depends upon the success of our newer product and service offerings. To the extent that our emerging 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 and more businesses achieve high levels of virtualization in their data centers, the market for our VMware 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 may also shift some of their existing workloads to public cloud providers, thereby limiting growth, and potentially reducing, the market for on-premises deployments of VMware vSphere. Although sales of VMware vSphere have declined as a portion of our overall business, and we expect this trend to continue, VMware vSphere remains key to our future growth, as it serves as the foundation for our newer SDDC, network virtualization and our planned new cross-cloud offerings. Although we are developing 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 we fail to develop products and services that address evolving customer requirements and that complement and or compete with off-premises compute resources offered by competitors, the demand for VMware's virtualization products and services may decline, and we could experience lower growth. Additionally, vCloud Air Network offerings from our partners and certain vCloud Air offerings may compete directly with infrastructure-as-a service ("IaaS") offerings from various public cloud providers such as Amazon Web Services ("AWS") and Microsoft. In October 2016, we announced a strategic alliance with AWS to deliver a vSphere-based cloud service running on AWS. Although we expect our strategic alliance to provide significant advantages to customers when it is generally available, our strategic alliance with Amazon and our vCloud Air Network offerings from our other partners may not prevent or completely offset a decline in demand for our virtualization products and services. Our strategic alliance with Amazon may also be seen as competitive with vCloud Air Network offerings and adversely affect our relationship with vCloud Air Network partners.

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, and Microsoft offers its own server, network and storage virtualization software packaged with its Windows Server product and offers built-in virtualization in the client version of Windows. 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, Rocket and OpenStack appear to provide pricing competition and enable competing vendors to leverage these open source technologies to compete directly with our SDDC initiative. Enterprises and service providers have shown interest in building their own clouds based on open source projects such as

OpenStack, and other companies have indicated their intention to expand offerings of virtual management and cloud computing solutions as well. Additionally, a number of enterprise IT hardware vendors have released solutions based on OpenStack including IBM and Cisco.

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. 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.

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.

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. 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 information technology (“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 could adversely impact our business, financial condition and operating results in a number of ways, including by lengthening sales cycles, affecting the size of enterprise agreements (“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 vote by the United Kingdom to exit the European Union or that region’s failure to recover 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 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 historically 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. Even if customers are willing to purchase our products and services, if they do not meet our credit requirements, we may not be able to record accounts receivable or unearned revenue or recognize revenue from these customers until we receive payment, which could adversely affect the amount of revenue we are able to recognize and our cash flows in a particular period. 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 existing notes payable to Dell, fund future product development and acquisitions or conduct stock buybacks.

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

The virtualization, cloud computing, end-user computing and SDDC 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 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.

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, introduce them into product suites and maintain their compatibility with multiple IT resources utilized by our customers, which can significantly increase the development time and effort necessary to achieve the interoperability of product suite components while maintaining product quality. 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 virtualization, cloud computing, end-user computing and SDDC 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 VMware 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 VMware vSphere may decline. Additionally, if we fail to realize returns on investments in our newer SaaS and cross-cloud initiatives, our operating margins and results of operations will be adversely impacted.

Breaches of our cybersecurity systems could seriously harm our business.

We increasingly depend upon our IT systems 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 have penetrated our network security and our website in the past and may do so in the future. These cyberattacks 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 we store increasing amounts of customer data and host or manage parts of customers’ businesses in cloud-based IT environments.

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, 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, we could be subject to significant claims for liability from our customers, we could face regulatory actions from governmental agencies, our ability to protect our intellectual property rights could be compromised, our reputation and competitive position could be materially harmed 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 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 (which have been increasing in length) 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 recognizing revenue in any given quarter, which can be affected by a number of factors, including product announcements, beta programs and product promotions that can cause revenue recognition of certain orders to be deferred until future products to which customers are entitled become available;
- 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;
- credit risks of our distributors, who account for a significant portion of product revenue and accounts receivable;
- our ability to process sales at the end of quarter;
- 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;
- 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; and
- to the extent that we buy back shares of our common stock in private transactions with Dell or other third parties through arrangements that are accounted for as derivative instruments, fluctuations in our stock price during the pricing reference periods of such arrangements may result in gains or losses in our quarterly earnings.

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. During the year ended December 31, 2016, 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 further weakening of foreign currency exchange rates against the U.S. dollar would likely result in additional adverse impact on our revenue.

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

Our international activities account for a substantial portion of our revenue and profits, 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 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, the Chinese government is working to implement new network security standards that will require IT systems being sold into certain key sectors to be certified as “secure and controllable.” As part of that effort, in December 2014, standards were implemented in the banking sector requiring IT companies selling to Chinese banks to submit their software and other technology to intrusive security testing, include indigenous Chinese intellectual property and encryption technology in their software and disclose source code and other proprietary information to the Chinese government. Implementation of these standards was subsequently suspended in light of concerns communicated by banks and other parties. However, in 2015 and 2016, the government has continued to enact or propose additional laws and regulations to address information and network security. For example, in July 2015, China enacted a State Security Law authorizing the government to implement a system for maintaining the security of networks and information. In November 2015, the insurance regulator in China issued draft insurance cyber rules that would require insurance companies to have compliant encryption tools, secure and compliant hardware and software products, and data storage. 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 prohibit the provision of services to customers whose identities are unclear or who refuse to cooperate in the verification process. In November 2016, China’s legislature enacted a Network Security Law that comes into effect June 1, 2017 and that contemplates data localization measures and other network security measures relevant to a vaguely defined scope of “key information infrastructure.” 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.

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.

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 VMware NSX virtual networking, vSAN virtual storage, cross-cloud and SaaS 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 21% of our total revenue during the year ended December 31, 2016. 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, 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 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 the merit of 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 J 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 United States. 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 an open source license 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. On August 9, 2016, a Notice of Appeal was filed. We have filed our responsive appellate brief. An adverse outcome to this claim on appeal or to other claims could have a material adverse impact on our intellectual property rights, our operating results and financial condition.

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, vCloud Air, vCloud Air Network integrated virtual desktop and mobile device, cross-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. Additionally, the duration of sales cycles for our offerings has increased as our customers’ purchasing decisions become more complex and require additional levels of approval. 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.

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 new product initiatives, such as our vCloud Air 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 arrangements 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 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. 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. We may also inherit unknown security vulnerabilities when we integrate the products or services of other companies into VMware products or services. 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.

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 intend 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, which completed its acquisition of EMC in September 2016, 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.

Three of our distributors each accounted for 10% or more of our consolidated revenue during the year ended December 31, 2016. 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 vCloud Air and SaaS offerings rely on third-party providers for data center space and colocation services.

Our vCloud Air and 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 vCloud Air and 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.

SaaS offerings, which involve various risks, constitute an important part of our business.

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 cross-cloud offerings will also require 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.

Improper disclosure and use of personal data could result in liability and impact our business.

Our business is subject to a wide variety of laws and regulations regarding privacy and protection of personal data. Federal, state and foreign governments and agencies have adopted or are considering adopting laws and regulations regarding the collection, storage, use and disclosure of this information. We collect contact and other personal or identifying information from our customers, and our customers increasingly use our services to store and process personal information and other regulated data, including protected health information subject to stringent data privacy laws. In the course of providing employee compensation and benefits, we also maintain personal data of our employees and share that information with third party payroll and benefits providers. Our hybrid cloud computing service offerings, pursuant to which we offer hybrid cloud services and enable third-party service providers to offer hybrid cloud services built on our technology, expose us to particularly significant risks. We rely on the contractual representations of these third parties that they do not violate any applicable privacy laws and regulations or their own privacy policies.

Any failure or perceived failure by us or our business partners to comply with posted privacy policies, other federal, state or international privacy-related or data protection laws and regulations, or the privacy commitments contained in contracts could result in proceedings against us by governmental entities or others and significant fines, which could have a material adverse effect on our business and operating results and harm our reputation. Further, any systems failure, unauthorized access or other compromise of our security that results in the release of our customers' or employees' data could (i) subject us to substantial damage claims, (ii) expose us to costly regulatory remediation, (iii) harm our reputation and brand, and (iv) disrupt our business activities. The application of U.S. and international data privacy laws and regulations to cloud computing vendors is evolving and uncertain, and our existing contractual provisions may prove to be inadequate to protect us from claims for data loss or regulatory noncompliance made against cloud computing providers with whom we may partner. Additionally, privacy laws and regulations could negatively affect demand for our services, thereby reducing our revenue.

A new European Union data protection law, the General Data Protection Regulation, which will become effective in May 2018, is wide-ranging in scope. In order to meet the new EU requirements, we will have to invest resources necessary to implement policy changes across our business units and services relating to how we collect and use personal data relating to customers, employees and vendors. Failure to comply may lead to sizeable fines. EU data protection regulators are expected to publish guidance for compliance with the new law which may further impact our information processing activities. In parallel, with the advent of the EU-U.S. Privacy Shield (the new framework agreement between the U.S. Department of Commerce and the European Commission for transferring personal data from the European Union to the United States), we expect that the international transfer of personal data will present ongoing compliance challenges and complicate our business transactions as we negotiate and implement suitable arrangements with international customers and international and domestic vendors. In addition, countries outside the EU are considering or have passed legislation that requires local storage and processing of data, which could increase the cost and complexity of delivering our services. Our current arrangements for the transfer of personal data will also need to continue to adapt to future judicial decisions and future rulemaking activity as laws on privacy and the protection of personal data continue to evolve in the countries in which we do business.

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.

In June 2015, we reached an agreement with the Department of Justice (“DOJ”) and the General Services Administration (“GSA”) to pay \$76 million to resolve allegations that our government sales practices between 2006 and 2013 had violated the federal False Claims Act. As set forth in the settlement agreement, VMware denied the allegations and did not admit liability. 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 dispositions 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, and from time to time we dispose of businesses, products and technologies. These transactions 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, 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;
- unidentified issues not discovered during the diligence process, including issues with the acquired 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 acquisitions of other companies, which could result in an impairment of goodwill or intangibles. As of December 31, 2016, goodwill and amortizable intangible assets were \$4,032 million and \$517 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 customers, fulfilling contractual obligations 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 February 2017 we implemented a change in our fiscal calendar, which required us to make adjustments to our critical business processes and data systems. Any disruptions relating to our systems enhancements, particularly any disruptions impacting our operations during the implementation period, could adversely affect our business in a number of respects. Additionally, delays in adapting our information systems to address new business models could limit the success or result in the failure of such initiatives and impair the effectiveness of our internal controls. Even if we do not encounter these adverse effects, the implementation of these enhancements may be much more costly than we anticipated. If we are unable to successfully implement the information systems enhancements as planned, our operating results could be negatively impacted.

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 (the "IRS"). All U.S. federal income tax matters have been concluded for years through 2010, except for any matters under appeal. The IRS is currently auditing the Dell-owned EMC consolidated group's federal tax returns for tax year 2011. 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. 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, changing interpretation of existing laws or regulations, the impact of accounting for stock-based compensation, the impact of accounting for business combinations, changes in the composition of global earnings, the expiration of statute of limitations, settlements of audits, changes in our international organization and changes in overall levels of income before tax.

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 rate of taxation in foreign jurisdictions is lower than our U.S. tax rate. Our international income is primarily earned by our subsidiaries organized in Ireland, and, as such, our effective tax rate can be impacted by the composition of our earnings in the U.S. and foreign 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. Prior to this date, 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 Dell Acquisition, we could be subject to higher tax obligations in the event we executed similar structural changes.

The current U.S. administration has made public statements indicating that tax reform is a priority. Any significant change to U.S. tax laws could have a material impact on our financial condition and operating results.

In addition, numerous other countries have recently enacted or are considering enacting changes to tax laws, administrative interpretations, decisions, policies and positions. The Organisation for Economic Cooperation and Development issued

guidelines and proposals during October 2015 that may change how our tax obligations are determined in many of the countries in which we do business. 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 United States. These principles are subject to interpretation by the SEC 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 May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, Revenue from Contracts with Customers (Topic 606). We plan to adopt Topic 606 using the full retrospective transition method when it becomes effective for us in the first fiscal quarter of 2019, under the Company's new fiscal calendar. While we are continuing to assess the potential impacts of Topic 606, we currently expect unearned license revenue related to the sale of perpetual licenses will decline significantly upon adoption. Currently, we defer all license revenue related to the sale of perpetual licenses in the event certain revenue recognition criteria are not met. However, under Topic 606 we would generally expect that substantially all license revenue related to sale of perpetual licenses will be recognized upon delivery. We are continuing to evaluate the effect that Topic 606 will have on our financial statements and related disclosures, and preliminary assessments are subject to change.

Risks Related to Our Relationship with Dell

Our stock price fluctuated significantly following the announcement of the Dell Acquisition, and our future relationship with Dell may adversely impact our business and stock price in the future.

In October 2015, EMC and Dell announced the Dell Acquisition, pursuant to which Dell acquired EMC in a transaction that closed on September 7, 2016. In connection with the Dell Acquisition, Dell issued a tracking stock to EMC shareholders, Class V common stock, that is intended to reflect our economic performance as partial consideration to the EMC shareholders. The Class V common stock tracks the performance of an approximately 53% economic interest in our business.

Our stock price fluctuated significantly following the announcement of the Dell Acquisition. A number of factors relating to our future 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 and the other matters over which EMC formerly had control, 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 that our other stockholders may not view as beneficial.
- We have arrangements with a number of companies that compete with Dell, and the completion of the Dell Acquisition could adversely affect our relationship with these companies or other customers, suppliers and partners.
- 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.
- We anticipate certain synergies and benefits from the Dell Acquisition that may not be realized.
- The Class V common stock issued by Dell on September 7, 2016, while not a VMware issued security, increases the supply of publicly traded securities that track VMware's economic performance and may create the perception that the Class V common stock dilutes the holdings of our public stockholders, both of which may put downward pressure on our stock price. While the price of Class V common stock has initially been relatively stable, it may be volatile from

time-to-time as a consistent trading market in Class V common stock is established. Any volatility in the market for Class V common stock could contribute to volatility in the price of VMware Class A common stock.

- With the closing of the Dell Acquisition, Dell has become more highly leveraged and may be required to commit a substantial portion of its cash flows to servicing its indebtedness. While Dell has publicly stated that it plans to leave VMware free to use its cash to invest in the VMware business, 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, the trading price of the Class V common stock issued by Dell would be adversely affected, which could negatively impact the price of our Class A common stock, and uncertainty as to the impact of such a default on VMware could disrupt our business.
- Some of our products compete directly with products sold or distributed by Dell, which could result in reduced sales.
- The Dell Acquisition creates potential litigation risk. Various lawsuits have been filed against EMC and others in connection with the Dell Acquisition, including one ongoing litigation in which the Company and our directors are named as defendants. It is possible that we or our directors may be named in other lawsuits.

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

As of December 31, 2016, Dell controlled 38,250,166 shares of our Class A common stock and all 300,000,000 shares of our Class B common stock, representing 82.8% of the total outstanding shares of common stock or 97.7% of the voting power of outstanding common stock held by EMC. 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 Internal Revenue Service. 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. Dell is entitled to exercise the voting control and contractual rights of EMC, and may do so in a manner that could vary significantly from EMC's historic practice. 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 December 31, 2016, Dell controlled 82.8% 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 our 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. Dell is prohibited through September 7, 2018 under its charter from purchasing or otherwise acquiring 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 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 contributed technology and transferred employees to Pivotal Software, Inc. ("Pivotal") in 2013 and continue to hold a significant ownership interest in Pivotal. For more information, refer to Note B to the consolidated financial statements in Part II, Item 8 and "Our Relationship with Dell" 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 and "Transactions with Related Persons" in the proxy statement for our 2016 annual meeting of stockholders.

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, if Pivotal requires additional funding, we may be asked to contribute capital resources to Pivotal or accept dilution in our ownership interest, and we may be unable to realize any value from the technology and resources that we contributed to Pivotal.

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.

The realignment of our fiscal calendar to coincide with Dell's and Dell's reporting on our financial results may result in fluctuations in our stock price, and errors in our implementation of the realignment could adversely impact our business operations and financial results.

Dell provides segment reporting on VMware in its public reports on financial results. However, prior to February 2017, the fiscal calendars for Dell and VMware did not align. VMware reported on a calendar year basis through December 31, 2016, whereas Dell reports on a 52- or 53-week fiscal year basis ending on the Friday nearest to January 31 of each year. On October 25, 2016, our Board of Directors approved a change to our fiscal calendar effective January 1, 2017 so that our fiscal calendar will align with Dell's.

The change in our fiscal year was effective January 1, 2017, and the period beginning on January 1, 2017 and ending on February 3, 2017 will be reported as a transition period (the "Transition Period"). Accordingly, our first full fiscal year under our revised fiscal calendar began on February 4, 2017 and will end on February 2, 2018. As a result of the change, our fiscal periods will correspond with Dell's.

We plan to include our unaudited financial statements for the approximately one-month transition period in our Quarterly Report on Form 10-Q filed for the fiscal quarter ending May 5, 2017. We will not file a separate transition report. Following the change in our fiscal calendar and for the first fiscal year, we will compare results from each fiscal period under our new fiscal calendar to the corresponding period under our prior calendar. Any confusion by investors and analysts in interpreting year-over-year changes to our financial results due to the change in our fiscal calendar could cause fluctuations and volatility in our stock price.

Additionally, the financial results for Dell's VMware business segment may differ from the financial results reported by us due to the impact of intercompany transactions, purchase accounting, and reporting practices. These differences in the reporting of VMware's financial results by us and Dell could result in volatility and fluctuations in the price of our Class A common stock.

Further, the process of implementing a fiscal calendar transition requires us to make adjustments to many of the critical business processes and data systems that our management and personnel rely upon to conduct our business operations and coordinate our worldwide activities. Although we are undertaking a thorough programmatic approach to transition our processes and systems to the new fiscal calendar, there can be no assurance that errors and failures will not occur that could temporarily impair our ability to conduct our operations efficiently and effectively. Any such failures to our critical business processes and data systems could adversely impair our results of operations and financial results until such failures can be successfully remediated.

We could be held liable for the tax liabilities of other members of Dell's consolidated tax group.

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 with the closing of the Dell Acquisition, we are now 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. 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. 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 VMware's 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, VMware 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, 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.

Additionally, under the tax sharing agreement, if it is subsequently determined that the tracking stock issued in connection with the Dell Acquisition constitutes a taxable distribution, VMware 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 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.

Our CEO, our CFO and some of our directors have potential conflicts of interest with Dell.

Our CEO, our CFO and some of our directors received shares of Dell Class V common stock in partial consideration for their EMC common stock when the Dell Acquisition closed. In addition, some of our directors are executive officers or directors of Dell, and Dell, through its control of EMC, which is the sole holder of our Class B common stock, is entitled to elect 8 of our 9 directors. Ownership of Dell Class V 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 or officers 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 officers or directors of both us and Dell and we may be precluded from pursuing certain growth initiatives.

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, persons who might otherwise accept our invitation to join our board of directors may decline.

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. 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 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 the year ended December 31, 2016, we recognized revenue of \$663 million and as of December 31, 2016, \$652 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 B 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 trading market for Dell Class V common stock that was issued upon the closing of the Dell Acquisition that is expected to track the performance of VMware, as well as continuing volatility in technology company share prices, could also lead to volatility in our stock price.

Dell, which beneficially owned 82.8% of our outstanding stock as of December 31, 2016, 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. It is also uncertain what impact the trading of Dell Class V common stock, which represents approximately 53% of the economic interest in us, will have on the volatility and the liquidity of our Class A common stock and how the Dell Class V common stock will trade in relation to our Class A common stock over time. 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 or who cover the Dell Class V common stock 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 December 31, 2016, we owned or leased the facilities described below:

Location		Approximate Sq. Ft.	Principal Use(s)
Palo Alto, CA	owned:	1,492,802 ⁽¹⁾	Executive and administrative offices, sales and marketing, and R&D
North and Latin American region (excluding Palo Alto, CA)	leased:	1,105,910 ⁽²⁾	Administrative offices, sales and marketing, R&D and data center
Asia Pacific region	leased:	1,214,958	Administrative offices, sales and marketing, R&D and data center
Europe, Middle East and Africa region	leased:	604,775	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 2046, covering the property and improvements located at VMware's Palo Alto, California campus. Of the total square feet owned, approximately 86,000 square feet were under construction as of December 31, 2016. In addition, we have the right to build an additional 100,000 square feet on the campus, if needed, to accommodate expansion.

⁽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 2017, 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 J 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.

The following table sets forth the range of high and low sales prices of our Class A common stock on the New York Stock Exchange for the past two years during the fiscal periods shown. Our Class B common stock is not publicly traded.

	Market Prices	
	High	Low
Year ended December 31, 2016		
First Quarter	\$ 57.27	\$ 43.25
Second Quarter	65.31	49.76
Third Quarter	76.99	56.09
Fourth Quarter	83.00	72.05
Year ended December 31, 2015		
First Quarter	\$ 86.91	\$ 73.65
Second Quarter	92.20	79.93
Third Quarter	93.43	76.04
Fourth Quarter	82.35	52.72

Holders

We had 36 holders of record of our Class A common stock, and one holder of record, EMC Corporation, of our Class B common stock as of February 17, 2017.

Dividends

Subsequent to our initial public offering in August 2007, we have not declared or paid cash dividends on our common stock. 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 December 31, 2016 :

	Total Number of Shares Purchased ⁽¹⁾	Average Price Paid Per Share ⁽¹⁾⁽²⁾	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs ⁽¹⁾	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Publicly Announced Plans or Programs ⁽¹⁾⁽³⁾
October 1 – October 31, 2016	2,506,192	\$ 73.25	2,506,192	\$ —
November 1 – November 30, 2016	—	—	—	—
December 1 – December 31, 2016	4,775,142	78.53	4,775,142	125,000,000
	<u>7,281,334</u>	<u>\$ 76.71</u>	<u>7,281,334</u>	<u>125,000,000</u>

⁽¹⁾ On December 15, 2016, we entered into a stock purchase agreement with Dell to purchase \$500 million of our Class A common stock. Through December 31, 2016, we had purchased 4.8 million shares for \$375 million. On February 15, 2017, the stock purchase agreement with Dell was completed. A total of \$500 million was paid in exchange for 6.2 million shares.

⁽²⁾ The average price paid per share excludes commissions.

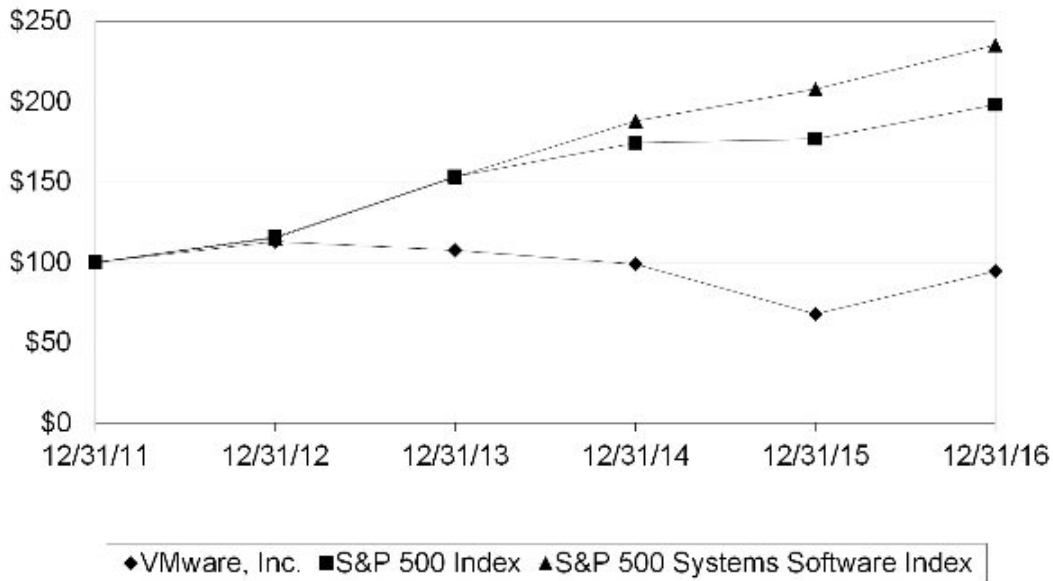
⁽³⁾ Represents the amounts remaining in the VMware stock repurchase authorizations.

During January 2017, VMware’s board of directors authorized the repurchase of up to \$1,200 million of VMware’s Class A common stock through the end of fiscal 2018.

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, 2011 through December 31, 2016, assuming an initial investment of \$100. Historically, we have not declared or paid cash dividends on our common stock, while the data for the S&P 500 Index and the S&P 500 Systems Software Index assume reinvestment of dividends.

Comparison of Cumulative Five Year Total Return



	Base Period					
	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016
VMware, Inc.	\$ 100.00	\$ 113.16	\$ 107.84	\$ 99.19	\$ 68.00	\$ 94.64
S&P 500 Index	100.00	116.00	153.57	174.60	177.01	198.18
S&P 500 Systems Software Index	100.00	115.22	153.13	188.36	208.08	235.62

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 December 31,				
	2016	2015	2014	2013	2012
Summary of Operations:					
Revenue:					
License	\$ 2,794	\$ 2,720	\$ 2,591	\$ 2,270	\$ 2,087
Services	4,299	3,927	3,444	2,937	2,518
GSA settlement	—	(76)	—	—	—
Total revenue	\$ 7,093	\$ 6,571	\$ 6,035	\$ 5,207	\$ 4,605
Operating income	1,439	1,197	1,027	1,093	872
Net income	1,186	997	886	1,014	746
Net income per weighted average share, basic, for Class A and Class B	\$ 2.82	\$ 2.35	\$ 2.06	\$ 2.36	\$ 1.75
Net income per weighted average share, diluted, for Class A and Class B	\$ 2.78	\$ 2.34	\$ 2.04	\$ 2.34	\$ 1.72
Weighted average shares, basic, for Class A and Class B	420,520	424,003	430,355	429,093	426,658
Weighted average shares, diluted, for Class A and Class B	423,994	426,547	434,513	433,415	433,974

	December 31,				
	2016	2015	2014	2013	2012
Balance Sheet Data:					
Cash, cash equivalents and short-term investments ⁽¹⁾	\$ 7,985	\$ 7,509	\$ 7,075	\$ 6,175	\$ 4,631
Working capital ⁽¹⁾	5,781	5,231	4,886	4,198	2,982
Total assets	16,643	15,746	15,216	12,327	10,596
Total unearned revenue	5,624	5,076	4,833	4,092	3,461
Long-term obligations ⁽²⁾	1,500	1,500	1,500	450	450
Total stockholders' equity	8,097	7,923	7,586	6,816	5,740
Cash Flow Data:					
Net cash provided by operating activities	\$ 2,381	\$ 1,899	\$ 2,180	\$ 2,535	\$ 1,897

⁽¹⁾ In 2012, we acquired all of the outstanding capital stock of Nicira, Inc. ("Nicira") for \$1,100 million, net of cash acquired, consisting of \$1,083 million in cash and \$17 million for the fair value of assumed equity attributed to pre-combination services.

⁽²⁾ On January 21, 2014, in connection with our agreement to acquire A.W.S. Holding, LLC ("AirWatch Holding"), the sole member and equity holder of AirWatch LLC ("AirWatch"), we entered into a note exchange agreement with EMC providing for the issuance of three promissory notes in the aggregate principal amount of \$1,500 million. The total debt of \$1,500 million includes \$450 million that was exchanged for the \$450 million promissory note outstanding in prior years. Refer to Note B 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 ("MD&A") is provided in addition to the accompanying consolidated financial statements and notes to assist in understanding our results of operations and financial condition.

Period-over-period changes are calculated based upon the respective underlying, non-rounded data. 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

The information technology ("IT") industry is transforming, moving from a hardware-based traditional model to one of a software-defined infrastructure. We are a leader in virtualization and cloud infrastructure solutions utilized by organizations to help transform the way they build, deliver and consume IT resources.

Over the years, we have increased our product offerings beyond compute virtualization to include offerings that allow organizations to manage IT resources across private clouds and complex multi-cloud, multi-device environments by leveraging synergies across three product categories: Software-Defined Data Center (SDDC), Hybrid Cloud Computing and End-User Computing. Our portfolio supports and addresses the four key IT priorities of our customers: modernizing data centers, integrating public clouds, empowering digital workspaces and transforming security.

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 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 are the basis for the private cloud environment 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. While sales of our VMware vSphere ("vSphere") offerings have remained strong, the majority of our license sales originate from products and services solutions across our portfolio beyond our compute products. We continue to experience growth in sales of VMware NSX ("NSX"), our network virtualization solution, and VMware vSAN ("vSAN") products.

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 is comprised of VMware vCloud Air Network ("vCAN") and VMware vCloud Air ("vCloud Air") offerings. We continue to see growth in revenue derived from vCAN. We have narrowed the focus of vCloud Air to provide specialized cloud software and services unique to VMware that are distinct from those offered by other cloud providers.

End-User Computing

Our End-User Computing solution consists of VMware 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 and an off-premises solution that we offer as software-as-a-service ("SaaS"). AirWatch products and services continued to contribute to the growth of our end-user computing product group during the year ended December 31, 2016.

Dell and EMC Merger

In October 2015, EMC Corporation ("EMC") and Dell Technologies Inc. ("Dell") (formerly Denali Holdings Inc.) entered into a definitive merger agreement, pursuant to which Dell acquired EMC in a transaction that closed on September 7, 2016 (the "Dell Acquisition").

As a result of the Dell Acquisition, VMware became an indirectly held, majority-owned subsidiary of Dell. As of December 31, 2016, Dell controlled 82.8% of our outstanding common stock and 97.7% of the combined voting power of our outstanding common stock, including 38 million shares of our Class A common stock and all of our Class B common stock. We continue to operate as a publicly traded company.

On October 25, 2016, our Board of Directors approved a change to our fiscal year 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 to align with Dell's. The change in our fiscal year was effective January 1, 2017. As a result of the change, the period beginning on January 1, 2017 and ending on February 3, 2017 is being reported as a transition period, and our first full fiscal year under the revised fiscal calendar began on February 4, 2017 and will end on February 2, 2018. We plan to include our unaudited financial statements for the approximately one-month transition period in our Quarterly Report on Form 10-Q filed for the fiscal quarter ended May 5, 2017.

Results of Operations

Approximately 70% of our sales are denominated in the 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 impacted by foreign exchange fluctuations.

Revenue

Our revenue during the years ended December 31, 2016, 2015 and 2014 was as follows (dollars in millions):

	For the Year Ended December 31,			2016 vs. 2015		2015 vs. 2014	
	2016	2015	2014	\$ Change	% Change	\$ Change	% Change
Revenue:							
License	\$ 2,794	\$ 2,720	\$ 2,591	\$ 74	3%	\$ 130	5%
Services:							
Software maintenance	3,740	3,405	3,022	335	10	384	13
Professional services	559	522	422	37	7	98	23
Total services	4,299	3,927	3,444	372	9	482	14
GSA settlement	—	(76)	—	76	n/a	(76)	n/a
Total revenue	\$ 7,093	\$ 6,571	\$ 6,035	\$ 522	8	\$ 536	9

Revenue:							
United States	\$ 3,588	\$ 3,311	\$ 2,912	\$ 277	8%	\$ 399	14%
International	3,505	3,260	3,123	245	8	137	4
Total revenue	\$ 7,093	\$ 6,571	\$ 6,035	\$ 522	8	\$ 536	9

Hybrid cloud, including vCAN and vCloud Air, and our SaaS offerings, including our AirWatch mobile solutions, increased to approximately 8% of our total revenue during the year ended December 31, 2016 from greater than 6% during the year ended December 31, 2015. vCAN revenue is generally included in license revenue, and SaaS revenue, including vCloud Air and our AirWatch mobile solutions, is included in both license and services revenue.

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

License Revenue

License revenue growth in 2016 compared to 2015 was largely driven by license sales of NSX, vSAN and AirWatch mobile solutions, as well as growth in our vCAN offering. We experienced stronger than expected sales of our compute products, which also contributed to the license revenue growth in 2016 compared to 2015. Strength in sales of our compute products were, in part, due to strong renewals of our EAs. We expect compute license sales to decline in 2017 and over the longer-term.

License revenue increased in 2015 compared to 2014 primarily as a result of increased sales of our emerging product offerings, including NSX, AirWatch mobile solutions and vSphere with Operations Management ("vSOM"), as well as revenue from our hybrid cloud offerings. License revenue during 2015 also benefited from declines in unearned license revenue.

In 2015, our license revenue growth rate was negatively impacted by certain factors including lower license sales of our core compute products, changes in the value of the U.S. dollar against the foreign currencies in which we invoice and an increase in the percentage of sales derived from our hybrid cloud and SaaS offerings. Increased sales of our hybrid cloud and SaaS offerings resulted in less revenue being recognized up-front, which also had an adverse impact on our growth rate during 2015.

Services Revenue

During 2016 and 2015, software maintenance revenue benefited from strong renewals of our software enterprise agreements, 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, more than 24 months of support and maintenance with each new license purchased.

Professional services revenue increased 7% in 2016 and 23% in 2015. As we continue to invest in our partners and expand our ecosystem of third-party professionals with expertise in our offerings to independently provide professional services to our customers, our professional services revenue will vary based on the delivery channels used in any given period as well as the timing of service engagements.

GSA Settlement

During 2015, we reached an agreement with the Department of Justice (“DOJ”) and the General Services Administration (“GSA”) to pay \$76 million to resolve allegations that our government sales practices between 2006 and 2013 had violated the federal False Claims Act. The settlement was paid and recorded as a reduction of our total revenue during the year ended December 31, 2015.

Unearned Revenue

Unearned revenue as of December 31, 2016 and 2015 was as follows (table in millions):

	December 31,	
	2016	2015
Unearned license revenue	\$ 503	\$ 428
Unearned software maintenance revenue	4,628	4,174
Unearned professional services revenue	493	474
Total unearned revenue	<u>\$ 5,624</u>	<u>\$ 5,076</u>

Unearned license revenue is generally recognized upon delivery of existing or future products or services, or is otherwise recognized ratably over the term of the arrangement. Future products include, in some cases, emerging products that are offered as part of product promotions where the purchaser of an existing product is entitled to receive the future product at no additional charge. To the extent the future product has not been delivered and vendor-specific objective evidence (“VSOE”) of fair value cannot be established, revenue for the entire order is deferred until such time as all product delivery obligations have been fulfilled. Unearned revenue arising from product promotions as of December 31, 2016 increased compared to December 31, 2015. In addition, unearned revenue as of December 31, 2016 increased as a result of increased sales of our hybrid cloud and SaaS offerings. If the arrangement does not include professional services, unearned license revenue may also be recognized ratably, if the customer is granted the right to receive unspecified future products or VSOE of fair value on the software maintenance element of the arrangement does not exist.

Unearned software maintenance revenue is attributable to our maintenance contracts and is generally recognized ratably over the contract period. The weighted-average remaining term at December 31, 2016 was approximately two years. Unearned professional services revenue results primarily from prepaid professional services, including training, and is generally recognized as the services are delivered.

Unearned license and software maintenance revenue will fluctuate based upon a variety of factors including sales volume, the timing of both product promotion offers and delivery of the future products offered, and the amount of arrangements sold with ratable revenue recognition. Additionally, the amount of unearned revenue derived from transactions denominated in a foreign currency is impacted by fluctuations in the foreign currencies in which we invoice.

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

Our cost of services revenue and operating expenses were primarily impacted by increasing employee-related expenses including salaries, bonuses, commissions and stock-based compensation across most of our income statement expense categories, net of realignment activities, during the years ended December 31, 2016 and 2015. We expect this trend to continue. As part of the realignment plan approved in January 2016, we have largely reinvested the associated savings primarily in research and development as well as sales and marketing.

In calculating the impact of foreign currency fluctuations on cost of license revenue, cost of services revenue and operating expenses, we converted expenses recognized during the current period derived from non-U.S. dollar-based transactions into U.S. dollars using the exchange rates that were effective in the comparable prior-year period and compared the calculated amount to the amount, as reported, in the comparable prior-year period.

Cost of License Revenue

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

Cost of license revenue during the years ended December 31, 2016, 2015 and 2014 was as follows (dollars in millions):

	For the Year Ended December 31,			2016 vs. 2015		2015 vs. 2014	
	2016	2015	2014	\$ Change	% Change	\$ Change	% Change
Cost of license revenue	\$ 157	\$ 184	\$ 190	\$ (27)	(15)%	\$ (6)	(3)%
Stock-based compensation	2	2	2	—	5	—	(15)
Total expenses	\$ 159	\$ 186	\$ 192	\$ (27)	(14)	\$ (6)	(3)
<i>% of License revenue</i>	<i>6%</i>	<i>7%</i>	<i>7%</i>				

Cost of license revenue decreased in 2016 compared to 2015 primarily due to a decrease in royalty costs of \$16 million and amortization of intangible assets of \$7 million.

Cost of license revenue decreased in 2015 compared to 2014 primarily due to a decrease in royalty costs of \$6 million.

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 and to provide professional services. Additionally, cost of services revenue includes depreciation on equipment supporting our service offerings.

Cost of services revenue during the years ended December 31, 2016, 2015 and 2014 was as follows (dollars in millions):

	For the Year Ended December 31,			2016 vs. 2015		2015 vs. 2014	
	2016	2015	2014	\$ Change	% Change	\$ Change	% Change
Cost of services revenue	\$ 842	\$ 788	\$ 683	\$ 54	7%	\$ 106	15%
Stock-based compensation	52	44	42	8	19	2	4
Total expenses	\$ 894	\$ 832	\$ 725	\$ 63	8	\$ 107	15
<i>% of Services revenue</i>	<i>21%</i>	<i>21%</i>	<i>21%</i>				

Cost of services revenue increased in 2016 compared to 2015. The increase was primarily due to growth in cash-based employee-related expenses of \$69 million, driven by incremental growth in headcount and salaries. In addition, stock-based compensation increased by \$8 million, primarily driven by an increase in restricted stock awards granted.

Cost of services revenue increased in 2015 compared to 2014. The increase was primarily due to growth in cash-based employee-related expenses of \$96 million, driven by incremental growth in headcount, and an increase in equipment, depreciation and facilities-related costs of \$42 million. Additionally, third-party professional services costs increased \$23 million due to an increase in demand for technical support and services. These increases were partially offset by a decrease in cost of services revenue of \$47 million resulting from fluctuations in the exchange rates for foreign currencies in which we incur expenses.

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.

Research and development expenses during the years ended December 31, 2016, 2015 and 2014 were as follows (dollars in millions):

	For the Year Ended December 31,			2016 vs. 2015		2015 vs. 2014	
	2016	2015	2014	\$ Change	% Change	\$ Change	% Change
Research and development	\$ 1,198	\$ 1,074	\$ 995	\$ 124	12%	\$ 80	8 %
Stock-based compensation	305	226	244	80	35	(18)	(7)
Total expenses	\$ 1,503	\$ 1,300	\$ 1,239	\$ 203	16	\$ 61	5
<i>% of Total revenue</i>	<i>21%</i>	<i>20%</i>	<i>21%</i>				

Research and development expenses increased in 2016 compared to 2015. The increase was primarily due to growth in cash-based employee-related expenses of \$120 million, driven by incremental growth in headcount and salaries. In addition, stock-based compensation increased by \$80 million, primarily driven by an increase in restricted stock unit awards granted.

Research and development expenses increased in 2015 compared to 2014. The increase was primarily due to growth in cash-based employee-related expenses of \$90 million, driven by incremental growth in headcount. In addition, facilities-related costs increased \$7 million. These increases were partially offset by a decrease in stock-based compensation of \$18 million, primarily as a result of certain awards becoming fully vested in 2014. Additionally, research and development expenses decreased by \$16 million due to fluctuations in the exchange rates for foreign currencies in which we incur expenses.

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. Sales commissions for our license offerings are generally earned and expensed when a firm order is received from the customer. In the event of a multi-year EA or our SaaS offerings, sales commissions may be expensed over the term of the arrangement.

Sales and marketing expenses during the years ended December 31, 2016, 2015 and 2014 were as follows (dollars in millions):

	For the Year Ended December 31,			2016 vs. 2015		2015 vs. 2014	
	2016	2015	2014	\$ Change	% Change	\$ Change	% Change
Sales and marketing	\$ 2,162	\$ 2,099	\$ 1,969	\$ 61	3%	\$ 130	7 %
Stock-based compensation	195	168	172	28	16	(4)	(2)
Total expenses	\$ 2,357	\$ 2,267	\$ 2,141	\$ 88	4	\$ 126	6
<i>% of Total revenue</i>	<i>33%</i>	<i>35%</i>	<i>35%</i>				

Sales and marketing expenses increased in 2016 compared to 2015. The increase was primarily due to growth in cash-based employee-related expenses of \$134 million, driven by incremental growth in headcount and salaries, as well as higher sales commission expense resulting from increased sales volume. In addition, stock-based compensation increased by \$28 million, primarily driven by an increase in restricted stock unit awards granted. These increases were partially offset by decreases in costs incurred for marketing programs and related initiatives of \$45 million. In addition, sales and marketing expenses decreased by \$28 million due to fluctuations in the exchange rates for foreign currencies in which we incur expenses.

Sales and marketing expenses increased in 2015 compared to 2014. The increase was primarily driven by growth in cash-based employee-related expenses of \$158 million, due to incremental growth in headcount, and higher commission expense resulting from increased sales volume. In addition, equipment, depreciation and facilities-related costs increased \$24 million. Costs incurred for marketing programs and related initiatives increased \$20 million, and costs incurred for third-party services increased \$19 million. These increases were partially offset by a decrease in sales and marketing expenses of \$109 million resulting from fluctuations in the exchange rates for foreign currencies in which we incur expenses.

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 charitable donations.

General and administrative expenses during the years ended December 31, 2016, 2015 and 2014 were as follows (dollars in millions):

	For the Year Ended December 31,			2016 vs. 2015		2015 vs. 2014	
	2016	2015	2014	\$ Change	% Change	\$ Change	% Change
General and administrative	\$ 607	\$ 702	\$ 626	\$ (94)	(13)%	\$ 76	12 %
Stock-based compensation	82	64	69	17	27	(5)	(7)
Total expenses	\$ 689	\$ 766	\$ 695	\$ (77)	(10)	\$ 71	10
<i>% of Total revenue</i>	<i>10%</i>	<i>12%</i>	<i>12%</i>				

General and administrative expenses decreased in 2016 compared to 2015. The decrease was primarily driven by a decrease in installment payments to certain key employees of AirWatch that were subject to the achievement of specified employment conditions. The final installment payment to key employees of AirWatch occurred during the first quarter of 2016. As a result, compensation expense relating to these installment payments decreased by \$132 million in 2016.

These decreases in general and administrative expenses were partially offset by an increase in equipment, depreciation and facilities-related costs of \$36 million. In addition, cash-based employee-related expenses increased by \$32 million, driven by incremental growth in headcount and salaries, and stock-based compensation increased by \$17 million, primarily due to an increase in restricted stock awards granted.

General and administrative expenses increased in 2015 compared to 2014. The increase was primarily driven by an increase in equipment, depreciation and facilities-related costs of \$37 million and an increase in cash-based employee-related expenses of \$30 million, due to incremental growth in headcount. In addition, professional services-related costs increased \$18 million. We also made installment payments to certain key employees of AirWatch that had been subject to the achievement of specified future employment conditions. We recognized compensation expense of \$145 million during 2015 relating to these installment payments. The increase to general and administrative expenses was partially offset by a decrease of \$13 million resulting from fluctuations in the exchange rates for foreign currencies in which we incur expenses.

Realignment

Realignment expenses during the years ended December 31, 2016, 2015 and 2014 were as follows (dollars in millions):

	For the Year Ended December 31,			2016 vs. 2015		2015 vs. 2014	
	2016	2015	2014	\$ Change	% Change	\$ Change	% Change
Realignment	\$ 52	\$ 23	\$ 16	\$ 29	126%	\$ 7	46%
<i>% of Total revenue</i>	<i>1%</i>	<i>—%</i>	<i>—%</i>				

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 the year ended December 31, 2016. We recognized \$50 million of severance-related realignment expenses during the year ended December 31, 2016 on the consolidated statements of income. Additionally, we 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. Actions associated with this plan were substantially completed by December 31, 2016.

During the year ended December 31, 2015, we eliminated approximately 380 positions across all major functional groups and geographies to streamline our operations. As a result of these actions, \$23 million of realignment expenses were recognized during the year ended December 31, 2015.

During the year ended December 31, 2014, we eliminated approximately 180 positions across all major functional groups and geographies to streamline our operations. As a result of these actions, \$16 million of severance-related realignment expenses were recognized during the year ended December 31, 2014 on the consolidated statements of income.

Investment Income

Investment income during the years ended December 31, 2016 , 2015 and 2014 was as follows (dollars in millions):

	For the Year Ended December 31,			2016 vs. 2015		2015 vs. 2014	
	2016	2015	2014	\$ Change	% Change	\$ Change	% Change
Investment income	\$ 77	\$ 49	\$ 38	\$ 28	57%	\$ 11	28%
% of Total revenue	1%	1%	1%				

Investment income increased in 2016 compared to 2015 and 2015 compared to 2014, primarily as a result of increased interest income earned on our short-term investments resulting from both higher yields and higher invested balances, partially offset by the amortization of premiums.

Income Tax Provision

Our annual effective income tax rate was 19.5% , 17.8% and 15.5% during the years ended 2016, 2015, and 2014, respectively. Our effective income tax rate in 2016 was higher than in 2015 primarily as a result of a shift in mix of earnings from our lower tax non-U.S. jurisdictions to the United States. This impact from the shift in mix of earnings was partially offset by the favorable impact of lower unrecognized tax benefit additions recorded in 2016 compared to 2015. Our annual effective tax rate in 2015 was higher than in 2014 primarily due to a shift in the mix of earnings from lower tax non-U.S. jurisdictions to the United States, a reduction in the benefit from the federal research tax credit and the net increase in unrecognized tax benefits.

Our rate of taxation in non-U.S. jurisdictions is lower than our U.S. tax rate. Our non-U.S. earnings are primarily earned by our subsidiaries organized in Ireland, and as such, our annual effective tax rate can be significantly impacted by the composition of our earnings in the U.S. and non-U.S. jurisdictions.

All income earned in non-U.S. jurisdictions, except for previously taxed income for U.S. tax purposes, is considered indefinitely reinvested in our foreign operations and no tax provision for U.S. taxes has been recognized with respect to such income. As of December 31, 2016 and 2015, the undistributed earnings of our non-U.S. subsidiaries were approximately \$5,354 million and \$4,473 million , respectively. Our intent is to indefinitely reinvest our non-U.S. funds in our foreign operations, and our current plans do not demonstrate a need to repatriate them to fund our U.S. operations. At this time, it is not practicable to estimate the amount of tax that may be payable if we were to repatriate these earnings.

We have historically been included in EMC’s consolidated group for U.S. federal income tax purposes, and with the closing of the Dell Acquisition, we are now included in Dell’s consolidated tax group. We 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. 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 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 group.

Although our results are included in the Dell consolidated return for U.S. federal income tax purposes, our income tax provision is calculated primarily as though we were a separate taxpayer. However, certain transactions that we and Dell are parties to are assessed using consolidated tax return rules.

Our future effective tax rate may be affected by such factors as changes in tax laws, changes in our business, regulations, or rates, changing interpretation of existing laws or regulations, the impact of accounting for stock-based compensation, the impact of accounting for business combinations and shifts in the amount of earnings in the United States compared with other regions in the world as well as the expiration of statute of limitations and settlements of audits.

Our Relationship with Dell

As of December 31, 2016 , Dell controlled 38 million shares of Class A common stock and all 300 million shares of Class B common stock, representing 82.8% of our total outstanding shares of common stock and 97.7% 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 and the Dell Acquisition” 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 December 31, 2016. Transactions prior to the effective date of the Dell Acquisition represent transactions only with EMC and its consolidated subsidiaries (“Parent”).

During the fourth quarter of 2014, Dell acquired the controlling interest in VCE Company LLC (“VCE”). Transactions with VCE from the acquisition date have been included in the tables below.

Transactions with Dell

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

- Pursuant to ongoing reseller arrangements with Dell, Dell bundles our products and services with Dell’s products and sells them to end users. Reseller revenue is presented net of related marketing development funds and rebates paid to Dell.
- Dell purchases products and services from us for internal use.
- We provide professional services to end users based upon contractual agreements with Dell.
- Pursuant to an ongoing distribution agreement, we act 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 us and remitted to Pivotal, net of the contractual agency fee.
- We provide various services to Pivotal. Support costs incurred by us are reimbursed to us and are recorded as a reduction to the costs incurred by us.

Information about our revenue and receipts from such arrangements during the years ended December 31, 2016, 2015 and 2014 and unearned revenue from such arrangements as of December 31, 2016 and 2015 consisted of the following (table in millions):

	Revenue and Receipts			Unearned Revenue	
	For the Year Ended December 31,			As of December 31,	
	2016	2015	2014	2016	2015
Reseller revenue	\$ 508	\$ 301	\$ 205	\$ 637	\$ 292
Internal-use revenue	35	17	21	15	11
Professional services revenue	115	100	85	—	3
Agency fee revenue	4	6	5	—	—
Reimbursement for services to Pivotal	1	4	2	n/a	n/a

We engaged with Dell in the following ongoing intercompany 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 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 and primarily include salaries, benefits, travel and rent expenses. Dell also incurs certain administrative costs on our behalf in the United States that are recorded as expenses on our consolidated statements of income.
- 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 costs from such arrangements for the years ended December 31, 2016, 2015 and 2014 consisted of the following (table in millions):

	For the Year Ended December 31,		
	2016	2015	2014
Purchases and leases of products and purchases of services	\$ 97	\$ 63	\$ 71
Collaborative technology project costs	—	5	12
Dell subsidiary support and administrative costs	105	100	137

We also purchase Dell products through Dell's channel partners. Purchases of Dell products through Dell's channel partners were not significant during the year ended December 31, 2016. During the years ended December 31, 2015 and 2014, purchases of Dell products through Dell's channel partners were \$36 million and \$25 million, respectively.

Dell Financial Services ("DFS")

During 2016, DFS provided financing to certain of our end customers based on the customer's discretion. Upon acceptance of the financing arrangement by both our end customer and DFS, amounts classified as trade accounts receivable are reclassified to due from related parties, net on the consolidated balance sheets. Financing fees recognized on these arrangements were not significant during the year ended December 31, 2016.

EMC Equity Awards Held by Our Employees

In connection with the Dell Acquisition, vesting was accelerated for all outstanding EMC stock options and restricted stock units and stock options were automatically exercised on the last trading day prior to the effective date of the merger. Our portion of the expense associated with accelerated EMC equity awards held by our employees was \$7 million and was included within stock-based compensation expense on the consolidated statements of income during the year ended December 31, 2016.

Due To/From Related Parties, Net

Amounts due to and from related parties, net as of December 31, 2016 and 2015 consisted of the following (table in millions):

	December 31,	
	2016	2015
Due (to) related parties	\$ (71)	\$ (68)
Due from related parties	203	142
Due (to) from related parties, net	\$ 132	\$ 74

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

Stock Purchase Agreement with Dell

On December 15, 2016, we entered into a stock purchase agreement with Dell to purchase \$500 million of our Class A common stock. Through December 31, 2016, we had purchased 4.8 million shares for \$375 million. A derivative asset was recognized related to our obligation to purchase additional shares for \$125 million and is measured at fair value on a recurring basis. The fair value adjustment measured as of December 31, 2016 resulted in the recognition of an \$8 million gain that was included in other income (expense), net on the consolidated statements of income.

On February 15, 2017, the stock purchase agreement with Dell was completed. A total of \$500 million was paid in exchange for 6.2 million shares. The aggregate number of shares purchased was determined based upon the volume-weighted average price during a defined period, less an agreed upon discount.

Notes Payable to Dell

We entered into a note exchange agreement with our Parent on January 21, 2014 providing for the issuance of three promissory notes in the aggregate principal amount of \$1,500 million. The total debt of \$1,500 million includes \$450 million that was exchanged for the \$450 million promissory note issued to our Parent in April 2007, as amended and restated in June 2011.

The three notes issued may be prepaid without penalty or premium, and outstanding principal is due on the following dates: \$680 million due May 1, 2018, \$550 million due May 1, 2020 and \$270 million due December 1, 2022. The notes bear interest, payable quarterly in arrears, at the annual rate of 1.75%. During the years ended December 31, 2016, 2015 and 2014, \$26 million, \$26 million and \$24 million, respectively, of interest expense was recognized.

Pivotal

In April 2016, we contributed \$20 million in cash to Pivotal in exchange for additional preferred equity interests in Pivotal. As of December 31, 2016, our ownership interest in Pivotal was 21%. As of December 31, 2015, our ownership interest in Pivotal was 28%. This strategic investment is accounted for using the cost method.

Liquidity and Capital Resources

At December 31, 2016 and 2015, we held cash, cash equivalents and short-term investments as follows (table in millions):

	December 31,	
	2016	2015
Cash and cash equivalents	\$ 2,790	\$ 2,493
Short-term investments	5,195	5,016
Total cash, cash equivalents and short-term investments	\$ 7,985	\$ 7,509

We hold a diversified portfolio of money market funds, time deposits and fixed income securities. Our fixed income securities are denominated in U.S. dollars and primarily consist 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 limit the amount of our investments with any single issuer and monitor the diversity of the portfolio and the amount of investments held at any single financial institution, thereby diversifying our credit risk.

As of December 31, 2016, our cash, cash equivalents and short-term investments held outside the United States were \$6,921 million. If these overseas funds were needed for our operations in the United States, we would be required to accrue and pay U.S. taxes on substantially all of the undistributed earnings to repatriate these funds. However, our intent is to indefinitely reinvest our non-U.S. earnings in our foreign operations and our current plans do not demonstrate a need to repatriate them to fund our U.S. operations.

We expect that cash generated by operations will be our primary source of liquidity. We also believe that existing cash and cash equivalents, together with any cash generated from operations, will be sufficient to meet normal operating requirements for at least the next twelve months. While we believe our existing cash and cash equivalents and cash to be generated by operations will be sufficient to meet our normal operating requirements, our overall level of cash needs may be impacted by the number and size of acquisitions, investments and stock repurchases. Should we require additional liquidity, we may seek to arrange debt financing or enter into credit facilities.

Our cash flows summarized for the years ended December 31, 2016, 2015, and 2014 were as follows (table in millions):

	For the Year Ended December 31,		
	2016	2015	2014
Net cash provided by (used in):			
Operating activities	\$ 2,381	\$ 1,899	\$ 2,180
Investing activities	(465)	(336)	(2,785)
Financing activities	(1,619)	(1,141)	371
Net increase (decrease) in cash and cash equivalents	\$ 297	\$ 422	\$ (234)

Operating Activities

Cash provided by operating activities increased \$482 million in 2016 compared to 2015, driven primarily by increased cash collections due to growth in sales during the year ended December 31, 2016. Additionally, cash provided by operating activities in 2015 reflects payments for legal settlements, including \$76 million for the GSA settlement, and approximately \$185 million of installment payments made to certain key employees of AirWatch. The final installment payment of \$29 million was made during the first quarter of 2016. Cash provided by operating activities was partially offset by increases in cash payments for employee-related expenses including salaries, bonuses and commissions, resulting primarily from incremental growth in headcount and salaries. Cash paid for taxes under our tax sharing arrangement with Dell also increased from \$144 million in 2015 to \$373 million in 2016.

Cash provided by operating activities decreased by \$281 million in 2015 compared to 2014, driven by changes in unearned revenue and accounts receivable. While cash collections increased in 2015, they were negatively impacted by the strengthening of the U.S. dollar against the foreign currencies in which we invoice. Additionally, cash provided by operating activities in 2015 reflects payments for legal settlements, primarily \$76 million for the GSA settlement, approximately \$185 million of

installment payments made to certain key employees of AirWatch, and increases in payroll and operating expenses resulting from growth in employee-related expenses driven by growth in headcount.

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 impacted by the sales and maturities of our available-for-sale securities.

Cash used in investing activities increased \$129 million in 2016 compared to 2015, driven primarily by increased cash used for net purchases of our available-for-sale securities. In addition, in 2015, we released \$75 million from escrow related to payments made to certain employees of AirWatch, which was reflected as an inflow within investing activities. These increases were partially offset by a decrease in property and equipment additions of \$180 million.

Cash used in investing activities decreased in 2015 compared to 2014 primarily as a result of our acquisitions, including AirWatch for \$1,068 million during the first quarter of 2014. Additionally, the net cash used related to our available-for-sale securities decreased in 2015 compared to 2014.

The increase in restricted cash during 2014 included \$75 million for amounts held in escrow and payable to certain AirWatch employees, subject to achievement of certain employment conditions. During 2015, \$75 million was released from escrow and paid to the employees. The release from escrow was reflected as an inflow within investing activities while the payment to the employees was reflected as an outflow within operating activities.

Financing Activities

Cash used in financing activities increased \$478 million in 2016 compared to 2015, primarily as a result of an increase in our repurchase of our common stock.

Cash used in financing activities in 2015 changed compared to cash provided by financing activities in 2014 primarily as a result of the cash received in connection with the notes payable exchange agreement with our Parent during 2014 and an increase in our repurchase of our common stock during 2015.

Notes Payable to Dell

As of December 31, 2016, \$1,500 million remained outstanding on notes payable to Dell, with interest payable quarterly in arrears.

In connection with our acquisition of AirWatch, we entered into a note exchange agreement with our Parent on January 21, 2014 providing for the issuance of three promissory notes in the aggregate principal amount of \$1,500 million. The total debt of \$1,500 million included \$450 million that was exchanged for the \$450 million promissory note issued to our Parent in April 2007, as amended and restated in June 2011.

The three notes issued have the following principal amounts and maturity dates: \$680 million due May 1, 2018, \$550 million due May 1, 2020 and \$270 million due December 1, 2022.

The notes bear interest at the annual rate of 1.75%. Interest is payable quarterly in arrears. The notes may be prepaid without penalty or premium. We drew down on all three notes in late January 2014.

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. All shares repurchased under our stock repurchase programs are retired.

From time to time, we may also repurchase stock pursuant to authorized stock repurchase programs in private transactions. On December 15, 2016, we entered into a stock purchase agreement with Dell to purchase \$500 million of our Class A common stock. Through December 31, 2016, we had purchased 4.8 million shares for \$375 million. On February 15, 2017, the stock purchase agreement with Dell was completed. A total of \$500 million was paid in exchange for 6.2 million shares.

During January 2017, our board of directors authorized the repurchase of up to \$1,200 million of VMware's Class A common stock through the end of fiscal 2018. This authorization was in addition to the stock purchase agreement with Dell. Refer to Note N 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 agreement. 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 December 31, 2016 (table in millions):

	Payments Due by Period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Notes payable to Dell ⁽¹⁾	\$ 1,576	\$ 26	\$ 713	\$ 563	\$ 274
Operating leases ⁽²⁾	845	89	132	80	544
Purchase obligations	81	48	33	—	—
Stock purchase obligation ⁽³⁾	125	125	—	—	—
Other contractual commitments ⁽⁴⁾	27	3	10	5	9
Sub-Total	2,654	291	888	648	827
Uncertain tax positions ⁽⁵⁾	260				
Total	<u>\$ 2,914</u>				

⁽¹⁾ Consists of principal and interest payments on the notes payable to Dell. Refer to "Liquidity and Capital Resources" for a discussion of the \$1,500 million notes payable we entered into with our Parent on January 21, 2014, in connection with our agreement to acquire AirWatch.

⁽²⁾ Our operating leases are primarily for facility space and land, and amounts in the table above exclude expected sublease income.

⁽³⁾ On December 15, 2016, we entered into a stock purchase agreement with Dell to purchase \$500 million of our Class A common stock. Through December 31, 2016, we had purchased 4.8 million shares for \$375 million and had an obligation to purchase \$125 million of additional shares.

- (4) Consisting of various contractual agreements, which include commitments on the lease for our Washington data center facility and asset retirement obligations.
- (5) As of December 31, 2016, we had \$260 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 \$8 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 (“GAAP”), we are required to make estimates, assumptions and judgments that affect the amounts reported in 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 our software under perpetual licenses, related software maintenance and support, training, consulting services and hosted services. Revenue is recognized when persuasive evidence of an arrangement exists, delivery has occurred or service has been provided, the sales price is fixed or determinable, and collectibility is probable. Determining whether and when some of these criteria have been satisfied often involves assumptions and judgments that can have a significant impact on the timing and amount of revenue recognized.

We enter into multiple-element revenue arrangements in which a customer may purchase a combination of software, maintenance and support, training, consulting services, and hosted services. If a product or service included in a software-related multiple-element arrangement has not been delivered, and is not considered essential to the functionality of the delivered products or services, we must determine the fair value of each undelivered product or service using vendor-specific objective evidence (“VSOE”). Absent VSOE, revenue is deferred until VSOE of fair value exists for each of the undelivered products or services, or until all elements of the arrangement have been delivered. However, if the only undelivered element without VSOE is maintenance and support, the entire arrangement fee is recognized ratably over the performance period. Changes in assumptions or judgments or changes to the elements in a software arrangement could cause a material increase or decrease in the amount of revenue that we report in a particular period.

VSOE of fair value for an undelivered element is generally based on historical stand-alone sales to third parties. In limited instances, for an offering that is not yet sold, VSOE is the price established by management if it is probable that the price will not change when introduced to the marketplace, including through the use of a contractual renewal rate. In determining VSOE of fair value, we require that the selling prices for a product or service fall within a reasonable pricing range. For multiple-element arrangements that contain software and non-software elements, we allocate revenue to software or software-related elements as a group and any non-software elements separately based on relative selling prices using the selling price hierarchy. The relative selling price for each deliverable is determined using VSOE, if it exists, or third-party evidence (“TPE”) of selling price. TPE of selling price is based on evaluation of prices charged for competitor products or services sold to similarly situated customers. As our offerings contain significant proprietary technology and provide different features and functionality, comparable prices of similar products typically cannot be obtained and relied upon. If neither VSOE nor TPE of selling price exist for a deliverable, best estimate of selling price (“BESP”) is used for that deliverable. We use BESP in allocation of arrangement consideration. We determine BESP by considering our overall pricing objectives and practices across different sales channels.

A specified upgrade obligation is created in the event we publicly announce new specific features, functionalities or entitlements to software upgrades or license products that have not been made available. We generally do not have VSOE of fair value for specified upgrades or license products. Accordingly, revenue recognition is deferred for multiple-element

arrangements that entitle a customer to specified upgrades or new license products until the product obligations have been fulfilled.

Professional services include design, implementation and training. Professional services are not considered essential to the functionality of our products because services do not alter the product capabilities and may be performed by customers or other vendors. 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 on a proportional performance basis assuming all other revenue recognition criteria are met. Revenue for professional services engagements billed on a time and materials basis is recognized as the hours are incurred.

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 of 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.

Accounting for Income Taxes

We are included in the Dell consolidated group for U.S. federal income tax purposes, and expect to continue to be included in such consolidated group for periods in which Dell owns at least 80% of the total voting power and value of our outstanding 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. However, our income tax expense and the related income tax balance sheet accounts are derived primarily assuming we filed a separate tax return. However, certain transactions that we and Dell are parties to 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 actually paid to Dell pursuant to our tax sharing agreement with Dell is presented as a component of additional paid-in capital. 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 Internal Revenue Service 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.

We are subject to tax in the United States, and in multiple foreign tax jurisdictions. Our U.S. liquidity needs are currently satisfied using cash flows generated from our U.S. operations, borrowings, or both. We also utilize a variety of tax planning strategies in an effort to ensure that our worldwide cash is available in locations in which it is needed. Currently, we do not provide U.S. income taxes on undistributed earnings of our non-U.S. subsidiaries. These undistributed earnings are considered permanently reinvested outside the United States. While we do not anticipate changing our intention regarding permanently reinvested earnings, if certain foreign earnings previously treated as permanently reinvested are repatriated, the related U.S. tax liability may be reduced by any non-U.S. income taxes paid on these earnings.

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

Topic 606, Revenue from Contracts with Customers

During May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2014-09, Revenue from Contracts with Customers (Topic 606). In 2016, the FASB issued ASU 2016-08, ASU 2016-10 and ASU 2016-12, which provide interpretive clarifications on the new guidance in Topic 606 (collectively, “Topic 606”). The updated revenue standard replaces all existing revenue recognition guidance under GAAP and establishes common principles for recognizing revenue for all industries. It also provides guidance on the accounting for costs to fulfill or obtain a customer contract. The core principle underlying the updated standard is the recognition of revenue based on consideration expected to be entitled from the transfer of goods or services to a customer. The updated standard is effective for interim and annual periods beginning after December 15, 2017 and permits the use of either the full retrospective or cumulative effect transition method. Early adoption is permitted for annual periods beginning after December 15, 2016.

We plan to adopt Topic 606 using the full retrospective transition method when it becomes effective for us in the first fiscal quarter of 2019, under our new fiscal calendar. While we are continuing to assess the potential impacts of Topic 606, we currently expect unearned license revenue related to the sale of perpetual licenses will decline significantly upon adoption. Currently, we defer all license revenue related to the sale of our perpetual licenses in the event certain revenue recognition criteria are not met. However, under Topic 606 we would generally expect that substantially all license revenue related to sale of our perpetual licenses will be recognized upon delivery. We are continuing to evaluate the effect that Topic 606 will have on our financial statements and related disclosures, and preliminary assessments are subject to change.

ASU No. 2016-02, Leases

During February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), which requires a lessee to recognize a lease liability for the obligation to make lease payments and a right-to-use asset for the right to use the underlying asset for the lease term. This updated standard also requires additional disclosure regarding leasing arrangements. It is effective for interim and annual periods beginning after December 15, 2018 and requires a modified retrospective adoption, with early adoption permitted. We are currently evaluating the effect that ASU 2016-02 will have on its consolidated financial statements and related disclosures, and expect that most of our lease commitments will be subject to the updated standard and recognized as lease liabilities and right-of-use assets upon adoption.

ASU No. 2016-09, Compensation

During March 2016, the FASB issued ASU No. 2016-09, Compensation—Stock Compensation (Topic 718), which impacts the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statements of cash flows. The updated standard is effective for interim and annual periods beginning after December 15, 2016 and permits early adoption in any interim or annual period. We adopted the updated standard effective February 4, 2017. The updated standard is expected to cause volatility in our effective tax rates and net income per share due to the treatment of the tax effects on exercised or vested stock-based awards recorded to the consolidated statements of income. The volatility in future periods will depend on our stock price at the awards’ vest dates or exercise dates and the number of awards that vest or exercise in each period. In addition, all tax-related cash flows resulting from share-based payments are required to be reported as operating activities in the consolidated statement of cash flows. As permitted under the updated standard, we will continue to estimate forfeitures at each period and did not elect an accounting policy change to record forfeitures as they occur.

ASU No. 2016-16, Income Taxes

During October 2016, the FASB issued ASU No. 2016-16, Income Taxes: Intra-Entity Transfers of Assets Other Than Inventory (Topic 740), which requires entities to recognize at the transaction date the income tax consequences of intra-entity asset transfers. Previous guidance requires the tax effects from intra-entity asset transfers to be deferred until that asset is sold to a third party or recovered through use. The updated standard is effective in annual and interim periods beginning after December 15, 2017, with early adoption permitted during the first interim period of a fiscal year, and requires a modified retrospective transition method. We are currently evaluating the effect that the updated standard will have on our consolidated financial statements and related disclosures.

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 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 December 31, 2016 and 2015, we had outstanding forward contracts with a total notional value of \$22 million and \$213 million, respectively. The fair value of these forward contracts was not significant as of December 31, 2016 and 2015.

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 December 31, 2016 and 2015, we had outstanding forward contracts with a total notional value of \$875 million and \$721 million, respectively. The fair value of these forward contracts was not significant as of December 31, 2016 and 2015.

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 \$90 million in fair value of our forward contracts as of December 31, 2016. This sensitivity analysis 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 H 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 is denominated in U.S. dollars and consists of various sectors at different maturities. Our primary objective for holding fixed income securities is to achieve an appropriate investment return consistent with preserving principal and managing risk.

Sensitivity Analysis. At any time, a sharp rise in interest rates or credit spreads could have a material adverse impact on the fair value of our fixed income investment portfolio. Hypothetical increases in interest rates of 50 basis points and 100 basis points would have decreased the fair value of our fixed income investment portfolio as of December 31, 2016 by \$39 million and \$77 million, respectively. Hypothetical decreases in interest rates of 50 basis points and 100 basis points would have increased the fair value of our fixed income investment portfolio as of December 31, 2016 by \$39 million and \$77 million, respectively.

This sensitivity analysis assumes a parallel shift of all interest rates; however, interest rates do not always move in such a manner and actual results may differ significantly. We monitor our interest rate and credit risk, including our credit exposures to specific rating categories and to individual issuers. These instruments are not leveraged and we do not intend to use them for speculative purposes. Refer to Notes F and 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. The carrying values of our strategic investments were accounted for under the cost method. We evaluate the strategic investments in our portfolio to assess whether they are other-than-temporarily impaired. 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 \$139 million and \$103 million as of December 31, 2016 and December 31, 2015, respectively.

Marketable Equity Securities

We have minimal exposure to equity price risk on our portfolio of marketable equity securities as it was insignificant as of December 31, 2016 and 2015. As of December 31, 2016 and 2015, our total equity holdings in publicly traded companies was \$22 million and \$18 million, respectively.

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 Shareholders of VMware, Inc.

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of VMware, Inc. and its subsidiaries at December 31, 2016 and December 31, 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the accompanying index presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements and financial statement schedule, 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 Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements, on the financial statement schedule, and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. 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.

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

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

/s/ PricewaterhouseCoopers LLP

San Jose, California
February 24, 2017

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

	For the Year Ended December 31,		
	2016	2015	2014
Revenue:			
License	\$ 2,794	\$ 2,720	\$ 2,591
Services	4,299	3,927	3,444
GSA settlement	—	(76)	—
Total revenue	7,093	6,571	6,035
Operating expenses ⁽¹⁾ :			
Cost of license revenue	159	186	192
Cost of services revenue	894	832	725
Research and development	1,503	1,300	1,239
Sales and marketing	2,357	2,267	2,141
General and administrative	689	766	695
Realignment	52	23	16
Operating income	1,439	1,197	1,027
Investment income	77	49	38
Interest expense with Dell	(26)	(26)	(24)
Other income (expense), net	(17)	(7)	7
Income before income taxes	1,473	1,213	1,048
Income tax provision	287	216	162
Net income	\$ 1,186	\$ 997	\$ 886
Net income per weighted-average share, basic for Class A and Class B	\$ 2.82	\$ 2.35	\$ 2.06
Net income per weighted-average share, diluted for Class A and Class B	\$ 2.78	\$ 2.34	\$ 2.04
Weighted-average shares, basic for Class A and Class B	420,520	424,003	430,355
Weighted-average shares, diluted for Class A and Class B	423,994	426,547	434,513

⁽¹⁾ Includes stock-based compensation as follows:

Cost of license revenue	\$ 2	\$ 2	\$ 2
Cost of services revenue	52	44	42
Research and development	305	226	244
Sales and marketing	195	168	172
General and administrative	82	64	69

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 December 31,		
	2016	2015	2014
Net income	\$ 1,186	\$ 997	\$ 886
Other comprehensive income (loss):			
Changes in market value of available-for-sale securities:			
Unrealized gains (losses), net of tax provision (benefit) of \$(4), \$(4) and \$—	(6)	(7)	(1)
Reclassification of (gains) losses realized during the period, net of tax (provision) benefit of \$3, \$— and \$(2)	5	—	(3)
Net change in market value of available-for-sale securities	(1)	(7)	(4)
Changes in market value of effective foreign currency forward contracts:			
Unrealized gains (losses), net of tax provision (benefit) of \$— for all periods	1	—	(1)
Reclassification of (gains) losses realized during the period, net of tax (provision) benefit of \$— for all periods	(1)	—	—
Net change in market value of effective foreign currency forward contracts	—	—	(1)
Total other comprehensive income (loss)	(1)	(7)	(5)
Total comprehensive income, net of taxes	\$ 1,185	\$ 990	\$ 881

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)

	December 31,	
	2016	2015
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 2,790	\$ 2,493
Short-term investments	5,195	5,016
Accounts receivable, net of allowance for doubtful accounts of \$2 and \$2	1,856	1,633
Due from related parties, net	132	74
Other current assets	362	144
Total current assets	10,335	9,360
Property and equipment, net	1,049	1,128
Other assets	248	193
Deferred tax assets	462	456
Intangible assets, net	517	616
Goodwill	4,032	3,993
Total assets	\$ 16,643	\$ 15,746
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 125	\$ 138
Accrued expenses and other	898	746
Unearned revenue	3,531	3,245
Total current liabilities	4,554	4,129
Notes payable to Dell	1,500	1,500
Unearned revenue	2,093	1,831
Other liabilities	399	363
Total liabilities	8,546	7,823
Contingencies (refer to Note J)		
Stockholders' equity:		
Class A common stock, par value \$.01; authorized 2,500,000 shares; issued and outstanding 108,351 and 121,947 shares	1	1
Class B convertible common stock, par value \$.01; authorized 1,000,000 shares; issued and outstanding 300,000 shares	3	3
Additional paid-in capital	1,721	2,728
Accumulated other comprehensive income (loss)	(9)	(8)
Retained earnings	6,381	5,195
Total VMware, Inc.'s stockholders' equity	8,097	7,919
Non-controlling interests	—	4
Total stockholders' equity	8,097	7,923
Total liabilities and stockholders' equity	\$ 16,643	\$ 15,746

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 December 31,		
	2016	2015	2014
Operating activities:			
Net income	\$ 1,186	\$ 997	\$ 886
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	345	335	345
Stock-based compensation	636	504	529
Excess tax benefits from stock-based compensation	(15)	(28)	(36)
Deferred income taxes, net	(8)	(31)	(128)
Gain on Dell stock purchase	(8)	—	—
Impairment of strategic investments	14	5	—
Loss on disposal of assets	16	—	—
Other	(2)	(1)	(7)
Changes in assets and liabilities, net of acquisitions:			
Accounts receivable	(224)	(114)	(267)
Other assets	(215)	32	(70)
Due to/from related parties, net	(54)	(21)	(46)
Accounts payable	(9)	(35)	69
Accrued expenses	187	1	135
Income taxes payable	(15)	13	77
Unearned revenue	547	242	693
Net cash provided by operating activities	2,381	1,899	2,180
Investing activities:			
Additions to property and equipment	(153)	(333)	(352)
Purchases of available-for-sale securities	(3,725)	(3,323)	(3,937)
Sales of available-for-sale securities	2,227	2,193	2,076
Maturities of available-for-sale securities	1,307	1,100	717
Purchases of strategic investments	(49)	(14)	(52)
Proceeds from sales of strategic investments	1	4	11
Business combinations, net of cash acquired	(74)	(38)	(1,168)
Decrease (increase) in restricted cash	(2)	75	(78)
Other investing	3	—	(2)
Net cash used in investing activities	(465)	(336)	(2,785)
Financing activities:			
Proceeds from issuance of common stock	109	126	164
Proceeds from issuance of notes payable to Dell	—	—	1,050
Reduction in capital from Dell	—	—	(24)
Proceeds from non-controlling interests	—	4	7
Payment to acquire non-controlling interests	(4)	—	—
Repurchase of common stock	(1,575)	(1,125)	(700)
Excess tax benefits from stock-based compensation	15	28	36
Shares repurchased for tax withholdings on vesting of restricted stock	(164)	(174)	(162)
Net cash provided by (used in) financing activities	(1,619)	(1,141)	371
Net increase (decrease) in cash and cash equivalents	297	422	(234)
Cash and cash equivalents at beginning of the period	2,493	2,071	2,305
Cash and cash equivalents at end of the period	\$ 2,790	\$ 2,493	\$ 2,071
Supplemental disclosures of cash flow information:			
Cash paid for interest	\$ 29	\$ 28	\$ 27
Cash paid for taxes, net	467	231	215
Non-cash items:			
Changes in capital additions, accrued but not paid	\$ (7)	\$ (49)	\$ 19

Changes in tax withholdings on vesting of restricted stock, accrued but not paid	3	(2)	7
Fair value of stock-based awards assumed in acquisitions	—	—	24

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

VMware, Inc.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in millions)

	Class A Common Stock		Class B Convertible Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Non-controlling Interests	Stockholders' Equity
	Shares	Par Value	Shares	Par Value					
Balance, January 1, 2014	130	\$ 1	300	\$ 3	\$ 3,496	\$ 3,312	\$ 4	\$ —	\$ 6,816
Proceeds from issuance of common stock	4	—	—	—	164	—	—	—	164
Issuance of stock-based awards in acquisition	—	—	—	—	24	—	—	—	24
Repurchase and retirement of common stock	(8)	—	—	—	(700)	—	—	—	(700)
Issuance of restricted stock, net of cancellations	5	—	—	—	1	—	—	—	1
Shares withheld for tax withholdings on vesting of restricted stock	(2)	—	—	—	(162)	—	—	—	(162)
Stock-based compensation	—	—	—	—	516	—	—	—	516
Excess tax benefits from stock-based compensation	—	—	—	—	32	—	—	—	32
Amount due from tax sharing arrangement	—	—	—	—	(12)	—	—	—	(12)
Total other comprehensive income (loss)	—	—	—	—	—	—	(5)	—	(5)
Activities with non-controlling interests	—	—	—	—	—	—	—	5	5
Reclassification of liability-classified awards to equity stock-based compensation	—	—	—	—	21	—	—	—	21
Net income	—	—	—	—	—	886	—	—	886
Balance, December 31, 2014	129	1	300	3	3,380	4,198	(1)	5	7,586
Proceeds from issuance of common stock	4	—	—	—	126	—	—	—	126
Repurchase and retirement of common stock	(13)	—	—	—	(1,125)	—	—	—	(1,125)
Issuance of restricted stock, net of cancellations	5	—	—	—	—	—	—	—	—
Shares withheld for tax withholdings on vesting of restricted stock	(3)	—	—	—	(173)	—	—	—	(173)
Stock-based compensation	—	—	—	—	504	—	—	—	504
Excess tax benefits from stock-based compensation	—	—	—	—	3	—	—	—	3
Credit from tax sharing arrangement	—	—	—	—	13	—	—	—	13
Total other comprehensive income (loss)	—	—	—	—	—	—	(7)	—	(7)
Activities with non-controlling interests	—	—	—	—	—	—	—	(1)	(1)
Net income	—	—	—	—	—	997	—	—	997
Balance, December 31, 2015	122	1	300	3	2,728	5,195	(8)	4	7,923
Proceeds from issuance of common stock	3	—	—	—	109	—	—	—	109
Repurchase and retirement of common stock	(21)	—	—	—	(1,575)	—	—	—	(1,575)
Issuance of restricted stock, net of cancellations	7	—	—	—	—	—	—	—	—
Shares withheld for tax withholdings on vesting of restricted stock	(3)	—	—	—	(167)	—	—	—	(167)
Stock-based compensation	—	—	—	—	636	—	—	—	636
Tax shortfall from stock-based compensation	—	—	—	—	(24)	—	—	—	(24)
Credit from tax sharing arrangement	—	—	—	—	15	—	—	—	15
Total other comprehensive income (loss)	—	—	—	—	—	—	(1)	—	(1)
Activities with non-controlling interests	—	—	—	—	(1)	—	—	(4)	(5)
Net income	—	—	—	—	—	1,186	—	—	1,186
Balance, December 31, 2016	108	\$ 1	300	\$ 3	\$ 1,721	\$ 6,381	\$ (9)	\$ —	\$ 8,097

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”) is a leader in virtualization and cloud infrastructure solutions that enable businesses to transform the way they build, deliver and consume information technology (“IT”) resources in a manner that is based on their specific needs. VMware’s virtualization infrastructure solutions, which include a suite of products and services designed to deliver a software-defined data center, run on industry-standard desktop computers, servers and mobile devices and support a wide range of operating system and application environments, as well as networking and storage infrastructures.

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.

VMware was incorporated as a Delaware corporation in 1998, was acquired by EMC Corporation (“EMC”) in 2004 and conducted its initial public offering of VMware’s Class A common stock in August 2007. Effective September 7, 2016, Dell Technologies Inc. (“Dell”) (formerly Denali Holding Inc.) acquired EMC, and majority control of VMware (the “Dell Acquisition”). As a result of the Dell Acquisition, EMC became a wholly-owned subsidiary of Dell and VMware became an indirectly-held, majority-owned subsidiary of Dell. As of December 31, 2016, Dell controlled 82.8% of VMware’s outstanding common stock and 97.7% of the combined voting power of VMware’s outstanding common stock, including 38 million shares of VMware’s Class A common stock and all of VMware’s Class B common stock.

Michael S. Dell was elected to the VMware Board of Directors as Chairman and Egon Durban was elected to the VMware Board. 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. Pushdown accounting was not applied as a result of the Dell Acquisition and consequently no change in basis was reflected in VMware’s consolidated financial statements. Transactions prior to the effective date of the Dell Acquisition represent transactions only with EMC and its consolidated subsidiaries (“Parent”).

On October 25, 2016, the VMware Board of Directors approved a change to VMware’s fiscal year 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 change in VMware’s fiscal year was effective January 1, 2017. As a result of the change, the Company had a transition period that began on January 1, 2017 and ended on February 3, 2017, and VMware’s first full fiscal year under the revised fiscal calendar began on February 4, 2017 and will end on February 2, 2018. The Company plans to include its financial statements for the approximately one-month transition period in its Quarterly Report on Form 10-Q filed for the fiscal quarter ended May 5, 2017.

Management believes the assumptions underlying the consolidated financial statements are reasonable. However, the amounts recorded for VMware’s intercompany transactions with Dell and its consolidated subsidiaries may not be considered arm’s length with an unrelated third party. Therefore, the 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. Non-controlling interests are presented as a separate component within total stockholders’ equity and represent the equity and cumulative pro-rata share of the results of operations attributable to the non-controlling interests. 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 and is not presented separately as the amount was not material for the periods presented. During 2016, VMware acquired all of the non-controlling interests previously presented as a separate component within total stockholders’ equity.

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 and rebates, 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, related software maintenance and support, training, consulting services and hosted services. Revenue is recognized when persuasive evidence of an arrangement exists, delivery has occurred or service has been provided, the sales price is fixed or determinable and collectibility is probable.

License Revenue

VMware sells most of its license software through distributors, resellers, system vendors, systems integrators and through its direct sales force. VMware recognizes revenue from the sale of its software licenses upon shipment, provided all other revenue recognition criteria have been met. VMware also rents its software to customers using a pay-as-you-go consumption model. Revenue from this selling model is generally recognized based upon the customer's reported usage. When software license arrangements are offered with new products that become available on a when-and-if-available basis, revenue associated with these arrangements is recognized ratably over the subscription period.

For software sold by system vendors that is bundled with their hardware, unless VMware has a separate license agreement which governs the transaction, revenue is recognized in arrears upon the receipt of royalty reports.

Services Revenue

VMware's services revenue generally consist of software maintenance and support, training, consulting services and 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. Revenue from software maintenance and support offerings is generally recognized ratably over the contract period.

Professional services include design, implementation and training. Professional services are not considered essential to the functionality of VMware's products as these services do not alter the intended product capabilities and may be performed by customers or other vendors. Revenue from professional services engagements performed for a fixed fee, for which VMware is able to make reasonably dependable estimates of progress toward completion, is recognized on a proportional performance basis assuming all other revenue recognition criteria are met. Revenue from professional services engagements invoiced on a time and materials basis is recognized as the hours are incurred.

VMware's hosted services consist of certain software offerings sold as a service without the customer's ability to take possession of the software over the subscription term. These arrangements are offered to VMware's customers over a specified period of time and revenue is recognized in both license and services revenue ratably over the subscription term commencing upon delivery of the service. Hosted services are also provided on a consumption basis with revenue recognized commensurate with customer's usage of the related services.

Rebate Reserves and Marketing Development Funds

Rebates are offered 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 of 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 eligible sales required to achieve the target.

VMware participates in marketing development programs with certain channel partners wherein VMware reimburses its partners for certain direct costs incurred by the partners for marketing-related expenses or other services under the terms of the programs. Reimbursed costs to channel partners are recognized as a reduction of revenue based upon the maximum potential liability. The difference between the maximum potential liability recognized and the actual amount paid out has not been material to date.

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

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.

Multiple-Element Arrangements

VMware enters into multiple-element revenue arrangements in which a customer may purchase a combination of software, maintenance and support, training, consulting services and hosted services. For multiple-element arrangements with software elements, VMware allocates and defers revenue for the undelivered elements based on fair value using vendor-specific objective evidence ("VSOE") and applies the residual method to allocate the remaining fee to the delivered products and services. If a product or service included in a software-related multiple-element arrangement has not been delivered, and is not considered essential to the functionality of the delivered products or services, VMware must determine the fair value of each undelivered product or service using VSOE. Absent VSOE, revenue is deferred until VSOE of fair value exists for each of the undelivered products or services, or until all elements of the arrangement have been delivered. However, if the only undelivered element without VSOE is maintenance and support, the entire arrangement fee is recognized ratably over the performance period.

VSOE of fair value for an undelivered element is generally based on historical stand-alone sales to third parties. In limited instances, for an offering that is not yet sold, VSOE is the price established by management if it is probable that the price will not change when introduced to the marketplace, including through the use of a contractually stated renewal rate. In determining VSOE of fair value, VMware requires that the selling prices for a product or service fall within a reasonable pricing range. VMware has established VSOE for its software maintenance and technical support services, consulting services and training.

For multiple-element arrangements that contain software and non-software elements, VMware allocates revenue to software or software-related elements as a group and any non-software elements separately based on relative selling prices using the selling price hierarchy. The relative selling price for each deliverable is determined using VSOE, if it exists, or third-party evidence ("TPE") of selling price. TPE of selling price is based on evaluation of prices charged for competitor products or services sold to similarly situated customers. As VMware's offerings contain significant proprietary technology and provide different features and functionality, comparable prices of similar products typically cannot be obtained and relied upon.

If neither VSOE nor TPE of selling price exists for a deliverable, VMware uses its best estimate of selling price ("BESP") for that deliverable. The objective of BESP is to determine the price at which VMware would transact a sale if the product or service were sold on a stand-alone basis. VMware determines BESP by considering its overall pricing objectives and practices across different sales channels and geographies, market conditions, and historical sales. VMware uses BESP in the allocation of arrangement consideration for non-software elements. Once value is allocated to software or software-related elements as a group, revenue is then recognized when the relevant revenue recognition criteria are met.

A specified upgrade obligation is created in the event VMware publicly announces new specific features, functionalities or entitlements to software upgrades or license products that have not been made available. VMware generally does not have VSOE of fair value for specified upgrades or license products. Accordingly, revenue recognition is deferred for multiple-element arrangements that entitle a customer to specified upgrades or new license products until the product obligations have been fulfilled.

Unearned revenue substantially consists of payments received in advance of revenue recognition for products and services described above.

Foreign Currency Remeasurement

The 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. 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 losses were \$8 million, \$11 million and \$8 million during the years ended December 31, 2016, 2015 and 2014, respectively.

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

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

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

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 fair 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. 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 ("FIFO") 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.

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. As of December 31, 2016 and 2015 the total amount of VMware's restricted cash was \$20 million and \$19 million, respectively.

As of December 31, 2016, VMware's total cash, cash equivalents and short-term investments were \$7,985 million, of which \$6,921 million was held outside the United States.

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

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.

Businesses acquired from Dell are accounted for as a business combination between entities under common control. VMware includes the results of operations of the acquired businesses under common control, if significant, in the period of acquisition as if it had occurred at the beginning of the period and also retrospectively adjusts the financial statement information presented for prior years to reflect the business as if it had been acquired at the beginning of the financial period presented. VMware recognizes the net assets under common control at Dell's carrying values as of the date of the transfer and records the difference between the carrying value and the cash consideration as an equity transaction.

Costs to effect an acquisition are recorded in general and administrative expenses on the consolidated statements of income as the expenses are incurred.

Purchased Intangible Assets and Goodwill

Goodwill is evaluated for impairment during the fourth 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.

In order 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 and 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.

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 to the related operating expense line item on the consolidated statements of income.

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

Advertising

Advertising costs are expensed as incurred. Advertising expense was \$21 million, \$22 million and \$29 million in the years ended December 31, 2016, 2015 and 2014, respectively.

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, certain transactions that VMware and Dell are parties to 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

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

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.

VMware does not provide for a U.S. income tax liability on undistributed earnings of VMware's non-U.S. subsidiaries. The earnings of non-U.S. subsidiaries, which reflect full provision for non-U.S. income taxes, are currently indefinitely reinvested in foreign operations or will be remitted substantially free of additional tax. If these overseas funds are needed for its operations in the United States, VMware would be required to accrue and pay U.S. taxes on substantially all undistributed earnings to repatriate these funds. However, VMware's intent is to indefinitely reinvest its non-U.S. earnings in its foreign operations and VMware's current plans do not demonstrate a need to repatriate them to fund its U.S. operations. At this time, it is not practicable to estimate the amount of tax that may be payable if VMware were to repatriate these funds.

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

Net Income Per Share

Basic net income per share is calculated using the weighted-average number of shares of VMware's common stock outstanding during the period. Diluted net income 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, Class A and Class B common stock. For purposes of calculating net income per share, VMware uses the two-class method. As both classes share the same rights in dividends, basic and diluted net income 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 holds a diversified portfolio of money market funds and fixed income securities, which primarily consist of various highly liquid debt instruments of the U.S. government and its agencies, municipal obligations, and U.S. and foreign corporate debt securities. VMware's fixed income investment portfolio is denominated in U.S. dollars and consists of securities with various maturities.

VMware manages counterparty risk through adequate 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, original equipment manufacturers ("OEMs"), resellers, and end-user customers, in the normal course of business. To reduce credit risk, the Company performs periodic credit evaluations, which consider the customer's payment history and financial stability.

As of December 31, 2016 and 2015, one distributor accounted for 19% and 18%, respectively, of VMware's accounts receivable balance, and another distributor accounted for 13% and 15%, respectively, of VMware's accounts receivable balance. A third distributor accounted for 13% and 11% of VMware's accounts receivable balance as of December 31, 2016 and 2015.

One distributor accounted for 15% of revenue in each of the years ended December 31, 2016, 2015 and 2014, and another distributor accounted for 12%, 12% and 13% of revenue in the years ended December 31, 2016, 2015 and 2014, respectively. A third distributor accounted for 10%, 11% and 11% of revenue in the years ended December 31, 2016, 2015 and 2014.

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 are achieved. 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

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

is adjusted and recorded on the statements of income 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 (the "ESPP") 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

Topic 606, Revenue from Contracts with Customers

During May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, Revenue from Contracts with Customers (Topic 606). In 2016, the FASB issued ASU 2016-08, ASU 2016-10 and ASU 2016-12, which provide interpretive clarifications on the new guidance in Topic 606 (collectively, "Topic 606"). The updated revenue standard replaces all existing revenue recognition guidance under GAAP and establishes common principles for recognizing revenue for all industries. It also provides guidance on the accounting for costs to fulfill or obtain a customer contract. The core principle underlying the updated standard is the recognition of revenue based on consideration expected to be entitled from the transfer of goods or services to a customer. The updated standard is effective for interim and annual periods beginning after December 15, 2017 and permits the use of either the full retrospective or cumulative effect transition method. Early adoption is permitted for annual periods beginning after December 15, 2016.

VMware plans to adopt Topic 606 using the full retrospective transition method when it becomes effective for the Company in the first fiscal quarter of 2019, under the Company's new fiscal calendar. While the Company is continuing to assess the potential impacts of Topic 606, VMware currently expects unearned license revenue related to the sale of perpetual licenses will decline significantly upon adoption. Currently, VMware defers all license revenue related to the sale of its perpetual licenses in the event certain revenue recognition criteria are not met. However, under Topic 606 the Company would generally expect that substantially all license revenue related to sale of its perpetual licenses will be recognized upon delivery. The Company is continuing to evaluate the effect that Topic 606 will have on its financial statements and related disclosures, and preliminary assessments are subject to change.

ASU No. 2016-02, Leases

During February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), which requires a lessee to recognize a lease liability for the obligation to make lease payments and a right-to-use asset for the right to use the underlying asset for the lease term. The updated standard also requires additional disclosure regarding leasing arrangements. It is effective for interim and annual periods beginning after December 15, 2018 and requires a modified retrospective adoption, with early adoption permitted. The Company is currently evaluating the effect that ASU 2016-02 will have on its consolidated financial statements and related disclosures, and expects that most of its lease commitments will be subject to the updated standard and recognized as lease liabilities and right-of-use assets upon adoption.

ASU No. 2016-09, Compensation

During March 2016, the FASB issued ASU No. 2016-09, Compensation—Stock Compensation (Topic 718), which impacts the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statements of cash flows. The updated standard is effective for interim and annual periods beginning after December 15, 2016 and permits early adoption in any interim or annual period. VMware adopted the updated standard effective February 4, 2017. The updated standard is expected to cause volatility in VMware's effective tax rates and net income per share due to the treatment of the tax effects on exercised or vested stock-based awards recorded to the consolidated statements of income. The volatility in future periods will depend on VMware's stock price at the awards' vest dates or exercise dates and the number of awards that vest or exercise in each period. In addition, all tax-related cash flows resulting from share-based payments are required to be reported as operating activities in the consolidated statement of cash flows. As permitted under the updated standard, VMware will continue to estimate forfeitures at each period and did not elect an accounting policy change to record forfeitures as they occur.

ASU No. 2016-16, Income Taxes

During October 2016, the FASB issued ASU No. 2016-16, Income Taxes: Intra-Entity Transfers of Assets Other Than Inventory (Topic 740), which requires entities to recognize at the transaction date the income tax consequences of intra-entity asset transfers. Previous guidance requires the tax effects from intra-entity asset transfers to be deferred until that asset is sold to a third party or recovered through use. The updated standard is effective in annual and interim periods beginning after December 15, 2017, with early adoption permitted during the first interim period of a fiscal year, and requires a modified

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

retrospective transition method. The Company is currently evaluating the effect that the updated standard will have on its consolidated financial statements and related disclosures.

B. 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 December 31, 2016. Transactions prior to the effective date of the Dell Acquisition represent transactions only with EMC and its consolidated subsidiaries.

During the fourth quarter of 2014, Dell acquired the controlling interest in VCE Company LLC ("VCE"). Transactions with VCE from the acquisition date have been included in the tables below.

Transactions with Dell

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

- Pursuant to ongoing reseller arrangements with Dell, Dell bundles VMware's products and services with Dell's products and sells them to end users. Reseller revenue is presented net of related marketing development funds and rebates paid to Dell.
- Dell purchases products and services from VMware for internal use.
- VMware provides professional services to end users based upon contractual agreements with Dell.
- 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.
- VMware provides various services to Pivotal. Support costs incurred by VMware are reimbursed to VMware and are recorded as a reduction to the costs incurred by VMware.

Information about VMware's revenue and receipts from such arrangements during the years ended December 31, 2016, 2015 and 2014 and unearned revenue from such arrangements at December 31, 2016 and 2015 consisted of the following (table in millions):

	Revenue and Receipts			Unearned Revenue	
	For the Year Ended December 31,			As of December 31,	
	2016	2015	2014	2016	2015
Reseller revenue	\$ 508	\$ 301	\$ 205	\$ 637	\$ 292
Internal-use revenue	35	17	21	15	11
Professional services revenue	115	100	85	—	3
Agency fee revenue	4	6	5	—	—
Reimbursement for services to Pivotal	1	4	2	n/a	n/a

VMware and Dell engaged in the following ongoing intercompany 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 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 and primarily include salaries, benefits, travel and rent expenses. Dell also incurs certain administrative costs on VMware's behalf in the United States that are recorded as expenses on VMware's consolidated statements of income.
- 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.

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

Information about VMware's costs from such arrangements for the years ended December 31, 2016, 2015 and 2014 consisted of the following (table in millions):

	For the Year Ended December 31,		
	2016	2015	2014
Purchases and leases of products and purchases of services	\$ 97	\$ 63	\$ 71
Collaborative technology project costs	—	5	12
Dell subsidiary support and administrative costs	105	100	137

VMware also purchases Dell products through Dell's channel partners. Purchases of Dell products through Dell's channel partners were not significant during the year ended December 31, 2016. During the years ended December 31, 2015 and 2014, purchases of Dell products through Dell's channel partners were \$36 million and \$25 million, respectively.

Dell Financial Services ("DFS")

During 2016, DFS provided financing to certain of VMware's end customers based on the customer's discretion. Upon acceptance of the financing arrangement by both VMware's end customer and DFS, amounts classified as trade accounts receivable are reclassified to due from related parties, net on the consolidated balance sheets. Financing fees recognized on these arrangements were not significant during the year-ended December 31, 2016.

EMC Equity Awards Held by VMware Employees

In connection with the Dell Acquisition, vesting was accelerated for all outstanding EMC stock options and restricted stock units and stock options were automatically exercised on the last trading day prior to the effective date of the merger. VMware's portion of the expense associated with accelerated EMC equity awards held by VMware employees was \$7 million and was included within stock-based compensation expense on the consolidated statements of income during the year ended December 31, 2016.

Due To/From Related Parties, Net

Amounts due to and from related parties, net as of December 31, 2016 and 2015 consisted of the following (table in millions):

	December 31,	
	2016	2015
Due (to) related parties	\$ (71)	\$ (68)
Due from related parties	203	142
Due (to) from related parties, net	\$ 132	\$ 74

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

Stock Purchase Agreement with Dell

On December 15, 2016, VMware entered into a stock purchase agreement with Dell to purchase \$500 million of VMware Class A common stock. Through December 31, 2016, VMware had purchased 4.8 million shares for \$375 million. A derivative asset was recognized related to VMware's obligation to purchase additional shares for \$125 million and is measured at fair value on a recurring basis. The fair value adjustment measured as of December 31, 2016 resulted in the recognition of an \$8 million gain that was included in other income (expense), net on the consolidated statements of income.

On February 15, 2017, the stock purchase agreement with Dell was completed. A total of \$500 million was paid in exchange for 6.2 million shares. The aggregate number of shares purchased was determined based upon the volume-weighted average price during a defined period, less an agreed upon discount.

Notes Payable to Dell

VMware entered into a note exchange agreement with its Parent on January 21, 2014 providing for the issuance of three promissory notes in the aggregate principal amount of \$1,500 million. The total debt of \$1,500 million includes \$450 million that was exchanged for the \$450 million promissory note issued to VMware's Parent in April 2007, as amended and restated in June 2011.

VMware, Inc.
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The three notes issued may be prepaid without penalty or premium, and outstanding principal is due on the following dates: \$680 million due May 1, 2018 , \$550 million due May 1, 2020 and \$270 million due December 1, 2022 . The notes bear interest, payable quarterly in arrears, at the annual rate of 1.75% . During the years ended December 31, 2016 , 2015 and 2014 , \$26 million , \$26 million and \$24 million , respectively, of interest expense was recognized.

Pivotal

In April 2016, VMware contributed \$20 million in cash to Pivotal in exchange for additional preferred equity interests in Pivotal. As of December 31, 2016, VMware's ownership interest in Pivotal was 21% . As of December 31, 2015, VMware's ownership interest in Pivotal was 28% . This strategic investment is accounted for using the cost method.

C. Business Combinations, Definite-Lived Intangible Assets, Net and Goodwill

Business Combination

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 VMware NSX and software-defined data centers. The pro forma financial information assuming the acquisition had occurred as of the beginning of the calendar year prior to the year of acquisition, as well as the revenue and earnings generated during the current year, were not significant for disclosure purposes.

The following table summarizes the preliminary allocation of the consideration to the fair value of the assets acquired and liabilities assumed (table in millions):

Intangible assets	\$	25
Goodwill		39
Other acquired assets		12
Total assets acquired		76
Deferred tax liabilities		(9)
Fair value of assets acquired and liabilities assumed	\$	67

The identifiable intangible assets acquired were primarily related to purchased technology with estimated useful lives of four to five years . Goodwill is not expected to be deductible for U.S. income tax purposes.

Prior to the closing of the acquisition on June 21, 2016, EMC owned approximately 16% of the outstanding shares of Arkin. As a result of the acquisition, cash paid to EMC was approximately \$13 million .

Other 2016 Business Combination

In December 2016, VMware completed one asset acquisition in addition to Arkin, in which VMware acquired certain intangible assets classified as completed technology for \$15 million .

2015

During the year ended December 31, 2015, VMware completed two business combinations, which were not significant to VMware's consolidated financial statements, either individually or in the aggregate. On October 15, 2015, VMware acquired all of the outstanding shares of Boxer, Inc. ("Boxer") to enhance the enterprise mobile management and security solutions. On February 2, 2015, VMware acquired all of the outstanding shares of Immidio B.V. ("Immidio") to expand VMware's workspace environment management solutions within the End-User Computing product group. The aggregate purchase price for these two acquisitions was \$39 million of cash, net of liabilities assumed. The purchase price primarily included \$13 million of identifiable intangible assets and \$29 million of goodwill that is non-deductible for tax purposes.

2014

Acquisition of AirWatch LLC

On February 24, 2014, VMware acquired for cash all of the outstanding membership units of A.W.S. Holding, LLC ("AirWatch Holding"), the sole member and equity holder of AirWatch LLC ("AirWatch"). AirWatch is a leader in enterprise mobile management and security solutions. VMware acquired AirWatch to expand VMware's solutions within the enterprise

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

mobile management and security space. The total purchase price of \$1,128 million included cash of \$1,104 million and the fair value of assumed unvested equity attributed to pre-combination services totaling \$24 million. The purchase price included \$868 million of goodwill and \$250 million of identified intangible assets, with useful lives ranging from two to eight years. The majority of the goodwill and intangible assets is deductible for U.S. income tax purposes.

Merger consideration totaling \$300 million, including \$75 million that was held in escrow, was payable to certain employees of AirWatch subject to specified future employment conditions and was recognized as expense over the requisite service period on a straight-line basis. Compensation expense of \$14 million, \$145 million and \$141 million was recognized during the years ended December 31, 2016, 2015 and 2014 respectively.

VMware assumed all of AirWatch's unvested stock options and restricted stock outstanding at the completion of the acquisition with an estimated fair value of \$134 million. Of the total fair value, \$24 million was allocated to the purchase price and \$110 million was allocated to future services and is being expensed over the remaining requisite service periods on a straight-line basis.

The following pro forma financial information summarizes the combined net income for VMware and AirWatch, which was significant for purposes of the unaudited pro forma financial information disclosure, as though the companies were combined at the beginning of 2013. The amount of revenue from AirWatch was not considered significant, and as such, has not been separately presented in the unaudited pro forma financial information disclosure below.

Supplemental information on an unaudited pro forma basis as if AirWatch had been acquired on January 1, 2013 is presented as follows (table in millions):

	For the Year Ended December 31, 2014	
Pro forma adjusted net income	\$	849

Pro forma adjustments primarily include compensation expense for certain key employees subject to specified future employment conditions, intangible amortization, stock-based compensation and related tax effects.

Definite-Lived Intangible Assets, Net

The following table summarizes the changes in the carrying amount of definite-lived intangible assets for the years ended December 31, 2016 and 2015 (table in millions):

	December 31,	
	2016	2015
Balance, beginning of the year	\$ 616	\$ 748
Additions to intangible assets related to business combinations	40	13
Amortization expense	(129)	(145)
Reduction related to sale of assets	(10)	—
Balance, end of the year	\$ 517	\$ 616

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

As of December 31, 2016 and 2015, definite-lived intangible assets consisted of the following (amounts in tables in millions):

	December 31, 2016			
	Weighted- Average Useful Lives (in years)	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Purchased technology	6.6	\$ 641	\$ (358)	\$ 283
Leasehold interest	34.9	149	(24)	125
Customer relationships and customer lists	8.3	132	(62)	70
Trademarks and tradenames	8.7	61	(23)	38
Other	5.7	4	(3)	1
Total definite-lived intangible assets		<u>\$ 987</u>	<u>\$ (470)</u>	<u>\$ 517</u>

	December 31, 2015			
	Weighted- Average Useful Lives (in years)	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Purchased technology	6.6	\$ 648	\$ (298)	\$ 350
Leasehold interest	34.9	149	(20)	129
Customer relationships and customer lists	8.4	148	(62)	86
Trademarks and tradenames	8.6	61	(16)	45
Other	2.9	20	(14)	6
Total definite-lived intangible assets		<u>\$ 1,026</u>	<u>\$ (410)</u>	<u>\$ 616</u>

Amortization expense of definite-lived intangible assets was \$129 million, \$145 million and \$141 million during the years ended December 31, 2016, 2015 and 2014, respectively.

Based on intangible assets recorded as of December 31, 2016 and assuming no subsequent additions, dispositions or impairment of underlying assets, the remaining estimated annual amortization expense is expected to be as follows (table in millions):

2017	\$ 126
2018	116
2019	95
2020	45
2021	27
Thereafter	108
Total	<u>\$ 517</u>

Goodwill

The following table summarizes the changes in the carrying amount of goodwill during the year ended December 31, 2016 and 2015 (table in millions):

	December 31,	
	2016	2015
Balance, beginning of the year	\$ 3,993	\$ 3,964
Increase in goodwill related to business combinations	39	29
Balance, end of the year	<u>\$ 4,032</u>	<u>\$ 3,993</u>

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

D. 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 associated with 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. 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. Actions associated with this plan were substantially completed by December 31, 2016.

During the year ended December 31, 2015, VMware eliminated approximately 380 positions across all major functional groups and geographies to streamline its operations. As a result of these actions, \$23 million of realignment expenses were recognized during the year ended December 31, 2015 on the consolidated statements of income.

During the year ended December 31, 2014, VMware eliminated approximately 180 positions across all major functional groups and geographies to streamline its operations. As a result of these actions, \$16 million of severance-related realignment expenses were recognized during the year ended December 31, 2014 on the consolidated statements of income.

The following table summarizes the activity for the accrued realignment expenses for the years ended December 31, 2016, 2015 and 2014 (tables 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

	For the Year Ended December 31, 2015			
	Balance as of January 1, 2015	Realignment	Utilization	Balance as of December 31, 2015
Severance-related costs	\$ 8	23	(28)	\$ 3

	For the Year Ended December 31, 2014			
	Balance as of January 1, 2014	Realignment	Utilization	Balance as of December 31, 2014
Workforce reductions	\$ —	\$ 18	\$ (10)	\$ 8
Asset impairments, exit of facilities and other exit costs	3	(2)	(1)	—
Total	\$ 3	\$ 16	\$ (11)	\$ 8

E. Net Income per Share

Basic net income per share is computed by dividing net income by the weighted-average number of common shares outstanding during the period. Diluted net income 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, including performance stock units, stock options, including purchase options under VMware's employee stock purchase plan. Securities are excluded from the computations of diluted net income per share if their effect would be anti-dilutive. VMware uses the two-class method to calculate net income 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 per share during the years ended December 31, 2016, 2015 and 2014 (table in millions, shares in thousands):

	For the Year Ended December 31,		
	2016	2015	2014
Net income	\$ 1,186	\$ 997	\$ 886
Gain on stock purchase with Dell, net of tax	(8)	—	—
Net income, as adjusted	<u>\$ 1,178</u>	<u>\$ 997</u>	<u>\$ 886</u>
Weighted-average shares, basic for Class A and Class B	420,520	424,003	430,355
Effect of stock purchase with Dell	7	—	—
Effect of other dilutive securities	3,467	2,544	4,158
Weighted-average shares, diluted for Class A and Class B	<u>423,994</u>	<u>426,547</u>	<u>434,513</u>
Net income per weighted-average share, basic for Class A and Class B	\$ 2.82	\$ 2.35	\$ 2.06
Net income per weighted-average share, diluted for Class A and Class B	<u>\$ 2.78</u>	<u>\$ 2.34</u>	<u>\$ 2.04</u>

The following table sets forth the weighted-average common share equivalents of Class A common stock that were excluded from the diluted net income per share calculations during the years ended December 31, 2016, 2015 and 2014, because their effect would have been anti-dilutive (shares in thousands):

	For the Year Ended December 31,		
	2016	2015	2014
Anti-dilutive securities:			
Employee stock options	1,817	2,219	1,440
Restricted stock units	652	249	16
Total	<u>2,469</u>	<u>2,468</u>	<u>1,456</u>

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

F. Cash, Cash Equivalents and Investments

Cash, cash equivalents and investments as of December 31, 2016 and 2015 consisted of the following (tables in millions):

	December 31, 2016			
	Cost or Amortized Cost	Unrealized Gains	Unrealized Losses	Aggregate Fair Value
Cash	\$ 512	\$ —	\$ —	\$ 512
Cash equivalents:				
Money-market funds	\$ 2,235	\$ —	\$ —	\$ 2,235
Time deposits	26	—	—	26
Municipal obligations	17	—	—	17
Total cash equivalents	\$ 2,278	\$ —	\$ —	\$ 2,278
Short-term investments:				
U.S. Government and agency obligations	\$ 734	\$ —	\$ (3)	\$ 731
U.S. and foreign corporate debt securities	3,885	2	(18)	3,869
Foreign governments and multi-national agency obligations	32	—	—	32
Municipal obligations	365	—	—	365
Asset-backed securities	4	—	—	4
Mortgage-backed securities	196	—	(2)	194
Total short-term investments	\$ 5,216	\$ 2	\$ (23)	\$ 5,195
Other assets:				
Marketable available-for-sale equity securities	\$ 15	\$ 7	\$ —	\$ 22
	December 31, 2015			
	Cost or Amortized Cost	Unrealized Gains	Unrealized Losses	Aggregate Fair Value
Cash	\$ 725	\$ —	\$ —	\$ 725
Cash equivalents:				
Money-market funds	\$ 1,763	\$ —	\$ —	\$ 1,763
Time deposits	5	—	—	5
Total cash equivalents	\$ 1,768	\$ —	\$ —	\$ 1,768
Short-term investments:				
Time deposits	\$ 12	\$ —	\$ —	\$ 12
U.S. Government and agency obligations	753	—	(3)	750
U.S. and foreign corporate debt securities	3,263	1	(12)	3,252
Foreign governments and multi-national agency obligations	35	—	—	35
Municipal obligations	705	1	—	706
Asset-backed securities	20	—	—	20
Mortgage-backed securities	243	—	(2)	241
Total short-term investments	\$ 5,031	\$ 2	\$ (17)	\$ 5,016
Other assets:				
Marketable available-for-sale equity securities	\$ 15	\$ 3	\$ —	\$ 18

VMware evaluated its available-for-sale investments as of December 31, 2016 and 2015 for other-than-temporary declines in fair value. As of December 31, 2016 and 2015, VMware did not consider any of its available-for-sale investments to be

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

other-than-temporarily impaired. The realized gains and losses on investments during the years ended December 31, 2016, 2015 and 2014 were not significant.

Unrealized losses on cash equivalents and available-for-sale investments as of December 31, 2016 and 2015, which have been in a net loss position for less than twelve months, were classified by sector as follows (table in millions):

	December 31, 2016		December 31, 2015	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. Government and agency obligations	\$ 608	\$ (3)	\$ 657	\$ (3)
U.S. and foreign corporate debt securities	2,595	(18)	2,564	(11)
Mortgage-backed securities	164	(2)	171	(1)
Total	\$ 3,367	\$ (23)	\$ 3,392	\$ (15)

As of December 31, 2016 and 2015, unrealized losses on cash equivalents and 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 cash equivalents and available-for-sale investments, which have been in a net loss position for twelve months or greater, were not significant as of December 31, 2016 and 2015.

Contractual Maturities

The contractual maturities of short-term investments held at December 31, 2016 consisted of the following (table in millions):

	Amortized Cost Basis	Aggregate Fair Value
Due within one year	\$ 1,570	\$ 1,570
Due after 1 year through 5 years	3,171	3,153
Due after 5 years through 10 years	113	112
Due after 10 years	362	360
Total short-term investments	\$ 5,216	\$ 5,195

G. 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 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
- 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 are primarily classified as Level 2, with the exception of some of the U.S. Government and agency obligations which are classified as Level 1. Additionally, VMware's Level 2 classification includes forward contracts and notes payable to Dell. At December 31, 2016 and 2015, VMware's Level 2 securities were generally priced using non-binding market consensus prices that are 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 fell into Level 3 of the fair value hierarchy as of December 31, 2016 and 2015, and there have been no transfers between fair value measurement levels during the years ended December 31, 2016 and 2015.

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

The following tables set forth the fair value hierarchy of VMware's cash equivalents, available-for-sale securities and derivatives that were required to be measured at fair value as of December 31, 2016 and 2015 (tables in millions):

	December 31, 2016		
	Level 1	Level 2	Total
Cash equivalents:			
Money-market funds	\$ 2,235	\$ —	\$ 2,235
Time deposits	—	26	26
Municipal obligations	—	17	17
Total cash equivalents	\$ 2,235	\$ 43	\$ 2,278
Short-term investments:			
U.S. Government and agency obligations	\$ 441	\$ 290	\$ 731
U.S. and foreign corporate debt securities	—	3,869	3,869
Foreign governments and multi-national agency obligations	—	32	32
Municipal obligations	—	365	365
Asset-backed securities	—	4	4
Mortgage-backed securities	—	194	194
Total short-term investments	\$ 441	\$ 4,754	\$ 5,195
Other current assets:			
Derivative on stock purchase with Dell (refer to Note B)	\$ —	\$ 8	\$ 8
Other assets:			
Marketable available-for-sale equity securities	\$ 22	\$ —	\$ 22

	December 31, 2015		
	Level 1	Level 2	Total
Cash equivalents:			
Money-market funds	\$ 1,763	\$ —	\$ 1,763
Time deposits	—	5	5
Total cash equivalents	\$ 1,763	\$ 5	\$ 1,768
Short-term investments:			
Time deposits	\$ —	\$ 12	\$ 12
U.S. Government and agency obligations	543	207	750
U.S. and foreign corporate debt securities	—	3,252	3,252
Foreign governments and multi-national agency obligations	—	35	35
Municipal obligations	—	706	706
Asset-backed securities	—	20	20
Mortgage-backed securities	—	241	241
Total short-term investments	\$ 543	\$ 4,473	\$ 5,016
Other assets:			
Marketable available-for-sale equity securities	\$ 18	\$ —	\$ 18

Notes payable to Dell are not adjusted to fair value. The fair value of the notes payable to Dell was approximately \$1,489 million and \$1,474 million, respectively. Fair value 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 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 and liabilities associated with this plan were both approximately

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

\$35 million and \$20 million as of December 31, 2016 and 2015 , respectively, and are included in other assets and other liabilities on the consolidated balance sheets.

Assets Measured and Recorded at Fair Value on a Non-Recurring Basis

VMware holds strategic investments in its portfolio accounted for using the cost method. These strategic investments are periodically assessed for other-than-temporary impairment. VMware uses Level 3 inputs as part of its impairment analysis, including, pre- and post-money valuations of recent financing events, the impact of financing events on its ownership percentages, and other available information relevant to the issuer's historical and forecasted performance. The estimated fair value of these investments is considered in VMware's impairment review if any events or changes in circumstances occur that might have a significant adverse effect on their value. If VMware determines that an other-than-temporary impairment has occurred, VMware writes down the investments to their fair value.

During the years ended December 31, 2016 and 2015 , VMware determined that certain strategic investments were considered to be other-than-temporarily impaired and accordingly, approximately \$14 million and \$5 million , respectively, were recognized as impairment charges. There was no impairment charge during the year ended December 31, 2014. Strategic investments are included in other assets on the consolidated balance sheets. The carrying value of VMware's strategic investments was \$139 million and \$103 million as of December 31, 2016 and December 31, 2015 , respectively.

H. 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 agreement. 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 have been 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 income in the same period that the underlying expenses are incurred. During the years ended December 31, 2016 , 2015 and 2014 , the effective portion of gains or losses reclassified to the consolidated statements of income 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 as incurred.

These forward contracts have contractual maturities of twelve months or less, and as of December 31, 2016 and 2015 , outstanding forward contracts had a total notional value of \$22 million and \$213 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 December 31, 2016 and 2015 , 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.

These forward contracts have a contractual maturity of one month, and as of December 31, 2016 and 2015 , outstanding forward contracts had a total notional value of \$875 million and \$721 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 December 31, 2016 , 2015 and 2014 , VMware recognized a gain of \$23 million , \$36 million and \$48 million , respectively, relating to the settlement of forward contracts. Gains and losses are recorded in other income (expense), net on the consolidated statements of income.

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

The combined gains and losses related to forward contracts and the underlying foreign currency denominated assets and liabilities resulted in a net loss of \$3 million, \$14 million and \$9 million during the years ended December 31, 2016, 2015 and 2014, respectively. Net gains and losses are recorded in other income (expense), net on the consolidated statements of income.

I. Property and Equipment, Net

Property and equipment, net, as of December 31, 2016 and 2015 consisted of the following (table in millions):

	December 31,	
	2016	2015
Equipment and software	\$ 1,269	\$ 1,180
Buildings and improvements	814	792
Furniture and fixtures	102	100
Construction in progress	30	30
Total property and equipment	2,215	2,102
Accumulated depreciation	(1,166)	(974)
Total property and equipment, net	\$ 1,049	\$ 1,128

Depreciation expense was \$215 million, \$190 million and \$190 million during the years ended December 31, 2016, 2015 and 2014, respectively.

J. Commitments and Contingencies

Litigation

Former employee Dane Smith filed a lawsuit against the Company alleging (i) wrongful retaliation in violation of the False Claims Act and (ii) wrongful termination in violation of public policy. The parties completed an arbitration hearing on January 23, 2017, but no decision has yet been issued by the arbitrator. VMware believes that it has meritorious defenses relating to these claims, and currently a reasonably possible loss or range of loss cannot be estimated.

On March 27, 2015, Phoenix Technologies (“Phoenix”) filed a complaint against VMware in the U.S. District Court for the Northern District of California asserting claims for copyright infringement and breach of contract relating to a version of Phoenix’s BIOS software that VMware licensed from Phoenix. In the lawsuit, Phoenix is seeking injunctive relief and monetary damages. On January 6, 2017, the court granted VMware’s motion for summary judgment on the contract statute of limitations issues, which removed Phoenix’s breach of contract claim from the lawsuit. No other claims were removed from the lawsuit on summary judgment and trial is currently scheduled to start on May 30, 2017. VMware believes that it has meritorious defenses in connection with this lawsuit, and currently a reasonably possible loss or range of loss cannot be estimated.

On March 4, 2015, Christoph Hellwig, a software developer who alleges 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 an open source General Public License v.2 (“GPL v.2”) and seeking an order requiring VMware 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 Mr. Hellwig’s lawsuit because he failed to show that his protectable software code had been used in VMware’s product. Mr. Hellwig has appealed the Regional Court’s decision and has filed his opening appellate brief and VMware has filed its responsive appellate brief. No further briefing or hearing schedule has yet been set by the appellate court.

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.

On November 17, 2015, Francis M. Ford, a VMware Class A stockholder, filed an action in the Delaware Chancery Court against certain current and former VMware directors, among others, alleging that the directors breached their fiduciary duties in connection with the Dell Acquisition, and the proposed issuance of tracking stock that is intended to track the performance of VMware. The plaintiff does not assert claims directly against VMware, but purports to bring class claims on behalf of other VMware Class A stockholders and derivative claims on behalf of VMware. The *Ford* matter is currently in the motion to dismiss stage; the hearing on these motions took place on February 3, 2017, but the court has not yet issued an order. In addition, on November 10, 2015, David Jacobs, also a VMware stockholder, filed an action in Massachusetts Superior Court

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

against, among others, EMC and four directors who serve on both the EMC board and the VMware board, setting forth similar allegations to those in the *Ford* matter. The *Jacobs* matter settled in December 2016 for an immaterial amount. While VMware does not believe that the *Ford* case represents material adverse exposures, no assurances can be given that the litigation will not have any adverse consequences for the company or the directors named in the suits.

During 2015, VMware reached an agreement with the Department of Justice (“DOJ”) and the General Services Administration (“GSA”) to pay \$76 million to resolve allegations that VMware’s government sales practices between 2006 and 2013 had violated the federal False Claims Act. The settlement was paid and recorded as a reduction of VMware’s total revenue during the year ended December 31, 2015.

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 December 31, 2016, amounts accrued relating to these other matters arising as part of the ordinary course of business were considered immaterial. 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 December 31, 2016, 2015 and 2014 was \$112 million, \$105 million and \$85 million, respectively. VMware’s minimum future lease commitments and other contractual commitments at December 31, 2016 were as follows (table in millions):

	Future Lease Commitments ⁽¹⁾	Purchase Obligations	Other Contractual Commitments ⁽²⁾	Total
2017	\$ 89	\$ 39	\$ 3	\$ 131
2018	73	29	5	107
2019	59	4	5	68
2020	44	—	3	47
2021	36	—	2	38
Thereafter	544	—	9	553
Total	\$ 845	\$ 72	\$ 27	\$ 944

(1) Amounts in the table above exclude 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.

The amount of the future lease commitments after 2021 is primarily for the ground leases on VMware’s Palo Alto, California headquarter facilities, which expire in 2046. 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.

In addition to the amounts above, \$1,500 million of notes payable to Dell was outstanding as of December 31, 2016 and reflected on the consolidated balance sheets. VMware also had an obligation as of December 31, 2016 to purchase \$125 million of VMware Class A common stock under a stock purchase agreement with Dell, which was settled during February 2017. Refer to Note B for further information regarding the notes payable to Dell and the stock purchase agreement with Dell.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

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 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 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 Company's limited history with prior indemnification claims and the unique facts and circumstances involved in each particular agreement. 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.

K. Accrued Expenses and Other

Accrued expenses and other as of December 31, 2016 and 2015 consisted of the following (table in millions):

	December 31,	
	2016	2015
Salaries, commissions, bonuses, and benefits	\$ 503	\$ 388
Accrued partner liabilities	219	146
Other	176	212
Total	<u>\$ 898</u>	<u>\$ 746</u>

Accrued partner liabilities primarily relate to rebates and marketing development fund accruals for channel partners, system vendors and systems integrators. Additionally, from time to time, unearned revenue for professional services is reclassified to accrued partner liabilities as VMware intends to leverage channel partners to directly fulfill the obligation to its customers.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

L. Unearned Revenue

Unearned revenue as of December 31, 2016 and 2015 consisted of the following (table in millions):

	December 31,	
	2016	2015
Unearned license revenue	\$ 503	\$ 428
Unearned software maintenance revenue	4,628	4,174
Unearned professional services revenue	493	474
Total unearned revenue	<u>\$ 5,624</u>	<u>\$ 5,076</u>

Unearned license revenue is generally recognized upon delivery of existing or future products or services, or is otherwise recognized ratably over the term of the arrangement. Future products include, in some cases, emerging products that are offered as part of product promotions where the purchaser of an existing product is entitled to receive the future product at no additional charge. To the extent the future product has not been delivered and VSOE of fair value cannot be established, the revenue for the entire order is deferred until such time as all product delivery obligations have been fulfilled. In the event the arrangement does not include professional services, unearned license revenue may also be recognized ratably, if the customer is granted the right to receive unspecified future products or VSOE of fair value on the software maintenance element of the arrangement does not exist.

Unearned software maintenance revenue is attributable to VMware's maintenance contracts and is generally recognized ratably over the contract period. The weighted-average remaining term at December 31, 2016 was approximately two years. Unearned professional services revenue results primarily from prepaid professional services, including training, and is generally recognized as the services are delivered.

Unearned license and software maintenance revenue will fluctuate based upon a variety of factors including sales volume, the timing of both product promotion offers and delivery of the future products offered, and the amount of arrangements sold with ratably revenue recognition. Additionally, the amount of unearned revenue derived from transactions denominated in a foreign currency is impacted by fluctuations in the foreign currencies in which VMware invoices.

M. Income Taxes

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

	For the Year Ended December 31,		
	2016	2015	2014
Domestic	\$ 478	\$ 257	\$ 174
Foreign	995	956	874
Total	<u>\$ 1,473</u>	<u>\$ 1,213</u>	<u>\$ 1,048</u>

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

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

	For the Year Ended December 31,		
	2016	2015	2014
Federal:			
Current	\$ 153	\$ 142	\$ 188
Deferred	5	(33)	(116)
	<u>158</u>	<u>109</u>	<u>72</u>
State:			
Current	14	9	15
Deferred	(5)	(1)	(12)
	<u>9</u>	<u>8</u>	<u>3</u>
Foreign:			
Current	128	96	87
Deferred	(8)	3	—
	<u>120</u>	<u>99</u>	<u>87</u>
Total provision for income taxes	<u><u>\$ 287</u></u>	<u><u>\$ 216</u></u>	<u><u>\$ 162</u></u>

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

	For the Year Ended December 31,		
	2016	2015	2014
Statutory federal tax rate	35 %	35 %	35 %
State taxes, net of federal benefit	1 %	1 %	1 %
Tax rate differential for non-U.S. jurisdictions	(16)%	(20)%	(21)%
U.S. tax credits	(3)%	(2)%	(3)%
Permanent items and other	2 %	4 %	4 %
Effective tax rate	<u><u>19 %</u></u>	<u><u>18 %</u></u>	<u><u>16 %</u></u>

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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 consisted of the following (table in millions):

	December 31,	
	2016	2015
Deferred tax assets:		
Unearned revenue	\$ 324	\$ 320
Accruals and other	66	60
Stock-based compensation	75	73
Tax credit and net operating loss carryforwards	175	162
Other assets, net	33	19
Intangible and other non-current assets	57	65
Basis difference on investment in business	20	20
Gross deferred tax assets	750	719
Valuation allowance	(166)	(144)
Total deferred tax assets	584	575
Deferred tax liabilities:		
Property, plant and equipment, net	(122)	(119)
Net deferred tax assets	\$ 462	\$ 456

VMware has U.S. federal net operating loss carryforwards of \$91 million from acquisitions made since 2007. These operating loss carryforwards expire at different periods through 2035. 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 \$131 million, resulting from acquisitions since 2007, expiring at different periods through 2036.

VMware has California research and development (“R&D”) credit carryforwards for income tax purposes of \$113 million that can be carried over indefinitely. VMware also has R&D credit carryforwards for Massachusetts and Georgia of approximately \$7 million and \$9 million, respectively, which expire at different periods through 2031. VMware has non-U.S. net operating losses of \$16 million resulting from certain foreign operations and non-U.S. acquisitions in 2014. 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, capital losses, and certain non-U.S. net operating losses did not meet the more-likely-than-not threshold, and accordingly, a valuation allowance of \$139 million was recorded. 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 December 31, 2016 and 2015, 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 years ended December 31, 2016 and December 31, 2015, the total change in the valuation allowance was \$22 million and \$38 million, respectively. The increases in the valuation allowance were primarily due to the California R&D credits and capital losses generated in each respective year.

U.S. income taxes have not been provided on certain undistributed earnings of non-U.S. subsidiaries of approximately \$5,354 million and \$4,473 million at December 31, 2016 and 2015, respectively, because such earnings are considered to be reinvested indefinitely outside of the United States, or will be remitted substantially free of additional U.S. tax. VMware's rate of taxation in non-U.S. jurisdictions is lower than the U.S. tax rate. VMware's non-U.S. income is primarily earned by VMware's subsidiaries in Ireland, where the statutory tax rate is 12.5%. Recent developments in non-U.S. tax jurisdictions and unfavorable changes in non-U.S. tax laws and regulations could have an adverse effect on VMware's annual effective tax rate in the future. All income earned abroad, except for previously taxed income for U.S. tax purposes, is considered indefinitely

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

reinvested in VMware's foreign operations and no provision for U.S. taxes has been provided with respect to such income. At this time, it is not practicable to estimate the amount of tax that may be payable if VMware were to repatriate these earnings.

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. The amended tax sharing agreement amends and restates the tax sharing agreement dated August 13, 2007 between VMware and EMC. Key contractual terms of the amended tax sharing agreement are substantially unchanged from the original agreement with EMC.

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, certain transactions that VMware and Dell are parties to 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 years ended December 31, 2016, 2015, and 2014 (table in millions):

	For the Year Ended December 31,		
	2016	2015	2014
Payments from VMware to Dell	\$ 373	\$ 144	\$ 150

Payments from VMware to Dell under the tax sharing agreement relate to VMware's estimated portion of federal income taxes on Dell's consolidated tax return as well as the state payments for combined states. The timing of the tax payments due to and from Dell is governed by the tax sharing agreement. The amounts that VMware owes to Dell for the estimated portion of federal income taxes on Dell's consolidated tax return differ from the amounts VMware would owe on a separate return basis and the difference is presented as a component of stockholders' equity. In the years ended December 31, 2016, 2015 and 2014, the difference between the amount of tax calculated on a separate return basis and the amount of tax calculated per the tax sharing agreement was recorded in stockholders' equity as an increase of \$15 million and \$13 million, and a decrease of \$12 million, respectively.

As a result of the activity under the tax sharing agreement with Dell, amounts due to and from Dell, net as of December 31, 2016 and 2015 consisted of the following (table in millions):

	December 31,	
	2016	2015
Income tax-related asset, net	\$ 181	\$ —
Income tax due to Dell	—	(18)

VMware's expected tax obligation includes two U.S. tax return periods in 2016 as a result of the Dell acquisition. Cash payments to Dell for taxes reflect expected tax obligations for the tax return period prior to the Dell acquisition and the period from the date of the Dell acquisition through the end of Dell's fiscal year end. The \$181 million asset shown in the table above was included in other current assets on VMware's consolidated balance sheets as of December 31, 2016.

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

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, is as follows (table in millions):

	For the Year Ended December 31,		
	2016	2015	2014
Balance, beginning of the year	\$ 245	\$ 190	\$ 167
Tax positions related to current year:			
Additions	45	41	32
Tax positions related to prior years:			
Additions	9	54	1
Reductions	(8)	(14)	(3)
Settlements	(16)	(12)	(1)
Reductions resulting from a lapse of the statute of limitations	(14)	(11)	(2)
Foreign currency effects	(1)	(3)	(4)
Balance, end of the year	\$ 260	\$ 245	\$ 190

Of the net unrecognized tax benefits, including interest and penalties, of \$277 million as of December 31, 2016, approximately \$259 million would, if recognized, benefit VMware's annual effective income tax rate. The \$277 million of net unrecognized tax benefits are included in other liabilities on the consolidated balance sheets. VMware includes interest expense and penalties related to income tax matters in the income tax provision. VMware had accrued \$44 million and \$34 million of interest and penalties associated with unrecognized tax benefits as of December 31, 2016 and 2015, respectively. Income tax expense for the years ended December 31, 2016, 2015 and 2014 included interest and penalties of \$10 million, \$13 million and \$8 million, respectively, associated with uncertain tax positions.

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 2010, except for any matters under appeal. The 2011 federal tax returns of the Dell-owned EMC consolidated group are currently under audit by the IRS. In addition, we are under corporate income tax audits in various states and non-U.S. jurisdictions. Consistent with our historical practices under the tax sharing agreement with EMC, when we become 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 2008. Open tax years for Ireland, the largest non-U.S. jurisdiction, begin 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 \$8 million within the next 12 months.

N. Stockholders' Equity**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 December 31, 2016 and 2015, 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 December 31, 2016, the number of authorized shares under the 2007 Plan was 121.6 million. 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 4.4 million shares, which accordingly have been added to authorized shares under the 2007 Plan reserve.

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

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 - year to four -year period over which they vest and vest 25% the first year and semi-annually thereafter. The exercise price for a stock option awarded under the 2007 Plan shall not be less than 100% of the 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. At December 31, 2016, there were an aggregate of 12.8 million shares of common stock available for issuance pursuant to future grants under the 2007 Plan.

VMware Stock Repurchases

During January 2017, VMware's board of directors authorized the repurchase of up to \$1,200 million of VMware's Class A common stock through the end of fiscal 2018. Stock will be purchased from time to time, in the open market or through private 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. All shares repurchased under VMware's stock repurchase programs are retired.

On December 15, 2016, VMware entered into a stock purchase agreement with Dell to purchase \$500 million of VMware Class A common stock. Through December 31, 2016, VMware had purchased 4.8 million shares for \$375 million. On February 15, 2017, the stock purchase agreement with Dell was completed. A total of \$500 million was paid in exchange for 6.2 million shares. The aggregate number of shares purchased was determined based upon the volume-weighted average priced during a defined period, less an agreed upon discount. Refer to Note B for further information.

During April 2016, VMware's board of directors authorized the repurchase of up to an aggregate of \$1,200 million of VMware's Class A common stock through the end of 2016. The aggregate authorized stock repurchase amount of \$1,200 million included the amount remaining from VMware's previous stock repurchase authorization announced on January 27, 2015 of \$835 million. All shares repurchased under VMware's stock repurchase programs were retired. The cumulative authorized amount for stock repurchases was fully utilized during the fourth quarter of 2016.

Excluding the stock purchase agreement with Dell as described above, the following table summarizes stock repurchase authorizations, which were open or completed during the years ended December 31, 2016, 2015, and 2014 (amount in table in millions):

Authorization Date	Amount Authorized	Expiration Date	Status
April 18, 2016	\$1,200	December 31, 2016	Completed in 2016
January 27, 2015	1,000	December 31, 2017	Completed in 2016
August 6, 2014	1,000	December 31, 2016	Completed in 2015
August 7, 2013	700	December 31, 2015	Completed in 2014

The following table summarizes stock repurchase activity, including shares purchased from Dell, during the years ended December 31, 2016, 2015, and 2014 (aggregate purchase price in millions, shares in thousands):

	For the Year Ended December 31,		
	2016	2015	2014
Aggregate purchase price	\$ 1,575	\$ 1,125	\$ 700
Class A common shares repurchased	21,281	13,495	7,642
Weighted-average price per share	\$ 73.99	\$ 83.36	\$ 91.61

The aggregate purchase price of repurchased shares includes commissions and is classified as a reduction to additional paid-in capital.

VMware Restricted Stock

VMware's restricted stock primarily consists of restricted stock unit ("RSU") awards granted to employees. The value of RSU grants 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 Class A common stock.

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

VMware’s restricted stock also includes performance stock unit (“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 vesting component. Upon vesting, each PSU award will 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 target designated by each individual award. If minimum performance thresholds are not achieved, then no shares will be issued. As of December 31, 2016, the number of PSUs outstanding includes certain PSUs for which performance conditions have concluded but time-based vesting is still required.

The following table summarizes restricted stock activity since January 1, 2014 (units in thousands):

	Number of Units	Weighted-Average Grant Date Fair Value (per unit)
Outstanding, January 1, 2014	12,856	\$ 85.85
Granted	6,189	92.82
Vested	(5,166)	86.27
Forfeited	(1,294)	88.03
Outstanding, December 31, 2014	12,585	88.88
Granted	12,787	72.42
Vested	(4,855)	90.72
Forfeited	(1,824)	87.39
Outstanding, December 31, 2015	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

As of December 31, 2016, the 20.9 million units outstanding included 20.4 million of RSUs and 0.5 million of PSUs. The above table includes RSUs issued for outstanding unvested RSUs in connection with business combinations.

As of December 31, 2016, restricted stock that is expected to vest was as follows:

	Number of Units (in thousands)	Weighted Average Remaining Term (in years)	Aggregate Intrinsic Value ⁽¹⁾ (in millions)
Expected to vest, December 31, 2016	17,835	2.65	\$ 1,404

⁽¹⁾ The aggregate intrinsic values represent the total pre-tax intrinsic values based on VMware's closing stock price of \$78.73 as of December 31, 2016, which would have been received by the RSU holders had the RSUs been issued as of December 31, 2016.

The total fair value of VMware restricted stock that vested during the years ended December 31, 2016, 2015 and 2014 was \$468 million, \$379 million and \$480 million, respectively. As of December 31, 2016, restricted stock representing 20.9 million shares of VMware’s Class A common stock were outstanding, with an aggregate intrinsic value of \$1,643 million based on VMware’s closing stock price as of December 31, 2016.

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 December 31, 2016, the number of authorized shares under the ESPP was a total of 14.3 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 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 December 31, 2016, 2.1 million shares of VMware Class A common stock were available for issuance under the ESPP.

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

The following table summarizes ESPP activity during the years ended December 31, 2016, 2015, and 2014 (cash proceeds in millions, shares in thousands):

	For the Year Ended December 31,		
	2016	2015	2014
Cash proceeds	\$ 103	\$ 98	\$ 80
Class A common shares purchased	2,657	1,495	1,099
Weighted-average price per share	\$ 38.78	\$ 65.54	\$ 73.21

As of December 31, 2016, \$56 million of ESPP withholdings were recorded as a liability in accrued expenses and other on the consolidated balance sheets for the purchase that occurred during January 2017.

VMware Stock Options

The following table summarizes stock option activity since January 1, 2014 (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, 2014	5,755	\$ 44.12	1,696	\$ 15.53
Options relating to employees transferred (to) from EMC	—	—	149	15.87
Granted	2,695	50.91	—	—
Forfeited	(220)	47.89	(2)	19.10
Expired	—	—	(9)	14.14
Exercised	(2,361)	35.58	(563)	14.37
Outstanding, December 31, 2014	5,869	50.54	1,271	16.08
Options relating to employees transferred (to) from EMC	—	—	8	20.23
Granted	21	54.23	—	—
Forfeited	(322)	70.42	(1)	19.37
Expired	—	—	(14)	14.21
Exercised	(2,404)	29.44	(201)	13.96
Outstanding, December 31, 2015	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	—	—

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.

The stock options outstanding as of December 31, 2016 had an aggregate intrinsic value of \$39 million based on VMware's closing stock price as of December 31, 2016.

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

Options outstanding that are exercisable and that have vested and are expected to vest as of December 31, 2016 were as follows:

	VMware Stock Options			
	Outstanding Options (in thousands)	Weighted Average Exercise Price	Weighted Average Remaining Term (in years)	Aggregate Intrinsic Value ⁽¹⁾ (in millions)
Exercisable, December 31, 2016	1,436	\$ 66.56	4.41	\$ 28
Vested and expected to vest, December 31, 2016	2,050	67.47	4.48	39

⁽¹⁾ The aggregate intrinsic values represent the total pre-tax intrinsic values based on VMware's closing stock price of \$78.73 as of December 31, 2016, 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 December 31, 2016, 2015, and 2014 was \$29 million, \$60 million and \$64 million, respectively.

The options exercised during the years ended December 31, 2016, 2015, and 2014 had a pre-tax intrinsic value of \$22 million, \$136 million and \$147 million, respectively.

The pre-tax intrinsic value of EMC stock options held by VMware employees that were exercised during the years ended December 31, 2016, 2015, and 2014 was \$13 million, \$3 million and \$7 million, respectively.

VMware Shares Repurchased for Tax Withholdings

During the years ended December 31, 2016, 2015 and 2014, VMware repurchased and retired or withheld 2.6 million, 2.6 million and 1.8 million shares, respectively, of Class A common stock, for \$167 million, \$173 million and \$162 million, respectively, to cover tax withholding obligations. 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 during the period. The value of the withheld shares, including restricted stock units, was classified as a reduction to additional paid-in capital.

Stock-Based Compensation

The following table summarizes the components of total stock-based compensation included in VMware's consolidated statements of income for the years ended December 31, 2016, 2015 and 2014 (table in millions):

	For the Year Ended December 31,		
	2016	2015	2014
Cost of license revenue	\$ 2	\$ 2	\$ 2
Cost of services revenue	52	44	42
Research and development	305	226	244
Sales and marketing	195	168	172
General and administrative	82	64	69
Stock-based compensation	636	504	529
Income tax benefit	(183)	(144)	(157)
Total stock-based compensation, net of tax	\$ 453	\$ 360	\$ 372

From time to time, VMware issues equity awards that have a guaranteed amount of value and are classified as liability awards on VMware's consolidated balance sheets. Upon vesting, these grants will be settled in shares based upon the stock price or a trailing average stock price on a date determined by the terms of each individual award. As of December 31, 2016 and 2015, there were no outstanding liability-classified awards. During the year ended December 31, 2014, \$21 million of liability-classified awards was reclassified to additional paid-in capital upon vesting.

As of December 31, 2016, the total unrecognized compensation cost for stock options and restricted stock was \$1,044 million and will be recognized through 2020 with a weighted-average remaining period of 1.5 years. Stock-based

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

compensation related to VMware equity awards held by VMware employees is recognized on VMware's consolidated statements of income 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 years ended December 31, 2016, 2015 and 2014 was estimated on the date of grant using the Black-Scholes option-pricing model with the following weighted-average assumptions:

<i>VMware Stock Options</i>	For the Year Ended December 31,		
	2016	2015	2014
Dividend yield	None	None	None
Expected volatility	31.9%	32.0%	36.2%
Risk-free interest rate	0.9%	1.1%	0.9%
Expected term (in years)	3.1	3.3	3.2
Weighted-average fair value at grant date	\$ 49.64	\$ 27.16	\$ 48.47

<i>VMware Employee Stock Purchase Plan</i>	For the Year Ended December 31,		
	2016	2015	2014
Dividend yield	None	None	None
Expected volatility	38.3%	30.1%	32.3%
Risk-free interest rate	0.5%	0.1%	0.1%
Expected term (in years)	0.7	0.5	0.5
Weighted-average fair value at grant date	\$ 13.57	\$ 20.59	\$ 20.71

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.

For equity awards granted during the years ended December 31, 2016, 2015 and 2014, 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 it has not historically paid, nor expects in the future to pay, cash 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.

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

Accumulated Other Comprehensive Income (Loss)

The changes in components of accumulated other comprehensive income (loss) during the years ended December 31, 2016 and 2015 were as follows (tables in millions):

	Unrealized Gain (Loss) on Available-for-Sale Securities	Unrealized Gain (Loss) on Forward Contracts	Total
Balance, January 1, 2015	\$ —	\$ (1)	\$ (1)
Unrealized gains (losses), net of tax provision (benefit) of \$(4), \$— and \$(4)	(7)	—	(7)
Other comprehensive income (loss), net	(7)	—	(7)
Balance, December 31, 2015	(7)	(1)	(8)
Unrealized gains (losses), net of tax provision (benefit) of \$(4), \$— and \$(3)	(6)	1	(5)
Amounts reclassified from accumulated other comprehensive income (loss) to the consolidated statement of income, net of tax (provision) benefit of \$3, \$— and \$3	5	(1)	4
Other comprehensive income (loss), net	(1)	—	(1)
Balance, December 31, 2016	\$ (8)	\$ (1)	\$ (9)

Unrealized gains on VMware's available-for-sale securities are reclassified to investment income on the consolidated statements of income in the period that such gains are realized.

The effective portion of gains (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 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 during the years ended December 31, 2016 and 2015 were not significant to the individual functional line items.

O. Segment Information

VMware operates in one reportable operating segment, thus all required financial segment information can be found on 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 geographic area for the years ended December 31, 2016, 2015 and 2014 was as follows (table in millions):

	For the Year Ended December 31,		
	2016	2015	2014
United States	\$ 3,588	\$ 3,311	\$ 2,912
International	3,505	3,260	3,123
Total	\$ 7,093	\$ 6,571	\$ 6,035

Revenue by geographic area is based on the ship-to addresses of VMware's customers. No individual country other than the United States accounted for 10% or more of revenue for the years ended December 31, 2016, 2015 and 2014.

One customer accounted for 15% of revenue during each of the years ended December 31, 2016, 2015 and 2014, respectively, and another customer accounted for 12%, 12% and 13% of revenue during the years ended December 31, 2016, 2015 and 2014, respectively. A third customer accounted for 10%, 11% and 11% of revenue during the years ended December 31, 2016, 2015 and 2014, respectively.

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

Long-lived assets by geographic area, which primarily include property and equipment, net, as of December 31, 2016 and 2015 were as follows (table in millions):

	December 31,	
	2016	2015
United States	\$ 784	\$ 831
International	132	148
Total	\$ 916	\$ 979

No individual country other than the United States accounted for 10% or more of these assets as of December 31, 2016 and 2015, respectively.

VMware's product and service solutions are organized into three main product groups:

- SDDC or Software-Defined Data Center
- Hybrid Cloud Computing
- End-User Computing

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.

P. Selected Quarterly Financial Data (unaudited)

Quarterly financial data for 2016 and 2015 were as follows (tables in millions, except per share amounts):

2016	Q1 2016	Q2 2016	Q3 2016	Q4 2016
Revenue	\$ 1,589	\$ 1,693	\$ 1,778	\$ 2,032
Net income	161	265	319	441
Net income per share, basic	\$ 0.38	\$ 0.62	\$ 0.76	\$ 1.07
Net income per share, diluted	\$ 0.38	\$ 0.62	\$ 0.75	\$ 1.04

2015	Q1 2015	Q2 2015	Q3 2015	Q4 2015
Revenue	\$ 1,511	\$ 1,521	\$ 1,672	\$ 1,868
Net income	196	172	256	373
Net income per share, basic	\$ 0.46	\$ 0.41	\$ 0.61	\$ 0.89
Net income per share, diluted	\$ 0.45	\$ 0.40	\$ 0.60	\$ 0.88

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 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 December 31, 2016 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 December 31, 2016, 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 December 31, 2016 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 December 31, 2016 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 year ended December 31, 2016. 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 Auditors.”

PART IV**ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULE**

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	S-1/A-2	333-142368	3.1	7/9/07
3.2	Amended and Restated Bylaws	8-K	001-33622	3.1	3/8/11
4.1	Form of Specimen Common Stock Certificate	S-1/A-4	333-142368	4.1	7/27/07
10.1	Form of Master Transaction Agreement between VMware, Inc. and EMC Corporation	S-1/A-2	333-142368	10.1	7/9/07
10.2	Form of Administrative Services Agreement between VMware, Inc. and EMC Corporation	S-1/A-2	333-142368	10.2	7/9/07
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 May 27, 2015	10-Q	001-33622	10.6	8/5/15
10.7+	Form of Indemnification Agreement for VMware, Inc. Directors and Executive Officers, as approved March 4, 2014	10-Q	001-33622	10.29	5/1/14
10.8	Form of Insurance Matters Agreement between VMware, Inc. and EMC Corporation	S-1/A-2	333-142368	10.11	7/9/07
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 August 12, 2016	10-Q	001-33622	10.10	11/7/16
10.11	2007 Employee Stock Purchase Plan, as amended and restated November 14, 2013	10-K	001-33622	10.13	2/25/14
10.12+	Executive Bonus Program, as amended and restated February 12, 2014	10-Q	001-33622	10.20	5/1/14
10.13	Agreement of Purchase and Sale Agreement 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

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
10.16+	Form of Performance Stock Unit Agreement, as amended March 16, 2015	10-Q	001-33622	10.19	5/4/15
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, effective as of January 1, 2014	10-K	001-33622	10.27	2/25/14
10.19+*	Letter Agreement between VMware, Inc. and Sanjay Poonen effective as of October 26, 2016				
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	Note Exchange Agreement by and between VMware, Inc. and EMC Corporation, dated as of January 21, 2014	10-Q	001-33622	10.31	5/1/14
10.22	Promissory Note for \$680 million due and payable on May 1, 2018, issued to EMC Corporation dated January 31, 2014	10-Q	001-33622	10.32	5/1/14
10.23	Promissory Note for \$550 million due and payable on May 1, 2020, issued to EMC Corporation dated January 31, 2014	10-Q	001-33622	10.33	5/1/14
10.24	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
10.25+	Change in Control Retention Plan, adopted February 25, 2015	10-K	001-33622	10.28	2/26/15
10.26+	Letter Agreement between VMware, Inc. and Zane Rowe dated January 26, 2016	10-Q	001-33622	10.27	5/5/16
10.27+	Consulting Agreement between VMware, Inc. and Carl Eschenbach effective as of April 11, 2016	10-Q	001-33622	10.28	8/8/16
10.28+	Executive Retention Plan, adopted June 15, 2016	8-K	001-33622	99.1	6/17/16
10.29+	Letter Agreement between VMware, Inc. and Maurizio Carli effective as of April 1, 2016	10-Q	001-33622	10.30	8/8/16
10.30+	Form of Restricted Stock Unit Agreement for U.K. Participants, as amended September 1, 2016	10-Q	001-33622	10.31	11/7/16
10.31	Stock Purchase Agreement, dated as of December 15, 2016, by and among Dell Technologies Inc., EMC Equity Assets LLC and VMware, Inc.	8-K	001-33622	10.1	12/15/16
10.32+*	Letter Agreement between VMware, Inc. and Raghu Raghuram effective as of October 26, 2016				
10.33+*	Letter Agreement between VMware, Inc. and Rajiv Ramaswami effective as of October 26, 2016				
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				
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				

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
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.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

VMWARE, INC.

Dated: February 24, 2017

By: _____
Patrick Gelsinger
Chief Executive Officer

Dated: February 24, 2017

By: _____
Kevan Kryslar
Senior Vice President, Chief Accounting Officer
(Principal Accounting Officer)

POWER OF ATTORNEY

Each person whose individual signature appears below hereby authorizes and appoints Patrick Gelsinger, Zane Rowe, and S. Dawn Smith, and each of them, with full power of substitution and resubstitution and full power to act without the other, as his or her true and lawful attorney-in-fact and agent to act in his or her name, place and stead and to execute in the name and on behalf of each person, individually and in each capacity stated below, and to file any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing, ratifying and confirming all that said attorneys-in-fact and agents or any of them or their or his or her substitute or substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed by the following persons on behalf of the Registrant in the capacities indicated and on the dates indicated.

<u>Date</u>	<u>Signature</u>	<u>Title</u>
February 24, 2017	_____ Patrick Gelsinger	Chief Executive Officer and Director <i>(Principal Executive Officer)</i>
February 24, 2017	_____ Zane Rowe	Chief Financial Officer and Executive Vice President <i>(Principal Financial Officer)</i>
February 24, 2017	_____ Michael Dell	Chairman
February 24, 2017	_____ Anthony Bates	Director
February 24, 2017	_____ Michael Brown	Director
February 24, 2017	_____ Donald Carty	Director
February 24, 2017	_____ Egon Durban	Director
February 24, 2017	_____ Karen Dykstra	Director
February 24, 2017	_____ Paul Maritz	Director
February 24, 2017	_____ Paul Sagan	Director

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 December 31, 2016 income tax valuation allowance	\$ 144	\$ 31	\$ (9)	\$ 166
Year ended December 31, 2015 income tax valuation allowance	106	47	(9)	144
Year ended December 31, 2014 income tax valuation allowance	94	21	(9)	106



October 25, 2016

Sanjay Poonen

Dear Sanjay,

I am pleased to present you with this letter to document your new role at VMware, Inc. ("VMware").

Title

Effective October 26, 2016 (the "Effective Date"), your new title is Chief Operating Officer, Customer Operations. In your role, you will report directly to me.

Salary and Bonus

As of the Effective Date, your annual base salary rate will continue to be \$610,000, and you will remain a participant in VMware's Executive Bonus Program as it may be amended from time to time. You will continue to be eligible for an annual target bonus opportunity of 100% of your eligible compensation.

Equity

Your existing equity awards will remain in effect in accordance with their terms. You will be eligible for future equity award grants by the Compensation and Corporate Governance Committee of the VMware Board of Directors (the "Committee") in accordance with VMware's ongoing compensation programs for its executive officers.

Severance Protection

You will remain a participant in the VMware Executive Retention Plan adopted on June 15, 2016, as it may be amended from time to time in accordance with and subject to its terms and conditions.

Change in Control Protection

You will remain a participant in the VMware Change in Control Retention Plan adopted on February 25, 2015, as it may be amended from time to time in accordance with and subject to its terms and conditions.

Entire Agreement

This letter agreement represents the entire agreement between you and VMware with respect to the matters set forth herein and supersedes and replaces any prior agreements, written or oral, with respect to your role and compensation.

I would like to thank you for your contributions to VMware's successes and for your continued commitment toward accomplishment of our goals.

Best regards and continued success,

Pat Gelsinger, Chief Executive Officer

Signed: /s/ Sanjay Poonen Date: October 31, 2016
Sanjay Poonen



October 25, 2016

Raghu Raghuram

Dear Raghu,

I am pleased to present you with this letter to document your new role at VMware, Inc. ("VMware").

Title

Effective October 26, 2016 (the "Effective Date"), your new title is Chief Operating Officer, Products and Cloud Services. In your role, you will report directly to me.

Salary and Bonus

As of the Effective Date, your annual base salary rate will continue to be \$610,000, and you will remain a participant in VMware's Executive Bonus Program as it may be amended from time to time. You will continue to be eligible for an annual target bonus opportunity of 100% of your eligible compensation.

Equity

Your existing equity awards will remain in effect in accordance with their terms. You will be eligible for future equity award grants by the Compensation and Corporate Governance Committee of the VMware Board of Directors (the "Committee") in accordance with VMware's ongoing compensation programs for its executive officers.

Severance Protection

You will remain a participant in the VMware Executive Retention Plan adopted on June 15, 2016, as it may be amended from time to time in accordance with and subject to its terms and conditions.

Change in Control Protection

You will remain a participant in the VMware Change in Control Retention Plan adopted on February 25, 2015, as it may be amended from time to time in accordance with and subject to its terms and conditions.

Entire Agreement

This letter agreement represents the entire agreement between you and VMware with respect to the matters set forth herein and supersedes and replaces any prior agreements, written or oral, with respect to your role and compensation.

I would like to thank you for your contributions to VMware's successes and for your continued commitment toward accomplishment of our goals.

Best regards and continued success,

Pat Gelsinger, Chief Executive Officer

Signed: /s/ Raghu Raghuram Date: October 31, 2016
Raghu Raghuram



October 25, 2016

Rajiv Ramaswami

Dear Rajiv,

I am pleased to present you with this letter to document your new role and compensation at VMware, Inc. ("VMware").

Title

Effective October 26, 2016 (the "Effective Date"), your new title is Chief Operating Officer, Products and Cloud Services. In your role, you will report directly to me.

Salary

As of the Effective Date, your annual base salary rate will continue to be \$700,000.

Bonus

As of the Effective Date, you will become a participant in VMware's Executive Bonus Program as it may be amended from time to time. You will continue to be eligible for an annual target bonus opportunity of 100% of your eligible compensation. Pursuant to the terms and conditions set forth in VMware's Executive Bonus Program, any bonus for which you become eligible will be measured and funded on a semi-annual basis, with the actual payout based on achievement of VMware financial goals and your individual performance, as approved by the Committee. Any bonus payment for your initial period of employment will be prorated based on your actual start date. VMware reserves the right to modify or discontinue the Executive Bonus Program and/or your bonus opportunity at any time.

Equity

Your existing equity awards will remain in effect in accordance with their terms. You will be eligible for future equity award grants by the Compensation and Corporate Governance Committee of the VMware Board of Directors in accordance with VMware's ongoing compensation programs for its executive officers.

Severance Protection

You will remain a participant in the VMware Executive Retention Plan adopted on June 15, 2016, as it may be amended from time to time in accordance with and subject to its terms and conditions.

Change in Control Protection

You will remain a participant in the VMware Change in Control Retention Plan adopted on February 25, 2015, as it may be amended from time to time in accordance with and subject to its terms and conditions.

Entire Agreement

This letter agreement represents the entire agreement between you and VMware with respect to the matters set forth herein and supersedes and replaces any prior agreements, written or oral, with respect to your role and compensation.

The company values the contributions you make and the results you have achieved to support our company in accomplishment of our goals. Best regards and continued success.

Pat Gelsinger, Chief Executive Officer

Signed: /s/ Rajiv Ramaswami Date: October 26, 2016

Rajiv Ramaswami

SUBSIDIARIES OF VMWARE, INC.

SUBSIDIARIES	STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION
3401 Hillview LLC	Delaware
Arkinnet Software Private Limited	India
A.W.S. Holding, LLC	Delaware
AirWatch LLC	Delaware
AirWatch Technologies India Private Limited	India
Nicira, Inc.	Delaware
Taiwan VMware Information Technology LLC	Taiwan
VMware Australia Pty Ltd	Australia
VMware Bermuda Limited	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 KSA	Saudi Arabia
VMware Korea Co., Ltd.	South Korea
VMware Malaysia SDN. BHD.	Malaysia
VMware Marketing Austria GmbH	Austria
VMware Middle East FZ-LLC	Dubai
VMware Netherlands B.V.	Netherlands
VMware NZ Company	New Zealand
VMware Singapore Pte Ltd.	Singapore
VMware Software e Serviços Brasil Ltda.	Brazil
VMware Software India Private Limited	India
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
Wanova Technologies Ltd.	Israel

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-145402, 333-152582, 333-159747, 333-162079, 333-179680, 333-189491, 333-194148, and 333-206114) of VMware, Inc. of our report dated February 24, 2017 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

February 24, 2017

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Patrick 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: February 24, 2017

By: /s/ Patrick Gelsinger

Patrick 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: February 24, 2017

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 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 December 31, 2016 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: February 24, 2017

By: /s/ Patrick Gelsinger

Patrick 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 December 31, 2016 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: February 24, 2017

By: /s/ Zane Rowe

Zane Rowe
Chief Financial Officer and Executive Vice President
(Principal Financial Officer)