EMC CORP
Form 10-K
February 25, 2016

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2015

OR

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

For the transition period from to

Commission File Number 1-9853

EMC CORPORATION

(Exact name of registrant as specified in its charter)

Massachusetts	04-2680009
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)
176 South Street Hopkinton, Massachusetts	01748
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: (508) 435-1000

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, par value $.01 per share	New York Stock Exchange

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ý 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 ý

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 ý 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 ý 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. ý

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	ý	Accelerated filer	¨
Non-accelerated filer	¨ (Do not check if a smaller reporting company)	Smaller reporting company	¨

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

The aggregate market value of voting stock held by non-affiliates of the registrant was $50,627,600,803 based upon the closing price on the New York Stock Exchange on the last business day of the registrant's most recently completed second fiscal quarter (June 30, 2015).

The number of shares of the registrant's Common Stock, par value $.01 per share, outstanding as of January 29, 2016 was 1,947,047,380.

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 the specified portions of the registrant's Proxy Statement for the 2016 Annual Meeting of Shareholders.

EMC CORPORATION

FACTORS THAT MAY AFFECT FUTURE RESULTS

This Annual Report on Form 10-K contains forward-looking statements, within the meaning of the Federal securities laws, about our business and prospects. The forward-looking statements do not include the potential impact of any mergers, acquisitions, divestitures, securities offerings or business combinations that may be announced or closed after the date hereof. Any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words "believes," "plans," "intends," "expects," "goals" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these words. Our future results may differ materially from our past results and from those projected in the forward-looking statements due to various uncertainties and risks, including, but not limited to, those described in Item 1A of Part I (Risk Factors). The forward-looking statements speak only as of the date of this Annual Report and undue reliance should not be placed on these statements. We disclaim any obligation to update any forward-looking statements contained herein after the date of this Annual Report.

PART I

ITEM 1. BUSINESS

The Opportunity

Throughout this report, we refer to EMC Corporation, together with its subsidiaries, as "EMC," "we," "us," or "the Company." We manage our company as a federation of businesses in order to capitalize on the emerging and rapidly growing trends of cloud computing, Big Data, mobile, social networking and security. Our federated businesses include EMC Information Infrastructure, VMware Virtual Infrastructure, Pivotal and Virtustream, which we acquired on July 9, 2015, to further develop our cloud services strategy. We believe the combined strength of our federated businesses allows us to enable the digital enterprise through business and IT transformation via trusted hybrid cloud, modern application development, Big Data and cyber security solutions.

As data centers become more agile, managing information becomes central to our customers' operations. EMC Information Infrastructure provides a foundation for organizations to store, manage, protect, analyze and secure ever-increasing quantities of information, while at the same time improving business agility, lowering cost and increasing competitive advantage. These benefits can be greatly enhanced with virtualization. VMware Virtual Infrastructure, which is represented by EMC's majority equity stake in VMware, Inc. ("VMware"), is a leader in virtualization and cloud infrastructure solutions utilized by organizations to help transform the way they build, deliver and consume IT resources. EMC's majority-owned Pivotal Software, Inc. ("Pivotal") is a leading provider of application and data infrastructure software, agile development services and data science consulting. Pivotal has built a new platform comprising next-generation data fabrics, application fabrics and a cloud-independent platform-as-a-service ("PaaS"). Virtustream runs mission critical business applications on its own modern cloud architecture. Additionally, we recently combined EMC managed services and EMC object storage services with Virtustream to offer a portfolio of cloud-based solutions for tiered data storage, archiving backup and disaster recovery.

Under our federation model, each of the businesses operates independently to build its own ecosystem and culture, operate with greater speed and agility and offer customers technology solutions that are free from vendor lock-in. At the same time, our businesses are strategically aligned in the mission to lead customers and partners through unprecedented transformational shifts occurring in IT. We believe this ability to draw on resources from across the federation to offer tightly integrated solutions that can be rapidly deployed while retaining choice for customers seeking flexibility is a distinct competitive advantage.

In the second quarter of 2015, we initiated a cost reduction and business transformation program to better align our expenses and improve the operations of our federation of businesses. This program is primarily in response to increased pressure on our traditional storage businesses and accordingly, the vast majority of this program will be focused on our EMC Information Infrastructure segment. The goal of this new cost reduction and business transformation program is to reduce our current annual cost base by $850 million and currently addresses eleven major areas including direct materials procurement, facilities and manufacturing optimization and SKU simplification.

We expect the $850 million reduction in our annual cost base to be achieved in 2017.
EMC was incorporated in Massachusetts in 1979. Our corporate headquarters are located at 176 South Street, Hopkinton, Massachusetts. EMC supports a broad range of customers, including businesses, governments, not-for-profit organizations and service providers, around the world and in every major industry, in both public and private sectors, and of sizes ranging from the Fortune 500 to small business and individual consumers.

Proposed Transaction with Dell

On October 12, 2015, EMC and Denali Holding Inc. (“Denali”), the parent company of Dell Inc. (“Dell”), signed a definitive agreement (“Merger Agreement”) under which Denali will acquire EMC Corporation, with VMware remaining a publicly-traded company. The combined company will be a leader in numerous high-growth areas of the $2 trillion information technology market, with a complementary portfolio, sales team and research and development (“R&D”) organization across four globally recognized technology franchises - servers, storage, virtualization and PCs - and brings together strong capabilities in the fast growing areas of the industry, including converged infrastructure, digital transformation, software-defined data center, hybrid cloud, mobile and security.

For additional information related to the Merger Agreement, please refer to the Preliminary Proxy Statement on Form 14-A filed with the Securities and Exchange Commission (“SEC”) on February 12, 2016, which includes the full text of the Merger Agreement included as Annex A.

Industry and Strategic Overview

The IT industry is experiencing one of the most disruptive periods of transition in its history. Macro trends toward technology that is mobile, social, cloud-based and Big Data-driven are forming what has become known as the third platform of IT, which is based on next-generation technologies. As a result, enterprise customers are investing beyond traditional IT solutions built for the client-server era, known as the second platform, and increasingly building out solutions that accommodate the new architectures of the third platform of IT. While the second platform of IT continues to support the vast majority of enterprise workloads, much of the new data that is being generated, stored and managed by enterprises is best accommodated by third-platform technologies. As a result, customers are seeking solutions that bridge the two platforms. Enterprises today are focused on building hybrid clouds consisting of IT assets both on and off premise.

The adoption of the third platform is changing the way IT is built, operated and consumed. IT leaders around the world are transforming the way they operate, and forging a new, always-on, data-driven computing infrastructure that can be accessed from anywhere in the world by a highly mobile and social workforce.

Contributing to the rise of the third platform is the unrelenting expansion of the world’s data, which is expected to double in size every two years. Cloud infrastructures represent the best platform for organizations to leverage the massive quantities of data generated by the proliferation of smart phones, social networks, machine-to-machine communications and sensor networks. For businesses, this new relationship to Big Data is enabling profound opportunities for operational efficiency, strategic insights and solving some of the world’s biggest problems. Hybrid clouds provide businesses with the ability to harness the power of Big Data by integrating it with proprietary, on-premise data and applications.

Yet, the increasing sophistication of cyber criminals stands as a primary obstacle to accessing the full benefits of cloud computing and Big Data. To realize true adoption, applications and services must be delivered on a fully trusted IT infrastructure.

An organization’s ability to achieve revenue goals and operational excellence increasingly depends largely on the successful implementation of information technology. The global pervasiveness of smart, mobile devices and the broad exposure of consumers to online retailers, social networks and technology-enhanced entertainment have put pressure on the IT industry to provide highly responsive, always-on applications and services.

In order for the IT organization to become more agile and responsive to business and consumer needs, the IT infrastructure must be made more efficient, so it can act as an enabler of business. To achieve this, data centers are becoming more and more driven by policy-based automation that improves the productivity and effectiveness of its operators. Such “software-defined data centers” feature virtualized infrastructure -- consisting of software-defined computing, software-defined networking, software-defined storage and software-defined security -- that can respond instantly to changing operating conditions and business imperatives.

Cloud

Many companies are building a "private cloud" inside their own data centers - consolidating, standardizing, virtualizing and then automating much of the existing infrastructure and applications. Many organizations also look to hosted, off premise cloud services, delivered by service providers that can run business applications, provide additional compute and storage capacity, and provide business continuity options. These public clouds will continue to provide and expand consumable IT services, especially for emerging development and analytic applications. IT departments are thus coming to rely on a combination of private cloud, managed private clouds and public cloud infrastructures - moving to a hybrid cloud model.

With this in mind, companies choose EMC as their IT transformation partner for three reasons:

- First, we believe we deliver the greatest improvements in efficiency of the IT infrastructure;
- Second, we provide IT with a solution that gives companies confidence in their control of critical data and applications; and
- Third, we offer choice - retaining an open architecture with the ability to run a broad range of applications on both virtual and physical infrastructure, and with platform-as-a-service that provides a foundation for next-generation applications to run on a variety of clouds.

Big Data

The continued growth of data in the digital universe creates a huge challenge for IT departments that must store and manage information, but Big Data also creates huge opportunities for a new generation of applications that help organizations turn massive amounts of data into insight and competitive advantage.
Many business-critical systems have amassed tens or hundreds of terabytes of structured and unstructured data - stored, managed and protected in many cases by EMC storage and security infrastructure. Companies want to analyze this data for trends and to gain understanding of customer or organizational behavior. In addition, many would like to use data to change business in real time, using fast-data techniques to adjust prices and product availability and to address changing external conditions. Analysts are also predicting rapid growth in the Internet of Things, where sensors and machinery are also generating steady streams of analyzable data.
To capitalize on the Big Data opportunity, IT leaders are developing applications that require new computing and storage workloads. These emerging workloads represent a new paradigm for data storage products, services and applications. As a long-time leader in storage technology and an emerging leader in analytics and applications for these workloads, EMC is strongly positioned to lead in this critical sector of the new IT economy.

Trust

The adoption of cloud computing and Big Data analytics is dependent upon IT’s ability to maintain a trustworthy infrastructure and application environment, one that supports business expectations while protecting and securing data assets and intellectual property.
An increasingly mobile workforce along with increasing use of hosted or public cloud services challenges the boundaries that define enterprise IT and the notion of a perimeter-based approach to cybersecurity. As the value of enterprise information grows, security threats become stealthier, more pervasive and more advanced. A Big Data approach to security analyzes vast flows of information and patterns of behavior in order to spot anomalies in activity. IT must move from an approach of static security to dynamic security in order to secure trust in cloud computing models.
In the cloud era, trust in IT is achieved when an organization can anticipate, identify and repel advanced threats while ensuring availability of applications, systems and data. With our emphasis on innovations like RSA security analytics and forensics, advanced data protection and next-generation backup, EMC plays a central role in enabling trusted cloud environments.

EMC Federated Solutions
EMC Information Infrastructure, VMware, Pivotal and Virtustream form a unique federation of strategically aligned businesses, each focused and free to execute individually or together. The federation provides customers with modern data center infrastructure solutions and choice for the software-defined enterprise and the emerging third platform of cloud, mobile, social and Big Data, transformed by billions of users and millions of apps.
The ability of our federated businesses to work together results in differentiated solutions, including Enterprise Hybrid Cloud (“EHC”) and Business Data Lake, with broad transformational capabilities which allow our customers to

maximize their control, efficiency and choice.

Enterprise Hybrid Cloud
EMC's EHC solutions provide customers with a single platform designed to reduce the cost of delivering mission-critical IT services, while providing the financial transparency, on-demand services and agility that businesses need. We deliver on this by combining the control, reliability and confidence of the private cloud with the simplicity, flexibility and cost efficiency of public clouds to transform delivery of IT services. Workflows and application blueprints transform what was once manual into automated infrastructure provisioning, on-demand, with management insights and cost transparency. Built-in security and data protection allows customers to run a hybrid cloud with confidence.
Designed, integrated and tested in EMC federation labs with best-in-class technologies, automated workflows and application templates, our EHC solutions can be deployed in as little as 28 days as the foundation for Infrastructure-as-a-Service. Deliver Anything-as-a-Service with add-on modules for data protection, disaster recovery, continuous availability, applications, Hadoop, encryption, continuous software release orchestration, ecosystem extensions and more. With thousands of engineering hours, the federation brings together best-in-class products and services from EMC Information Infrastructure, Virtustream and VMware to create fully integrated, enterprise-ready solutions.
Business Data Lake
EMC's data lake strategy is a holistic approach that brings data, applications and analytics together. Data is ingested, cataloged, inventoried and controlled regardless of the source or destination. Analytics capabilities are delivered where needed, down to the point of data inception and ingest.
EMC provides a complete, entirely flexible solution with the broadest choice of data lake foundation platforms powered by industry-leading, scale-out object, file and block storage platforms. This makes it easy to collect, store, manage, protect and analyze data through a single shared storage platform. With all of an organization's data in one place, EMC's data lake makes accessing and analyzing it even easier with industry-standard protocol support (Hadoop) and certified integrations of leading Business Analytics Application vendors such as Cloudera, Splunk, Hortonworks, Pivotal and more.
EMC's fully-engineered, enterprise-grade data lake solutions are built on federation solutions from EMC Information Infrastructure, Pivotal and VMware. Some of EMC's solutions solving Big Data needs include EMC Isilon and EMC Elastic Cloud Storage ("ECS"). With EMC Isilon scale-out NAS, customers can aggregate big data sets onto a powerful yet easy-to-manage storage platform that provides massive scalability, high performance, unmatched efficiency and operational flexibility to support a wide range of applications. EMC ECS is a software-defined, cloud scale object and HDFS storage platform that has the ability to efficiently store billions of objects, while delivering data anywhere to any device.

EMC Information Infrastructure Products and Offerings

Information Storage Segment

EMC offers a comprehensive portfolio of enterprise storage systems and software - including high-end VMAX and mid-tier VNX and all-flash XtremIO storage arrays that have rapidly become one of the fastest-growing products in EMC's history. EMC Isilon and ECS are storage families specifically designed to handle vast quantities of unstructured data, while software offerings such as ViPR and Storage Resource Manager ("SRM") automate the provisioning and management of storage networks and arrays. Complementing these storage platforms, EMC also offers a portfolio of backup products that supports a wide range of enterprise application workloads. As the foundation of an information infrastructure within traditional data centers, virtual data centers and cloud-based IT infrastructures, EMC storage systems can be deployed in storage-area networks ("SAN"), networked-attached storage ("NAS"), unified storage combining NAS and SAN, object storage and/or direct-attached storage environments. Customer adoption of EMC's storage products and offerings in 2015 was driven by storage innovations, new features and capabilities, and a focused emphasis on expanding EMC's partner ecosystem.

EMC continues to lead the high-end and mid-range storage markets. In 2015, EMC built on this leadership with an expanded set of new data services and capabilities that further automate, consolidate and protect mission-critical IT operations. This new approach to enterprise storage architectures separates software-based services from the underlying hardware, allowing these capabilities to extend to other platforms.

The significant demand for flash storage continued to benefit EMC in 2015 given our comprehensive flash portfolio, which includes flash-optimized hybrid arrays, server-flash solutions and all-flash arrays. In 2015, we unveiled XtremIO version 4.0 through a non-disruptive software upgrade. This new version supports larger all-flash array configurations, expands on-demand capabilities and consolidates workloads at unprecedented levels of performance and availability. XtremIO 4.0 uses a scale-out architecture that more than doubles the density of the previous system with 40TBs per X-Brick and offering configuration of up to eight 40TB X-Bricks, with non-disruptive performance and capacity expansions that automatically re-balance data to maintain consistent and predictable sub-millisecond performance. With these improvements, EMC remained the all-flash market leader in 2015 and XtremIO generated more than $1 billion in revenue. In addition, EMC's comprehensive flash portfolio addresses different market segments, use cases, workloads, applications, budgets and deployment scenarios based on customer needs.

EMC Isilon storage systems continue to give high performance at reduced costs for Big Data storage via a scale-out NAS architecture that delivers both capacity and performance alongside simplified management. In 2015, EMC announced the next generation Isilon scale-out NAS Data Lake, which includes new products, features and capabilities that allow enterprises to scale easily to edge locations as well as public clouds. The new IsilonSD Edge and Isilon Cloud Pools enhance the Data Lake by allowing unstructured data to be available not only within the core data center, but also at data center edge locations, such as remote offices, and archived in the cloud. The new Isilon solutions consolidate multiple workloads and allow users to access and analyze data from all locations. The new solutions will be generally available in early 2016.

In July 2015, EMC completed its acquisition of Virtustream. Virtustream represents a transformational element of EMC's strategy to help customers move all applications to cloud-based IT environments. With the addition of Virtustream, EMC completes the industry's most comprehensive hybrid cloud portfolio to support all applications, all workloads and all cloud models.

Virtustream is trusted by enterprises worldwide to migrate, run and manage mission-critical applications in the cloud. Virtustream's cloud software and Infrastructure-as-a-Service portfolio will be delivered directly to customers and through partners. EMC federation service provider partners will receive access to Virtustream's xStream cloud management software platform and be enabled to adopt and deliver their own branded services based upon it. Additionally, we recently combined EMC managed services and EMC object storage services with Virtustream to offer a portfolio of cloud-based solutions for tiered data storage, archiving backup and disaster recovery.

Converged Infrastructure

Enterprises are increasingly turning towards converged infrastructure to simplify deployments and increase efficiency in their data centers. VCE Vblock systems accelerate the adoption of cloud-based computing models that reduce the cost of IT, simplify operations and increase business agility, enabling customers to transform their IT for faster time to market. VCE solutions are available through an extensive partner network, and cover horizontal applications, vertical industry offerings, and application development environments, allowing customers to focus on business innovation instead of integrating, validating and managing IT infrastructure. Throughout 2015, VCE expanded its portfolio of offerings to address new customer use cases and emerging industry trends.

In 2015, EMC expanded its converged infrastructure offering with VxRACK - the industry's first hyperconverged rackscale system. VxRACK enables enterprises and service providers to simplify the deployment of next generation scale out mobile, cloud and distributed Tier 2 applications. The system enables customers to start from dozens of servers and scale to many thousands of servers -- tens of petabytes of storage capacity while delivering the highest performance and value per IOP. VxRACK systems are fully software-defined and support a choice of hypervisors and software stacks.

EMC Global Services

EMC Global Services ("GS") enables customers and partners to transform IT, realize the agility and efficiency of a trusted cloud and capitalize on the competitive advantage of Big Data. Our 17,000+ services professionals worldwide, plus our global network of partners, deliver the skills, knowledge and experience organizations need to accelerate their cloud, Big Data and trust initiatives and get the maximum value from their EMC technology investments. We provide a broad and comprehensive mix of services and consulting capabilities to assist customers with every phase of their journey - from developing a strategy to designing, deploying, operating and supporting their IT environment, and providing their workforce with the necessary skills, knowledge and certifications.

Global Services continually enhances its services portfolio and skills to support EMC's strategies and to stay ahead of rapidly evolving market and customer demands. We have invested in several new professional services offerings that enable our customers to realize the benefits of hybrid clouds. We help clients transform infrastructure, operating models and applications. For example, GS plays an integral role in accelerating time-to-value via the aforementioned EHC Solution.

Underpinning our course offerings is EMC Proven Professional, a leading education and certification program in the IT industry. The knowledge, expertise and thought leadership provided by certified EMC Proven Professionals is increasingly vital as the IT industry undergoes transformation.

In 2015, Global Services continued to achieve record-high customer satisfaction scores and earned multiple industry awards for our exemplary customer service around our customer-centric service culture and our excellence in online service and support.

RSA Information Security Segment

RSA, the Security Division of EMC, provides essential cybersecurity capabilities that fuse comprehensive visibility with advanced analytics designed to enable more effective detection and response, and drive faster, better-informed decisions to help manage an organization's security and risk posture. RSA solutions are engineered to enable organizations to detect, investigate and respond to advanced attacks; confirm and manage identities; and ultimately, help reduce IP theft, fraud and cybercrime.

RSA released a number of innovations throughout 2015. Most notably, RSA introduced the RSA Via portfolio of Smart Identity solutions, engineered to combine authentication, identity and access management, and identity governance silos into one unified solution that allows dynamic, end-to-end identity management across diverse systems and users. Identity and credential manipulation have become a fundamental part of cyber-attack campaigns, enabling adversaries to initially breach organizations and facilitate lateral movement once inside to get to an organization's digital "crown jewels." The RSA Via portfolio of solutions - including RSA Via Access, RSA Via Lifecycle and RSA Via Governance along with RSA SecurID authentication and RSA Adaptive Authentication - is designed to address the convenience needs of end-users and security needs of business.

Also in 2015, RSA updated its other growth portfolio products including RSA Security Analytics, RSA ECAT and RSA Archer GRC. RSA Security Analytics was engineered to enhance its ability to provide visibility from the endpoint to the cloud, giving organizations the necessary context to help detect and respond to today's advanced attack campaigns before they can damage the business. RSA ECAT is now built to enable active endpoint defense against advanced threats by rapidly detecting and blocking or quarantining suspicious files and processes without the need for signatures, even while those devices are outside the corporate network. RSA Archer GRC has been re-engineered for today's business realities, enabling greater agility and speed through decentralized, enterprise-wide risk management.

Additionally, RSA made a number of organizational changes during 2015 to pursue a more aggressive growth strategy, including reorganizing its sales team and go to market strategy to focus on its growth products and better leveraging its services organization to increase customer satisfaction with those products.

Enterprise Content Division Segment

The Enterprise Content Division ("ECD") provides enterprise software and cloud solutions that help organizations leverage their business content throughout its lifecycle to drive their digital agenda. The Documentum product line enables the digitization and flow of content through the world's most demanding organizations in regulated industries and includes capabilities like intelligent capture of information, enterprise content library services, customer communications, information governance and compliance as well as purpose built industry solutions for Life Science, Healthcare, Energy and Engineering. The InfoArchive product line helps customers take cost out of their current IT environments by archiving inactive information to decommission legacy applications and make their current applications run better.

In 2015, besides delivering customer value through innovation in Documentum and InfoArchive, ECD announced Project Horizon and a multi-year strategy for leadership in Next Generation of Enterprise Content Management. Project Horizon is a curated app marketplace of content related end-user productivity apps. It is based on a modular cloud native platform powered by Pivotal Cloud Foundry. In July of 2015, ECD announced the divestiture of Syncplicity to Skyview Capital in order to focus its innovation efforts on its growth strategy.

Within the Documentum franchise, in addition to continued investment in reducing TCO and improving security and manageability, in 2015 ECD focused on making the technology more consumable by business users through new releases of D2, xCP, Captiva and ApplicationXtender. The InfoArchive product-line saw robust growth driven by cost reduction and compliance drivers, and introduced "Compliant Data Lake" capability. This entailed storing archived information in Hadoop file system format, allowing Big Data analytics solutions to process archived information.

Finally, on the go-to-market dimension, ECD focused on reinvigorating inside and channel sales as well as invested in

Digital Marketing to create a route to market for new customer logos.

Pivotal Products and Offerings

As many enterprises are transitioning to cloud computing and seeing their industries disrupted by smaller, more nimble software-driven companies, these enterprises are seeking to transform their businesses by developing and using next generation software applications to differentiate themselves from their competitors. These applications are designed to drive more efficiencies within these organizations as well as provide a better customer experience for their products and services.

With the combination of Pivotal's cloud platform, big data products, agile development services and its roots in Silicon Valley, Pivotal is in a unique position to help these enterprise customers with their digital transformation. Pivotal's mission is to transform how the world builds software.

EMC and VMware, with an investment from General Electric, formed Pivotal in 2013. Pivotal is an enterprise software and services company that uses its innovative software development methodologies, a cloud platform and big data analytics tools to help customers, comprised of some of the world's largest enterprises and most admired brands, with their digital transformation.

Pivotal's main offering is its next generation cloud platform-as-a-service - Pivotal Cloud Foundry - which is designed to accelerate the speed in which developers build and deploy sophisticated modern software. Clients can also co-develop with Pivotal Labs, our agile software development consulting business unit, to learn modern development, pair programming methodologies designed to rapidly deliver web and mobile software applications. As Pivotal helps these clients quickly build more software applications, often these clients choose to deploy the applications on Pivotal Cloud Foundry. Furthermore, Pivotal offers clients its comprehensive big and fast data solutions - Pivotal Big Data Suite - as well as the expertise of its data scientists, in each case to help these clients analyze their business data in real-time.

In 2015, Pivotal completed the transition of its business model from perpetual software licenses to software subscriptions. Pivotal grew to over 2,000 employees and saw continued strong growth in its Pivotal Cloud Foundry and Pivotal Big Data Suite software subscription businesses, including its annualized recurring revenue and backlog. Pivotal Labs continued its expansion in 2015 with offices in 17 cities around the world.

VMware Virtual and Cloud Infrastructure Products and Offerings

VMware is a leader in virtualization and cloud infrastructure solutions utilized by organizations to help transform the way they build, deliver and consume IT resources. VMware develops and markets its product and service offerings within three main product groups which allow organizations to manage IT resources across complex multi-cloud, multi-device environments by leveraging synergies across these three product groups: Software-Defined Data Center, Hybrid Cloud Computing and End-User Computing.

VMware enables its customers to utilize off-premise vSphere-based hybrid cloud computing capacity through two offerings: VMware vCloud Air Network Service Providers ("vCAN") and VMware vCloud Air ("vCloud Air"). The 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. 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. VMware vCloud Air enables customers to extend the same skills, tools, networking and security models across both on-premise and off-premise environments.

VMware's cloud strategy has three 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. VMware's cloud strategy is designed to provide organizations with solutions that work across all clouds and all devices. VMware plans to narrow 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.

VMware's end-user computing solutions portfolio, which includes Horizon workplace suites and enterprise mobile management offerings led by the company's AirWatch mobile solutions, continues to experience strong growth. Currently, AirWatch business models include an on-premise solution that VMware offers through the sale of perpetual licenses and an off-premise solution that the company offers as software-as-a-service (“SaaS”).

Customers rely on VMware to help them transform the way they build, deliver and consume IT resources. The company is headquartered in Palo Alto, California, with offices throughout the world.

Markets and Distribution Channels

Markets

EMC supports a broad range of customers, including service providers, around the world - in every major industry, in both public and private sectors, and of sizes ranging from the Fortune 500 to small business and individual consumers.

Distribution Channels

We market our products through direct sales and through multiple distribution channels. We have a direct sales presence throughout North America, Latin America, Europe, the Middle East, South Africa and the Asia Pacific region. We also have agreements in place with many partners, including value-added resellers and distributors, cloud service providers, systems integrators, outsourcers, Independent Software Vendors (“ISVs”) and Original Equipment Manufacturers (“OEMs”). These agreements, subject to certain terms and conditions, help us extend our reach in established markets and expand EMC technologies into new markets.

EMC’s Business Partner Program is focused on partner enablement in a variety of ways, including reselling EMC solutions, providing cloud services powered by EMC technologies, including EMC as part of a strategic business solution, or embedding EMC technologies in their own technology and systems. These partners contribute over half of EMC’s storage revenue. EMC’s Business Partner Program offers partners direct connections to EMC’s federation of businesses, simplifies and aligns partner operations and provides opportunities for further growth and profitability.

The success of our Business Partner Program can be attributed to having a combination of a broad product portfolio, a program that rewards partners who are trained to effectively position, sell and service EMC products and go-to-market innovations, such as our VSPEX program. VSPEX, which is sold exclusively through partners, incorporates storage and data protection technology from EMC, and virtualization, server and networking technology from alliance partners like Brocade, Cisco, Citrix, Microsoft, Oracle and VMware, as well as support for business continuity and disaster recovery with EMC VPLEX, RecoverPoint, Avamar and Data Domain. VSPEX Labs has also enabled several ISVs to validate their software offerings as part of a VSPEX solution, further expanding the VSPEX technology partner ecosystem.

As a core element of EMC’s hybrid cloud strategy, EMC continues to establish focused and committed partnerships with service providers around the world to expand the range of options for IT organizations seeking to gain business agility through the efficiency and choice offered by cloud computing, without sacrificing trust or control. EMC’s Service Provider Partner program is designed to increase sales, marketing, planning and education benefits for our partners with the singular goal of delivering compelling cloud services to the global IT market. EMC also provides business development and services creation resources to enable partners to develop differentiated offerings built on EMC technology, as well as marketing support including market development funds, campaigns, field execution and sales enablement tools. The Service Provider Partner program is open to cloud service providers of all kinds, including networking and communications companies, managed hosting firms, outsourcers, ISVs, resellers, value-added resellers, distributors and enterprises. The program has evolved to enable qualified partner companies to participate and capture cloud opportunities.

VMware works closely with more than 1,200 technology partners, including leading server, microprocessor, storage, networking, software and security vendors. VMware facilitates joint solution creation and coordinated go-to-market activities with its partners.

Technology Alliances

EMC engages in numerous alliances with other technology companies to deliver significant technology integration, create best practices, and expand choice for our customers to help accelerate their journey to implementing private, public and hybrid cloud environments. In 2015, EMC continued to strengthen its technology innovations and to expand its partner ecosystem globally by deepening existing relationships and solidifying new alliances with emerging technology companies in the cloud stack and data fabric areas:

- EMC introduced a new Federation Ready credential program that expands deployment options through EMC Federation Business Partners.
- EMC introduced a new go-to-market team comprised of a highly specialized collection of experts from across the EMC Federation to provide dedicated support to the most strategic EMC Federation customers on their Digital Transformation and Hybrid Cloud journey.

- Virtustream became one of a select few premier strategic providers of cloud infrastructure services for SAP business-critical applications in SAP HANA® Enterprise Cloud.

Manufacturing and Quality

We conduct operations utilizing a formal, documented quality management system to ensure that our products and services satisfy customer needs and expectations. The quality management system also provides the framework for continual improvement of our processes and products. This system is certified to the ISO 9001 International Standard. Several additional ISO 9001 certifications are maintained for sales and service operations worldwide. We have also implemented Lean Six Sigma methodologies to ensure that the quality of our designs, manufacturing, test processes and supplier relationships are continually improved. Our order fulfillment, manufacturing and test facilities in Massachusetts, North Carolina and Ireland are certified to the ISO 14001 International Standard for environmental management systems. EMC's Franklin, Massachusetts, Apex, North Carolina and Cork, Ireland manufacturing facilities have achieved OHSAS 18001 certification, an international standard for facilities with world-class safety and health management systems. We also maintain Support Center Practices certification for our primary customer support centers. These internationally-recognized endorsements of ongoing quality and environmental management are among the highest levels of certifications available.

We maintain a robust Supplier Code of Conduct, actively manage recycling processes for our returned products and are also certified by the Environmental Protection Agency as a Smartway Transport Partner.

Our hardware products are assembled and tested primarily at our facilities in the United States and Ireland or at global manufacturing service suppliers. We work closely with our suppliers to design, assemble and test product components in accordance with production standards and quality controls established by us. Our software products are designed, developed and tested primarily at our facilities in the United States and abroad. The products are tested to meet our quality standards.

We have five manufacturing facilities: two in Massachusetts, which manufacture storage products and security products for the North American markets; two in Ireland, which manufacture storage products and security products for markets outside of North America; and one in North Carolina, which manufactures storage products for domestic markets. We also utilize contract manufacturers throughout the world to manufacture or assemble our Data Domain, Isilon, and, in limited amounts, other Information Infrastructure products.

Product Components

We purchase many sophisticated components and products from an approved list of qualified suppliers. Our products utilize industry-standard and semi-custom components and subsystems. Among the most important components that we use are disk drives, solid-state drives, high-density memory components, microcontrollers and power supplies. While such components are generally available, we have experienced delivery delays from time to time because of high industry demand or the inability of some vendors to consistently meet our quality or delivery requirements.

Research and Development

We continually enhance our existing products and develop new products to meet changing customer requirements. In 2015, 2014 and 2013, our research and development ("R&D") expenses totaled $3,167 million, $2,991 million and $2,761 million, respectively. We support our R&D efforts through state-of-the-art development labs worldwide. See Item 2, Properties.

Backlog

We produce our products on the basis of our forecast of near-term demand and maintain inventory in advance of receipt of firm orders from customers. We configure to customer specifications and generally deliver products shortly after receipt of the order. Service engagements are also included in certain orders. Customers generally may reschedule or cancel orders with little or no penalty. We believe that our backlog at any particular time is not meaningful because it is not necessarily indicative of future sales levels.

Competition

We compete with many companies in the industries we serve, including companies that offer a broad spectrum of IT products and services and others that offer specific information storage, protection, security, management and intelligence, data analytics or virtualization products or services. We believe that most of these companies compete based on their market presence, products, service or price. Some of these companies also compete by offering information storage, information governance, security or virtualization-related products or services, together with other IT products or services, at minimal or no additional cost in order to preserve or gain market share.

We believe that we have a number of competitive advantages over these companies, including product, distribution and service. We believe the advantages in our products include quality, breadth of offerings, performance, functionality, scalability, availability, interoperability, connectivity, time-to-market enhancements and total value of ownership. We believe our advantages in distribution include the world's largest information infrastructure-focused direct sales force and a broad network of channel partners. We believe our advantages in service include our ability to provide our customers with a full range of expertise before, during and after their purchase of solutions from us or other vendors.

VMware competes with large and small vendors in different segments of the cloud computing, end-user computing and virtualization spaces, and expects that new entrants will continue to enter these industries and develop technologies that, if commercialized, may compete with VMware's products and services.

Seasonality

We generally experience the lowest demand for our products and services in the first quarter of the year and the greatest demand for our products and services in the last quarter of the year, which is consistent with the seasonality of the IT industry as a whole.

Intellectual Property

We generally rely on patent, copyright, trademark and trade secret laws and contract rights to establish and maintain our proprietary rights in our technology and products. While our intellectual property rights are important to our success, we believe that our business as a whole is not materially dependent on any particular patent, trademark, license or other intellectual property right.

We have been granted or own by assignment approximately 6,100 patents issued by the U.S. Patent and Trademark Office, of which approximately 5,100 are owned by EMC, approximately 900 are owned by VMware, approximately 75 are owned by Pivotal, and 7 are owned by VCE. EMC, VMware, Pivotal and VCE have approximately 4,700 patent applications pending with the U.S. Patent and Trademark Office. We also have a corresponding number of international patents and patent applications. While the durations of our patents vary, we believe that the durations of our patents are adequate relative to the expected lives of our products.

We have used, registered or applied to register certain trademarks and copyrights in the United States and in other countries. We also license certain technology from third parties for use in our products and processes and license some of our technologies to third parties.

Employees

As of December 31, 2015, we had approximately 72,000 employees worldwide, of which approximately 19,000 were employed by or working on behalf of VMware. None of our domestic employees is represented by a labor union, and we have never suffered an interruption of business as a result of a labor dispute. We consider our relations with our employees to be good.

Financial Information About Segments, Foreign and Domestic Operations and Export Sales

EMC manages the Company as a federation of businesses: EMC Information Infrastructure, Pivotal, VMware Virtual Infrastructure and Virtustream. EMC Information Infrastructure operates in three segments: Information Storage, Enterprise Content Division and RSA Information Security, while Pivotal and VMware Virtual Infrastructure each operate as a single segment. The results of Virtustream are currently reported within our Information Storage segment.

Sales and marketing operations outside the United States are conducted through sales subsidiaries and branches located principally in Europe, Latin America and the Asia Pacific region. We have five manufacturing facilities: two in Massachusetts, which manufacture storage products and security products for the North American markets; two in Ireland, which manufacture storage products and security products for markets outside of North America; and one in

North Carolina, which manufactures storage products for domestic markets. We also utilize contract manufacturers throughout the world to manufacture or assemble our Data Domain, Isilon, and, in limited amounts, other Information Infrastructure products. See Note R to the consolidated financial statements for information about revenues by segment and geographic area.

Sustainability

We believe that investing in a sustainable future makes EMC a stronger and healthier company. Sustainable business practices are creating financial value by producing savings from more efficient products and operations, generating revenues from leveraging new market opportunities, and positioning EMC for long-term success in a changing world. Incorporating principles of sustainability in our product designs, operations, and decision making has enhanced our resilience and agility in the face of global social and environmental events.

EMC's sustainability strategy is to leverage our talent and technology to drive positive change in the areas where we have greatest potential for impact, hold ourselves accountable by measuring and reporting our progress, maintain open and candid communication with our internal and external stakeholders, and collaborate with our peer companies and those in our value chain to expand the scale of our impact.

Our areas of focus follow from our business objectives and the context in which we operate, prioritizing the issues that have the greatest potential to impact our business (positively or negatively) and where we have the greatest potential to mitigate negative impacts and drive positive results through our own actions and our ability to influence others.

As a result, we continue to focus on five social and environmental priorities: Energy Efficiency and Climate Change; eWaste; Science, Technology, Engineering and Math ("STEM") education; Supply Chain Responsibility; and the Role of Information Technology in Society. Four additional pertinent topics include: Corporate Governance; Diversity & Inclusion; Information Privacy & Security; and Innovation.

Energy efficiency is critical to EMC as our primary greenhouse gas ("GHG") emissions arise indirectly from the generation and transmission of electricity needed to run our business and even more, to power our products at customer sites. As our customers' businesses become increasingly digital, we must help them make the transition in ways that mitigate their costs and their emissions. Therefore, our energy and climate change strategy is focused on increasing energy efficiency in our products as well as in our facilities and data centers; supplying technology that enables energy efficient operations in our customers' data centers; engaging with suppliers to reduce emissions in the supply chain; and leveraging the transformative power of technology to reduce global energy demand. While availability of clean water is an urgent societal concern, EMC's primary interaction with water is in its use for the generation of electricity; as such we believe energy efficiency provides our greatest opportunity for positive impact on water supplies. We continue to work toward our 2020 science-based goals and have engaged with peers to help drive the market for renewable energy. We submitted our eighth annual GHG disclosure report to the Carbon Disclosure Project ("CDP") in 2015, and were honored as a Climate Performance Leader with a rating of A, and were included in the 2014 Carbon Disclosure Leadership Index for the seventh time with a score of 100. For detail about our targets and our progress in emissions reduction, please see EMC's 2014 Sustainability Report "Redefine the Future."

EMC's takeback and eWaste program encompasses the full life cycle of our products, increasingly important as IT becomes more pervasive and embedded in nearly every domain of the economy. In the design phase, we continuously pursue opportunities to reduce the amount of material used in our products, and to find viable alternatives for substances which may be harmful to people or the environment. When the product reaches the end of its useful life, we offer product takeback to all of our customers worldwide to help ensure those products are disposed of responsibly and in compliance with the law. To maximize environmental and financial benefit, we reuse, reprocess or recycle wherever possible. Any waste is handled with integrity and responsibility for the environment and human health. Our published principles include commitments to avoid shipment of eWaste from countries in the Organisation for Economic Co-operation and Development ("OECD") to non-OECD countries, and to ensure that no prison, child or forced labor is used in the processing of our eWaste. We require our disposal suppliers to be properly certified by third parties and in 2015, conducted business exclusively with disposal suppliers certified by the R2 or e-Stewards programs. We are tracking a new metric that estimates the percentage of material that we recover at the end of its useful life, and began reporting this in 2015. For more information, please see the EMC Sustainability Detailed Report: Our Products.

Environmental and social responsibility within our supply chain is central to our ability to drive change through collaboration and influence. We work directly with hundreds of suppliers in more than 20 countries, and rely indirectly on many more. EMC is committed to building a resilient supply chain that respects workers and the environment, mitigates risks, and creates opportunities that benefit stakeholders. In support of these goals, we engage suppliers through our Supply Chain Social and Environmental Responsibility ("SER") program, which we integrate with other supply chain programs such as Business Continuity Planning to ensure a multifaceted, strategic approach to enhancing resiliency. We are leveraging improved data collection to enhance our risk assessment and to prioritize capacity-building initiatives; engaging our internal staff, suppliers and stakeholders in new ways; and integrating SER more deeply into our business practices. We have public sustainability reporting as a metric within our supplier scorecard, and launched an engagement tool built on EMC's Archer GRC platform to manage both internal processes as well as communications with suppliers. EMC provides training and tools to our suppliers to assist them in their reporting, and introduced the Supply Chain Sustainability Management and Resource Training, or "SMaRT", Library to provide training modules, case studies, and access to other resources that help our suppliers build their capacity to address SER issues. EMC is also committed to the responsible sourcing of minerals. We are working with our suppliers and other stakeholders to trace the sources of the tantalum, tin, tungsten and gold in our products, and take steps to build a "conflict-free" mineral supply chain. For more information on EMC's extensive Supply Chain SER program, please see the EMC Sustainability Detailed Report: Supply Chain, and EMC's Conflict Minerals Report.

STEM education is critical to closing tomorrow's technology skills gap and is important to drive innovation, support communities, and provide a pipeline of skilled employees to our company and to companies in every industry. EMC and our employees invest time, talent and funds to support global education initiatives that expand access to education and encourage students, particularly from underrepresented groups, to pursue science and math programs. We have launched the Global Impact Corps as an opportunity for EMC employees to use their professional skills to build capacity in NGOs around the world to scale our impact. For more information, please see the EMC Sustainability Detailed Report: Communities.

The role of IT in society explores the potential arising from the pervasive nature of IT to contribute to long-term environmental, societal, and economic prosperity. The technologies that comprise the third platform-mobile, social, cloud and Big Data-are not only serving our customers' needs, but driving growth, creating resource efficiencies, improving resilience, tackling problems previously considered intractable, and providing people around the globe access to health care, education, and economic opportunity. We also realize that an increasingly interconnected world can result in the creation of social issues never before encountered, and it is our responsibility to encourage the use of IT in ways that protect and promote well-being. In 2015, EMC undertook a number of projects focused on the positive impact of IT, including a collaborative effort with BC Hydro to support their smart metering program using Big Data hardware and software solutions; and the launch of the Whenology Project, a collaboration between EMC, Earthwatch, and the Schoodic Institute to study the impacts of climate change using publicly available climate and ecology data. For more information, please see the EMC Sustainability Detailed Report: Customers.

EMC is proud to have been listed in the 2015 Dow Jones Sustainability Index for North America for the fifth consecutive year.

Please see EMC's most current sustainability report for more information about EMC's sustainability goals and performance.

Available Information

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to reports filed pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, are made available free of charge on or through our website at www.emc.com as soon as reasonably practicable after such reports are filed with, or furnished to, the SEC. The SEC also maintains a website, www.sec.gov, that contains reports and other information regarding issuers that file electronically with the SEC. Copies of our (i) Corporate Governance Guidelines, (ii) charters for the Audit Committee, Leadership and Compensation Committee, Corporate Governance and Nominating Committee, Mergers and Acquisitions Committee and Finance Committee and (iii) Business Conduct Guidelines (code of business conduct and ethics) are available at www.emc.com/corporate/investor-relations/governance/corporate-governance.htm. Copies will be provided to any shareholder upon request. Please go to www.emc.com/corporate/investor-relations/index.htm to submit an electronic request, or send a written request to EMC Investor Relations, 176 South Street, Hopkinton, MA 01748. None of the information posted on our website is incorporated by reference into this Annual Report.

ITEM 1A. RISK FACTORS

The risk factors that appear below could materially affect our business, financial condition and results of operations. 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.

The announcement and pendency of the Dell transaction may materially adversely affect our business.

Uncertainty about the effect of the proposed merger on our employees, customers and other parties may have a material adverse effect on our business. Our employees may experience uncertainty about their roles following the merger. There can be no assurance that our employees, including key personnel, can be retained to the same extent that we have previously been able to attract and retain employees. Any loss of such employees could have a material adverse effect on our business, operations and financial position.

Parties with which we do business may experience uncertainty associated with the merger and related transactions, including with respect to current or future business relationships with us. Such uncertainty could cause customers, suppliers and others to seek to change existing business relationships or delay or defer certain business decisions with us and could have a material adverse effect on our business, operations and financial position.

Pursuant to the terms of the Merger Agreement, we are subject to certain restrictions on the conduct of our business, including the ability in certain cases to enter into contracts, acquire or dispose of assets, incur indebtedness or incur capital expenditures, until the proposed merger closes or the Merger Agreement terminates. The restrictions may prevent us from pursuing otherwise attractive business opportunities and taking other actions with respect to our business that we may consider advantageous and result in our inability to respond effectively to competitive pressures and industry developments, and may otherwise harm our business and operations.

In addition, we have diverted, and will continue to divert, significant management resources towards the completion of the transaction, which could materially adversely affect our business and operations.

Failure to consummate the Dell transaction could have a material adverse impact on our business and financial results.

There can be no assurance that the proposed merger with Denali will occur. If the merger is not completed for any reason, including as a result of a failure of our shareholders to approve the Merger Agreement, the ongoing business of EMC may be adversely affected and, without realizing any of the benefits of having completed the merger, we may experience negative reactions from the financial markets, including negative impacts on the price of our common stock, and litigation related to any failure to complete the merger or related to any enforcement proceeding commenced against us to perform our obligations under the Merger Agreement. A failed transaction may result in negative publicity and a negative impression of us in the investment community. Further, any disruptions to our business resulting from the announcement and pendency of the merger, including any adverse changes in our relationships with our customers, partners and employees, could continue or accelerate in the event of a failed transaction.

Consummation of the merger is subject to certain conditions, including, among others, (i) approval by our shareholders; (ii) the absence of an order or law prohibiting consummation of the merger; (iii) the expiration or termination of the waiting period under the HSR Act and the receipt of consents under other specified antitrust laws; (iv) the absence of a material adverse effect on us; (v) the accuracy of the parties’ respective representations and warranties; and (vi) the parties’ respective compliance with agreements and covenants contained in the Merger Agreement. Many of the conditions to closing of the merger are not within our control and there can be no assurance that these and other conditions to closing will be satisfied. In addition, the closing may not occur if the required financing for the transaction is unavailable or delayed.

The Merger Agreement also contains certain termination rights for both us and Denali, and in certain specified circumstances upon termination of the Merger Agreement, including a termination by us to enter into an agreement for a superior proposal, we will be required to pay Denali a cash termination fee. This payment could affect the structure, pricing and terms proposed by a third party seeking to acquire or merge with us and could deter such third party from making a competing acquisition proposal.

The Merger Agreement provides for limited remedies for us in the event of a breach by Denali or its affiliates that results in termination of the Merger Agreement, including the right to a reverse termination fee payable under certain specified circumstances. There can be no assurance that a remedy will be available to us in the event of such a breach or that any damages incurred by us in connection with the merger will not exceed the amount of the reverse termination fee.

In addition, we have incurred, and will continue to incur, significant costs, expenses and fees for professional services and other transaction costs in connection with the proposed merger. We will be required to pay such costs relating to the transaction whether or not the merger is completed.

Lawsuits have been filed, and other lawsuits may be filed, challenging the merger. An adverse ruling in any such lawsuit may delay the merger or prevent the merger from being completed.

Lawsuits have been filed against various combinations of EMC, its current and former directors, VMware, certain of VMware's directors, Denali and Dell, among other defendants. Certain of the lawsuits have generally alleged, among other things, that the directors of EMC breached their fiduciary duties to EMC shareholders in connection with the merger; that various combinations of defendants aided and abetted the EMC directors in the alleged breach of their fiduciary duties; that the proxy statement filed by EMC with the SEC in connection with the merger contains material misstatements and omissions; that EMC, in its capacity as the majority shareholder of VMware, and individual defendants who are directors of EMC, VMware or both, breached their fiduciary duties to minority shareholders of VMware in connection with the merger; and that certain defendants aided and abetted those alleged breaches of fiduciary duties. The lawsuits have sought, among other things, injunctive relief enjoining the merger, rescission of the merger if consummated, an award of fees and costs and/or an award of damages. Additional lawsuits arising out of or relating to the Merger Agreement or the merger may be filed in the future. Lawsuits challenging the merger could prevent the merger from being completed, or could result in a material delay in, or the abandonment of, the merger.

We may be unable to keep pace with rapid industry, technological and market changes.

The markets in which we compete are characterized by rapid technological change, frequent new product introductions, evolving industry standards and changing needs of customers. In addition, our industry is experiencing one of the most disruptive periods of transition in its history as we move from IT solutions built for the client-server second platform into the next phase of IT growth and innovation, or the third platform. There can be no assurance that our existing products will be properly positioned in the third platform or that we will be able to introduce new or enhanced products into the market on a timely basis, or at all. We spend a considerable amount of money on research and development and introduce new products from time to time. There can be no assurance that enhancements to existing products and solutions or new products and solutions will receive customer acceptance. As competition in the IT industry increases, it may become increasingly difficult for us to maintain a technological advantage and to leverage that advantage toward increased revenues and profits. In addition, there can be no assurance that our vision of enabling hybrid cloud computing, Big Data and trust through infrastructure and application transformation will be accepted or validated in the marketplace.

Risks associated with the development and introduction of new products include delays in development and changes in data storage, networking virtualization, infrastructure management, information security and operating system technologies which could require us to modify existing products. Risks inherent in the transition to new products include:

- the difficulty in forecasting customer preferences or demand accurately;
- the inability to expand production capacity to meet demand for new products;
- the inability to successfully manage the interoperability and transition from older products;
- the impact of customers' demand for new products on the products being replaced, thereby causing a decline in sales of existing products and an excessive, obsolete supply of inventory;
- delays in initial shipments of new products; and
- delays in sales caused by the desire of customers to evaluate new products for extended periods of time.

Further risks inherent in new product introductions include the uncertainty of price-performance relative to products of competitors and competitors' responses to such new product introductions. Our failure to introduce new or enhanced products on a timely basis, keep pace with rapid industry, technological or market changes or effectively manage the transition to new products or new technologies could have a material adverse effect on our business, results of operations or financial condition.

The markets we serve are highly competitive, and we may be unable to compete effectively.

We compete with many companies in the markets we serve. Some of our competitors offer a broad spectrum of IT products and services, and others offer specific information storage, protection, security, management, virtualization and intelligence products or services. Some of our competitors (whether independently or by establishing alliances) may have substantially greater financial, marketing or technological resources, larger distribution capabilities, earlier access to customers or greater opportunity to address customers' various IT requirements than us. In addition, through further consolidation in the IT industry, companies may improve their competitive position and ability to compete against us. We compete on the basis of our products' features, performance and price as well as our services. Our failure to compete on any of these bases could affect demand for our products or services, which could have a material adverse effect on our business, results of operations or financial condition.

Companies may develop new technologies or products in advance of us or establish business models or technologies disruptive to us. Our business may be materially adversely affected by the announcement or introduction of new products, including hardware and software products, and new services offered by our competitors, and the implementation of effective marketing or sales strategies by our competitors. The material adverse effect to our business could include a decrease in demand for our products and services and an increase in the length of our sales cycle due to customers taking longer to compare products and services and to complete their purchases.

We may have difficulty managing operations.

Our future operating results will depend on our overall ability to manage operations, which includes, among other things:

- successfully communicating and executing on our unique federation strategy;
- retaining and hiring the appropriate number of qualified employees;
- managing, protecting and enhancing, as appropriate, our infrastructure, including but not limited to, our information systems (and our ability to protect confidential information residing on such systems) and internal controls;
- accurately forecasting revenues;

- training our sales force to sell effectively, given the breadth of our offerings;
- successfully integrating new acquisitions;
- managing inventory levels, including minimizing excess and obsolete inventory, while maintaining sufficient inventory to meet customer demands;
- controlling expenses;
- managing our manufacturing capacity, real estate facilities and other assets;
- meeting our sustainability goals; and
- executing on our plans.

An unexpected decline in revenues without a corresponding and timely reduction in expenses or a failure to manage other aspects of our operations could have a material adverse effect on our business, results of operations or financial condition.

Our business could be materially adversely affected as a result of a lessening demand in the information technology market.

Our revenue and profitability depend on the overall demand for our products and services. Delays or reductions in IT spending could materially adversely affect demand for our products and services which could result in decreased revenues or earnings.

Our customers operate in a variety of sectors and across many geographies. Any adverse effects to such markets could materially adversely affect demand for our products and services which could result in decreased revenues or earnings.

Pricing pressures, increases in component and product design costs, decreases in sales volume, or changes to the relative mixture of our revenues could materially adversely affect our revenues, gross margins or earnings.

Our gross margins are impacted by a variety of factors, including competitive pricing, component and product design costs, sales volume and the relative mixture of product and services revenue. Increased component costs, increased pricing pressures, the relative and varying rates of increases or decreases in component costs and product price, changes in our product and services revenue mixture, including the mixture of subscription based product revenue, or decreased sales volume could have a material adverse effect on our revenues, gross margins or earnings.

The costs of third-party components comprise a significant portion of our product costs. We may have difficulty managing our component and product design costs if supplies of certain components become limited or component prices increase. Any such limitation could result in an increase in our component costs. An increase in component or design costs relative to our product prices could have a material adverse effect on our gross margins and earnings. Moreover, certain competitors may have advantages with respect to component costs due to vertical integration of their supply chain, which may include disk drives, microprocessors, memory components and servers.

The markets in which we do business are highly competitive, and we may encounter aggressive price competition for all of our products and services from numerous companies globally. There also has been, and may continue to be, a willingness on the part of certain competitors to reduce prices or provide information infrastructure and virtual infrastructure products or services, together with other IT products or services, at minimal or no additional cost in order to preserve or gain market share. Such price competition may result in pressure on our product and service prices, and reductions in product and service prices may have a material adverse effect on our revenues, gross margins or earnings.

Our financial performance is impacted by the financial performance of VMware.

Because we consolidate VMware's financial results in our results of operations, our financial performance is impacted by the financial performance of VMware. VMware's financial performance may be affected by a number of factors, including, but not limited to:

- fluctuations in demand, adoption rates, sales cycles (which have been increasing in length) and pricing levels for VMware's products and services;
- changes in customers' budgets for information technology purchases and in the timing of its purchasing decisions;
- the timing of recognizing revenues 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 VMware or by its competitors;
- the timing and size of business realignment plans and restructuring charges;

- VMware's ability to maintain scalable internal systems for reporting, order processing, license fulfillment, product delivery, purchasing, billing and general accounting, among other functions;
- VMware's ability to control costs, including its operating expenses;
- credit risks of VMware's distributors, who account for a significant portion of product revenues and accounts receivable;
- VMware's ability to process sales at the end of the quarter;
- seasonal factors such as the end of fiscal period budget expenditures by VMware's customers and the timing of holiday and vacation periods;
- renewal rates and the amounts of the renewals for enterprise agreements, or EA's, as original EA terms expire;
- the timing and amount of software development costs that may be capitalized;
- unplanned events that could affect market perception of the quality or cost-effectiveness of VMware's products and solutions; and
- VMware's ability to accurately predict the degree to which customers will elect to purchase its subscription-based offerings in place of licenses to its on-premises offerings.

We may become involved in litigation that may materially adversely affect us.

We are involved in various legal proceedings in connection with our proposed merger. From time to time, we may also become involved in various legal proceedings relating to matters incidental to the ordinary course of our business, including patent, commercial, product liability, employment, class action, whistleblower and other litigation and claims, and governmental and other regulatory investigations and proceedings. Such matters can be time-consuming, divert management's attention and resources and cause us to incur significant expenses. Furthermore, because litigation is inherently unpredictable, there can be no assurance that the results of any of these actions will not have a material adverse effect on our business, results of operations or financial condition.

Cybersecurity breaches could expose us to liability, damage our reputation, compromise our ability to conduct business, require us to incur significant costs or otherwise adversely affect our financial results.

We retain sensitive data, including intellectual property, proprietary business information and personally identifiable information, in our secure data centers and on our networks. We face a number of threats to our data centers and networks of unauthorized access, including security breaches and other system disruptions. It is critical to our business strategy that our infrastructure remains secure and is perceived by our customers and business partners to be secure. Despite our security measures, our infrastructure may be vulnerable to attacks by hackers or other disruptive problems, such as the sophisticated cyber attack on our RSA division that we disclosed in March 2011. Any such security breach may compromise information stored on our networks and may result in significant data losses or theft of our, our customers', our business partners' or our employees' intellectual property, proprietary business information or personally identifiable information. In addition, we have outsourced a number of our business functions to third party contractors, and any breach of their security systems could adversely affect us.

A cybersecurity breach could negatively affect our reputation as a trusted provider of information infrastructure by adversely affecting the market's perception of the security or reliability of our products or services. In addition, a cyber attack could result in other negative consequences, including remediation costs, disruption of internal operations, increased cybersecurity protection costs, lost revenues or litigation.

Our quarterly revenues or earnings could be materially adversely affected by uneven sales patterns or changing purchasing behaviors.

Our quarterly sales have historically reflected an uneven pattern in which a disproportionate percentage of a quarter's total sales occur in the last month and weeks and days of each quarter. This uneven sales pattern makes it difficult for us to accurately predict revenues, earnings and working capital for each financial period and increases the risk of unanticipated variations in our quarterly results and financial condition. We believe this uneven sales pattern is a result of many factors, including:

- the relative dollar amount of our product and services offerings in relation to many of our customers' budgets, resulting in long lead times for customers' budgetary approval, which tends to be given late in a quarter;
- the tendency of customers to wait until late in a quarter to commit to purchase in the hope of obtaining more favorable pricing from one or more competitors seeking their business;
- the fourth-quarter influence of customers spending their remaining capital budget authorization prior to new budget constraints in the first nine months of the following year; and
- seasonal influences.

Our uneven sales pattern makes it extremely difficult to predict near-term demand and adjust manufacturing capacity or our supply chain accordingly. Our backlog at any particular time is also not necessarily indicative of future sales levels. This is because:

- we assemble our products on the basis of our forecast of near-term demand and maintain inventory in advance of receipt of firm orders from customers;
- we generally ship products shortly after receipt of the order; and
- customers may generally reschedule or cancel orders with little or no penalty.

If predicted demand is substantially greater than orders, we will have excess inventory. Alternatively, if orders substantially exceed predicted demand, our ability to assemble, test and ship orders received in the last weeks and days of each quarter may be limited. This could materially adversely affect quarterly revenues or earnings as our revenues in any quarter are substantially dependent on orders booked and shipped in that quarter.

Loss of infrastructure, due to factors such as an information systems failure, loss of public utilities, natural disasters or extreme weather conditions, could also impact our ability to book orders or ship products in a timely manner. Delays in product shipping or an unexpected decline in revenues without a corresponding and timely slowdown in expenses, could intensify the impact of these factors on our business, results of operations or financial condition.

In addition, unanticipated changes in our customers' purchasing behaviors, such as customers taking longer to negotiate and complete their purchases or making smaller, incremental purchases based on their current needs, can also make it difficult for us to accurately predict revenues, earnings and working capital for each financial period and increase the risk of unanticipated variations in our quarterly results and financial condition.

Our business could be materially adversely affected as a result of general global economic and market conditions.

We are subject to the effects of general global economic and market conditions that are beyond our control. If these conditions remain challenging or worsen, our business, results of operations or financial condition could be materially adversely affected. Possible consequences of macroeconomic global challenges that could have a material adverse effect on our results of operations or financial condition include insolvency of key suppliers resulting in product delays, inability of customers to obtain credit to finance purchases of our products, customer insolvencies, increased risk that customers may delay payments, fail to pay or default on credit extended to them, and counterparty failures that negatively impact our treasury operations.

Our business may suffer if we are unable to retain or attract key personnel.

Our business depends to a significant extent on the continued service of senior management and other key employees, the development of additional management personnel and the hiring of new qualified employees. There can be no assurance that we will be successful in retaining and developing existing personnel or recruiting new personnel. The loss of one or more key employees, our inability to attract or develop additional qualified employees or any delay in hiring key personnel could have a material adverse effect on our business, results of operations or financial condition.

Undetected problems in our products could directly impair our financial results.

If flaws in design, production, assembly or testing of our products (by us or our suppliers) were to occur, we could experience a rate of failure in our products that would result in substantial delays in shipment, significant repair, replacement or service costs or potential damage to our reputation. Any of these results could have a material adverse effect on our business, results of operations or financial condition. Continued improvement in manufacturing capabilities, control of material and manufacturing quality and costs and product testing are critical factors in our future growth. However, there can be no assurance that our efforts to monitor, develop, modify and implement appropriate testing and manufacturing processes for our products will be sufficient to avoid a rate of failure in our products that could otherwise have a material adverse effect on our business, results of operations or financial condition.

Our stock price is volatile and may be affected by factors related to VMware.

Our stock price, like that of other technology companies, is subject to significant volatility because of factors such as:

- the announcement of acquisitions, new products, services or technological innovations by us or our competitors;
- quarterly variations in our operating results;
- changes in revenue or earnings estimates by the investment community; and

- speculation in the press or investment community.

The trading price of our common stock has been and likely will continue to be affected by various factors related to VMware, including:

- the trading price for VMware Class A common stock;
- actions taken or statements made by us, VMware, or others concerning our relationship with VMware; and
- factors impacting the performance of VMware, including those discussed in the risk factor above regarding the impact of VMware's financial performance on our financial performance.

In addition, although we own a majority of VMware and consolidate its financial results in our results of operations, our stock price may not accurately reflect our pro rata ownership interest of VMware.

Due to the global nature of our business, political, economic or regulatory changes or other factors in a specific country or region could impair our international operations, future revenue or financial condition.

A substantial portion of our revenues is derived from sales outside the United States including, increasingly, in rapid growth markets such as Brazil, Russia, India and China. In addition, a substantial portion of our products is manufactured outside of the United States. Accordingly, our future results could be materially adversely affected by a variety of factors relating to our operations outside the United States, including, among others, the following:

- changes in foreign currency exchange rates;
- changes in a specific country's or region's economic conditions;
- political or social unrest;
- trade restrictions;
- import or export licensing requirements;
- the overlap of different tax structures or changes in international tax laws;
- changes in regulatory requirements;
- difficulties in staffing and managing international operations;
- stringent privacy policies in some foreign countries;
- compliance with a variety of foreign laws and regulations; and
- longer payment cycles in certain countries.

Our foreign operations, particularly in those countries with developing economies, are also subject to laws prohibiting improper payments and bribery, including the U.S. Foreign Corrupt Practices Act and similar regulations in foreign jurisdictions. Our employees, contractors and agents may take actions in violation of our policies that are designed to ensure compliance with these laws. Any such violations could subject us to civil or criminal penalties or otherwise have an adverse effect on our business and reputation.

In addition, we hold a significant portion of our cash and investments in our international subsidiaries. Potential regulations could impact our ability to transfer this cash and these investments to the United States. Although the international cash is permanently reinvested, should we be required to repatriate cash, we may incur a significant tax obligation.

We operate a Venezuelan sales subsidiary with a U.S. dollar functional currency. As a result, Bolivar-denominated transactions are subject to exchange gains and losses that may impact our earnings. As of quarter end, three exchange rates are available, via legal mechanisms administered by the Venezuelan government, to convert Bolivars into U.S. dollars. These three mechanisms are CENCOEX (official exchange rate), SICAD I and Simadi (formerly known as SICAD II). We have continued to use CENCOEX to remeasure these balances based upon the expected rate at which we believe is most appropriate for these items to be settled. We are closely monitoring information concerning these rates in the event it becomes appropriate to adopt a rate other than CENCOEX. Changing the rate used to re-measure our Bolivar-denominated transactions to either the SICAD I or Simadi rates could have an adverse effect on our financial position, results of operations or cash flows.

If our suppliers are not able to meet our requirements, we could have decreased revenues and earnings.

We purchase or license many sophisticated components and products from one or a limited number of qualified suppliers, including some of our competitors. These components and products include flash drives, disk drives, high density memory components, power supplies and software developed and maintained by third parties. We have experienced delivery delays from time to time because of high industry demand or the inability of some vendors to consistently meet our quality or delivery requirements. Natural disasters have also in the past impacted, and may continue to impact, our ability to procure certain components in a timely fashion, and an economic crisis could also negatively affect the solvency of our suppliers, resulting in product delays. Current or future social and environmental regulations or issues, such as those relating to the sourcing of conflict minerals from the Democratic Republic of the Congo or the elimination of environmentally sensitive materials from our products, could restrict the supply of resources used in production or increase our costs. If any of our suppliers were to cancel or materially change contracts or commitments with us or fail to meet the quality or delivery requirements needed to satisfy customer orders for our products, we could lose time-sensitive customer orders, be unable to develop or sell certain products cost-effectively or on a timely basis, if at all, and have significantly decreased quarterly revenues and earnings, which would have a material adverse effect on our business, results of operations or financial condition. Additionally, we periodically transition our product line to incorporate new technologies. The importance of transitioning our customers smoothly to such new technologies, along with our historically uneven pattern of quarterly sales (as discussed in a prior risk factor), intensifies the risk that the failure of a supplier to meet our quality or delivery requirements will have a material adverse impact on our revenues and earnings.

Our investment portfolio could experience a decline in market value which could adversely affect our financial results.

We held $8.2 billion in short- and long-term investments as of December 31, 2015. These investments consist primarily of investment grade debt securities, and we limit the amount of investment with any one issuer. A further deterioration in the economy, including a tightening of credit markets, increased defaults by issuers, or significant volatility in interest rates, could cause these investments to decline in value or could otherwise impact the liquidity of our portfolio. If market conditions deteriorate significantly, our results of operations or financial condition could be materially adversely affected.

Risks associated with our distribution channels may materially adversely affect our financial results.

In addition to our direct sales force, we have agreements in place with many distributors, systems integrators, resellers and original equipment manufacturers to market and sell our products and services. We derive a significant percentage of our revenues from such distribution channels. Our financial results could be materially adversely affected if our contracts with channel partners were terminated, if our relationship with channel partners were to deteriorate, if the financial condition of our channel partners were to weaken, if our channel partners were not able to timely and effectively implement their planned actions or if the level of demand for our channel partners' products and services were to decrease. In addition, as our market opportunities change, we may have an increased reliance on channel partners, which may negatively impact our gross margins. There can be no assurance that we will be successful in maintaining or expanding these channels. If we are not successful in maintaining or expanding these channels, we may lose sales opportunities, customers and market share. Furthermore, our partial reliance on channel partners may materially reduce our management's visibility of potential customers and demand for products and services, thereby making it more difficult to accurately forecast such demand. In addition, there can be no assurance that our channel partners will not develop, market or sell products or services or acquire other companies that develop, market or sell products or services in competition with us in the future.

In addition, as we focus on new market opportunities and additional customers through our various distribution channels, including small-to-medium sized businesses, we may be required to provide different levels of service and support than we typically have provided in the past. We may have difficulty managing directly or indirectly through our channels these different service and support requirements and may be required to incur substantial costs to provide such services, which may adversely affect our business, results of operations or financial condition.

Our business could be materially adversely affected as a result of the risks associated with alliances.

We have strategic alliances with leading information technology companies, some of whom may be our competitors in other areas, and we plan to continue our strategy of developing key alliances in order to expand our reach into existing and new markets. There can be no assurance that we will be successful in our ongoing strategic alliances or that we will be able to find further suitable business relationships as we develop new products and strategies. Any failure to continue or expand such relationships could have a material adverse effect on our business, results of operations or financial condition.

There can be no assurance that companies with which we have strategic alliances, certain of which have substantially greater financial, marketing or technological resources than us, will not develop or market products in competition with us in the future, discontinue their alliances with us or form alliances with our competitors.

Our business may suffer if we cannot protect our intellectual property.

We generally rely upon patent, copyright, trademark and trade secret laws and contract rights in the United States and in other countries to establish and maintain our proprietary rights in our technology and products. However, there can be no assurance that any of our proprietary rights will not be challenged, invalidated or circumvented. In addition, the laws of certain countries do not protect our proprietary rights to the same extent as do the laws of the United States. Therefore, there can be no assurance that we will be able to adequately protect our proprietary technology against unauthorized third-party copying or use, which could adversely affect our competitive position. Further, there can be no assurance that we will be able to obtain licenses to any technology that we may require to conduct our business or that, if obtainable, such technology can be licensed at a reasonable cost.

From time to time, we receive notices from third parties claiming infringement by our products of third-party patent or other intellectual property rights. Responding to any such claim, regardless of its merit, could be time-consuming, result in costly litigation, divert management's attention and resources and cause us to incur significant expenses. In the event there is a temporary or permanent injunction entered prohibiting us from marketing or selling certain of our products or a successful claim of infringement against us requiring us to pay royalties to a third party, and we fail to develop or license a substitute technology, our business, results of operations or financial condition could be materially adversely affected.

In addition, although we believe we have adequate security measures, if our intellectual property or other sensitive data is misappropriated, we could suffer monetary and other losses and reputational harm, which could materially adversely affect our business, results of operations or financial condition.

Issues arising during the upgrade of our enterprise resource planning system could affect our operating results and ability to manage our business effectively.

We are in the process of upgrading our enterprise resource planning, or ERP, computer system to enhance operating efficiencies and provide more effective management of our business operations. While one phase of our upgrade was implemented in the third quarter of 2012, we still have further planned phases to our upgrade. The upgrade could cause substantial business interruption that could adversely impact our operating results. We are investing significant financial and personnel resources into this project. However, there is no assurance that the system upgrade will meet our current or future business needs or that it will operate as designed. We are heavily dependent on such computer systems, and any significant failure or delay in the system upgrade could cause a substantial interruption to our business and additional expense, which could result in an adverse impact on our operating results, cash flows or financial condition.

We may have exposure to additional income tax liabilities.

As a multinational corporation, we are subject to income taxes in both the United States and various foreign jurisdictions. Due to economic and political conditions, tax rates in various jurisdictions may be subject to significant change, which might significantly impact our effective income tax rate in the future. Our domestic and international tax liabilities are subject to the allocation of revenues and expenses in different jurisdictions and the timing of recognizing revenues and expenses. Additionally, the amount of income taxes paid is subject to our interpretation of applicable tax laws and rules in the jurisdictions in which we file and changes to tax laws and rules. From time to time, we are subject to income tax audits. While we believe we have complied with all applicable income tax laws, there can be no assurance that a governing tax authority will not have a different interpretation of the law and assess us with additional taxes. Should we be assessed with additional taxes, there could be a material adverse effect on our results of operations or financial condition.

As part of the current Administration's ongoing negotiations, President Obama and House of Representatives and Senate Committees have called for a comprehensive tax reform, which might change certain U.S. tax rules for U.S. corporations doing business outside the United States. While the scope of future changes differs among various tax proposals and remains unclear, proposed changes might include limiting the ability of U.S. corporations to deduct certain expenses attributable to offshore earnings, modifying the foreign tax credit rules and taxing currently certain transfers of intangibles offshore. The enactment of some or all of these proposals could increase the Company's effective tax rate and adversely affect our profitability.

Recent developments in 2014, including the Irish government's announced changes to the taxation of certain existing non-resident Irish companies beginning in January 2021, and the Organisation for Economic Co-operation and Development's project on Base Erosion and Profit Shifting, could ultimately impact our tax liabilities to foreign jurisdictions and treatment of our foreign earnings from a U.S. perspective, which may adversely impact our effective tax rate.

On December 28, 2015, the U.S. Tax Court issued a final decision in Altera Corp. v. Commissioner related to the treatment of stock-based compensation expense in an intercompany cost-sharing arrangement. At this time, the U.S. Department of the Treasury has not withdrawn the requirement from its regulations to include stock-based compensation. The I.R.S. has the right to appeal the U.S. Tax Court decision. We concluded that no adjustment to our consolidated financial statements is appropriate at this time due to the uncertainties with respect to the ultimate resolution of this case.

Changes in laws or regulations could materially adversely affect us.

Our business, results of operations or financial condition could be materially adversely affected if laws, regulations or standards relating to us or our products are newly implemented or changed. In addition, our compliance with existing regulations may have a material adverse impact on us. Under applicable federal securities laws, including the Sarbanes-Oxley Act of 2002, we are required to evaluate and determine the effectiveness of our internal control structure and procedures for financial reporting. Should we or our independent auditors determine that we have material weaknesses in our internal controls, our results of operations or financial condition may be materially adversely affected or our stock price may decline.

Changes in generally accepted accounting principles may materially adversely affect us.

From time to time, the Financial Accounting Standards Board ("FASB") promulgates new accounting principles that could have a material adverse impact on our results of operations or financial condition. The FASB is currently contemplating a number of new accounting pronouncements which, if approved, could materially change our reported results. Such changes could have a material adverse impact on our results of operations and financial position.

Our business could be materially adversely affected as a result of the risks associated with acquisitions, investments and joint ventures.

As part of our business strategy, we seek to acquire businesses that offer complementary products, services or technologies. These acquisitions are accompanied by risks commonly encountered in an acquisition of a business, which may include, among other things:

- the effect of the acquisition on our financial and strategic position and reputation;
- the failure of an acquired business to further our strategic plans;
- the failure of the acquisition to result in expected benefits, which may include benefits relating to enhanced revenues, technology, human resources, cost savings, operating efficiencies and other synergies;
- the difficulty and cost of integrating the acquired business, including costs and delays in implementing common systems and procedures and costs and delays caused by communication difficulties or geographic distances between the two companies' sites;
- the assumption of known or unknown liabilities of the acquired business, including litigation-related liability;
- the potential impairment of acquired assets;
- the lack of experience in new markets, products or technologies or the initial dependence on unfamiliar supply or distribution partners;
- the diversion of our management's attention from other business concerns;
- the impairment of relationships with customers or suppliers of the acquired business or our customers or suppliers;
- the recoverability of benefits from goodwill and intangible assets and the potential impairment of these assets;
- the potential loss of key employees of the acquired company; and
- the potential incompatibility of business cultures.

These factors could have a material adverse effect on our business, results of operations or financial condition. To the extent that we issue shares of our common stock or other rights to purchase our common stock in connection with any future acquisition, existing shareholders may experience dilution. Additionally, regardless of the form of consideration issued, acquisitions could negatively impact our net income and our earnings per share.

In addition to the risks commonly encountered in the acquisition of a business as described above, we may also experience risks relating to the challenges and costs of closing a transaction or failing to close an announced transaction. Further, the risks described above may be exacerbated as a result of managing multiple acquisitions at the same time.

We also seek to invest in businesses that offer complementary products, services or technologies and to, from time to time, create new joint ventures or alliances. These investments and ventures are accompanied by risks similar to those encountered in an acquisition of a business.

Our pension plan assets are subject to market volatility.

We have a noncontributory defined benefit pension plan assumed as part of our Data General acquisition. The plan's assets are invested in common stocks, bonds and cash. The expected long-term rate of return on the plan's assets was 6.50%. This rate represents the average of the expected long-term rates of return weighted by the plan's assets as of December 31, 2015. As market conditions permit, we expect to continue to shift the asset allocation to lower the percentage of investments in equities and increase the percentage of investments in long-duration fixed-income securities. The effect of such change could result in a reduction in the long-term rate of return on plan assets and an increase in future pension expense. As of December 31, 2015, the ten-year historical rate of return on plan assets was 6.45%, and the inception to date return on plan assets was 6.46%. In 2015, we experienced a 2.42% loss on plan assets. Should we not achieve the expected rate of return on the plan's assets or if the plan experiences a decline in the fair value of its assets, we may be required to contribute assets to the plan which could materially adversely affect our results of operations or financial condition.

Our business could be materially adversely affected by changes in regulations or standards regarding energy use of our products.

We continually seek ways to increase the energy efficiency of our products. Recent environmental analyses have focused on the estimated amount of global carbon emissions that are generated by information technology products. As a result, governmental and non-governmental organizations have turned their attention to the development of regulations and standards to drive technological improvements to reduce the amount of such carbon emissions. There is a risk that any regulations or standards developed by these organizations will not fully address the complexity of the products and technology developed by the IT industry or will favor certain technological approaches to reducing such carbon emissions. Depending on the regulations or standards that are ultimately adopted, compliance with such regulations or standards could materially adversely affect our business, results of operations or financial condition.

Our business could be materially adversely affected as a result of war, acts of terrorism, natural disasters or climate change.

Terrorist acts, acts of war, natural disasters, or the direct and indirect effects of climate change (such as a rise in sea level, increased storm severity, drought, flooding, wildfires, pandemics, and social unrest from resource depletion and rising food prices) may cause damage or disruption to our employees, facilities, customers, partners, suppliers, distributors and resellers, which could have a material adverse effect on our business, results of operations or financial condition. Such events may also cause damage or disruption to transportation and communication systems and to our ability to manage logistics in such an environment, including receipt of components and distribution of products.

Our failure to pay quarterly dividends to our shareholders could materially adversely affect our stock price.

Our ability to pay quarterly dividends will be subject to, among other things, our financial position and results of operations, available cash and cash flow, and capital requirements. Any reduction or discontinuation of quarterly dividends could cause our stock price to decline significantly.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

As of December 31, 2015, we owned or leased the facilities described below:

Location	Approximate Sq. Ft.*		Principal Use(s)	Principal Segment(s)
Hopkinton, MA	owned:	1,681,000	executive and administrative offices, R&D, customer service, sales and marketing	Information Storage, Enterprise Content Division
Franklin, MA	owned: leased:	922,000 288,000	manufacturing	Information Storage
Bedford, MA	leased:	328,000	R&D, customer service, sales, administrative offices and marketing	RSA Information Security
Apex, NC	owned:	390,000	manufacturing	Information Storage
Palo Alto, CA	owned: leased:	1,500,000 107,000	executive and administrative offices, R&D, sales, marketing and data center	VMware Virtual Infrastructure
Other North American Locations	owned: leased:	1,304,000 4,952,000	executive and administrative offices, sales, customer service, R&D, data center and marketing	**
Asia Pacific	leased:	3,294,000	sales, marketing, customer service, R&D, data center and administrative offices	**
Cork, Ireland	owned: leased:	588,000 348,000	manufacturing, customer service, R&D, administrative offices, sales and marketing	**
Europe, Middle East and Africa (excluding Cork, Ireland)	owned: leased:	160,000 1,991,000	sales, manufacturing, customer service, R&D, data center, marketing and administrative offices	**
Latin America	owned: leased:	28,000 257,000	sales, customer service, R&D and marketing	**

* Of the total square feet owned and leased, approximately 522,000 square feet was vacant, approximately 157,000 square feet was leased or subleased to non-EMC businesses and approximately 215,000 square feet were under construction for various VMware projects.

** All segments of our business generally utilize these facilities.

We also own land in Massachusetts and Ireland for possible future expansion purposes. We believe our existing facilities are suitable and adequate for our present purposes. For further information regarding our lease obligations, see Note M to the consolidated financial statements.

ITEM 3. LEGAL PROCEEDINGS

See the information under “Litigation” in Note M to the consolidated financial statements, which we incorporate here by reference.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

EXECUTIVE OFFICERS OF THE REGISTRANT

Our executive officers are as follows:

Name	Age	Position
Joseph M. Tucci	68	Chairman, President and Chief Executive Officer
William J. Teuber, Jr.	64	Vice Chairman
Jeremy Burton	48	President, Products and Marketing
Paul T. Dacier	58	Executive Vice President and General Counsel
Howard D. Elias	58	President and Chief Operating Officer, Global Enterprise Services
David I. Goulden	56	Chief Executive Officer, EMC Information Infrastructure
Paul Maritz	60	Executive Chairman, Pivotal
Erin McSweeney	51	Executive Vice President, Human Resources
Robert Mee	52	Chief Executive Officer, Pivotal
Zane C. Rowe	45	Executive Vice President and Chief Financial Officer
William F. Scannell	53	President, Global Sales and Customer Operations
Amit Yoran	45	President, RSA, The Security Division of EMC
Harry L. You	56	Executive Vice President, Office of the Chairman

Joseph M. Tucci has been the Chairman of the Board of Directors since January 2006 and has been Chief Executive Officer and a Director since January 2001. He has served as President since February 2014, and also from January 2000 to July 2012. He also served as Chief Operating Officer from January 2000 to January 2001. Prior to joining EMC, Mr. Tucci served as Deputy Chief Executive Officer of Getronics N.V., an information technology services company, from June 1999 through December 1999 and as Chairman of the Board and Chief Executive Officer of Wang Global, an information technology services company, from December 1993 to June 1999. Mr. Tucci is the Chairman of the Board of Directors of VMware and a director of Paychex, Inc., a provider of payroll, human resources and benefits outsourcing solutions.

William J. Teuber, Jr. has been our Vice Chairman since May 2006. In this role, Mr. Teuber assists the Chairman and Chief Executive Officer in the day-to-day management of EMC. From 2006 to July 2012, he oversaw EMC Customer Operations, our global sales and distribution organization where he was responsible for driving EMC’s growth and market leadership worldwide. Mr. Teuber served as our Vice Chairman and Chief Financial Officer from May 2006 to August 2006 and as Executive Vice President and Chief Financial Officer from November 2001 to May 2006. Prior to serving as our Chief Financial Officer, he served as our Controller. Mr. Teuber joined EMC in 1995. Mr. Teuber is a director of Popular, Inc., a diversified financial services company and Inovalon Holdings, Inc., a healthcare technology company.

Jeremy Burton has been our President, Products and Marketing since March 2014. He was Executive Vice President, Product Operations and Marketing from July 2012 to March 2014. Mr. Burton joined EMC in March 2010 as our Chief Marketing Officer. Prior to joining EMC, Mr. Burton was President and Chief Executive Officer of Serena Software, Inc., a global independent software company. Previously, Mr. Burton was Group President of the Security and Data Management Business Unit of Symantec Corporation, a provider of security, storage and systems management solutions, where he was responsible for the company’s $2 billion Enterprise Security product line. Prior to that role, he served as Executive Vice President of the Data Management Group at VERITAS Software Corporation (now a part of Symantec) where he was responsible for the company’s backup and archiving products. He also served as VERITAS’ Chief Marketing Officer. Earlier in his career, Mr. Burton spent nearly a decade at Oracle Corporation, a large enterprise software company, ultimately in the role of Senior Vice President of Product and Services Marketing.

Paul T. Dacier has been our Executive Vice President and General Counsel since May 2006. Mr. Dacier served as Senior Vice President and General Counsel from February 2000 to May 2006 and joined EMC in 1990 as Corporate Counsel. Mr. Dacier is a director of AerCap Holdings N.V., a global aircraft leasing company.

Howard D. Elias has been our President and Chief Operating Officer, Global Enterprise Services since January 2013 and was our President and Chief Operating Officer, EMC Information Infrastructure and Cloud Services from September 2009 to January 2013. Since October 2015, Mr. Elias has also been responsible for leading the development of EMC's integration plans in connection with the proposed transaction with Dell. Previously, Mr. Elias served as President, EMC Global Services and EMC Ionix from September 2007 to September 2009. Mr. Elias served as our Executive Vice President, Global Services and Resource Management Software Group from May 2006 to September 2007 and served as our Executive Vice President, Global Marketing and Corporate Development from January 2006 to May 2006. He served as Executive Vice President, Corporate Marketing, Office of Technology and New Business Development from January 2004 to January 2006. Prior to joining EMC, Mr. Elias served in various capacities at Hewlett-Packard Company, a provider of information technology products, services and solutions for enterprise customers, most recently as Senior Vice President of Business Management and Operations in the Enterprise Systems Group. Mr. Elias is a director of TEGNA Inc., which is comprised of a dynamic portfolio of media and digital businesses.

David I. Goulden has been Chief Executive Officer of our EMC Information Infrastructure business since January 2014. Prior to this, he was President and Chief Operating Officer overseeing EMC's business units as well as Global Sales and Customer Operations, Global Services, Global Marketing and G&A functions since July 2012. Mr. Goulden was our Chief Financial Officer from August 2006 until October 2014. Prior to this, Mr. Goulden served as Executive Vice President and Chief Financial Officer from August 2006 to July 2012 and served as our Executive Vice President, Customer Operations from April 2004 to August 2006. He served as Executive Vice President, Customer Solutions and Marketing and New Business Development from November 2003 to April 2004. Prior to joining EMC in 2002, Mr. Goulden served in various capacities at Getronics N.V., an information technology services company, most recently as a member of the Board of Management, President and Chief Operating Officer for the Americas and Asia Pacific.

Paul Maritz has been Executive Chairman of Pivotal Software, Inc., an entity jointly owned by EMC and VMware, since August 2015. Prior to this, he was Chief Executive Officer of Pivotal Software, Inc. from April 2013 to August 2015. Mr. Maritz served as Chief Strategist of EMC from September 2012 to March 2013. Prior to this, he was Chief Executive Officer at VMware from July 2008 to August 2012 and he also served as VMware's President from July 2008 to January 2011. Prior to joining VMware, he was President of EMC's Cloud Infrastructure and Services Division after EMC acquired Pi Corporation in February 2008. Mr. Maritz was a founder of Pi and served as its Chief Executive Officer. Pi was a software company focused on building cloud-based solutions. Before founding Pi, he spent 14 years working at Microsoft Corporation, where he served as a member of the five-person Executive Committee that managed the overall company. As Vice President of the Platform Strategy and Developer Group, among other roles, he oversaw the development and marketing of System Software Products (including Windows 95, Windows NT, and Windows 2000), Development Tools (Visual Studio) and Database Products (SQL Server) and the complete Office and Exchange Product Lines. Prior to Microsoft, he spent five years working at Intel Corporation as a software and tools developer. Mr. Maritz is a director of VMware.

Erin McSweeney has been our Executive Vice President, Human Resources since June 2015. Ms. McSweeney served as Senior Vice President, Human Resources from April 2013 to June 2015. Prior to this, she was Vice President, Human Resources at VCE from February 2011 to April 2013. Ms. McSweeney served in multiple human resources leadership roles before joining EMC in 2006.

Robert Mee has been Chief Executive Officer of Pivotal Software, Inc., an entity jointly owned by EMC and VMware, since August 2015. Prior to this, he was Executive Vice President of Products and Research and Development for Pivotal from February 2015 to August 2015 and Senior Vice President of Pivotal from April 2013 to February 2015. At the time of the formation of Pivotal in April 2013, Mr. Mee was a Senior Vice President of EMC, responsible for the Pivotal Labs business unit. From 1989 to the acquisition of Pivotal Labs LLC by EMC in March 2012, Mr. Mee was the founder and Chief Executive Officer of Pivotal Labs LLC.

Zane C. Rowe has been our Executive Vice President and Chief Financial Officer since October 2014. 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.

William F. Scannell has been our President, Global Sales and Customer Operations since July 2012. He is responsible for driving EMC's global growth and continued market leadership by delivering and supporting the full range of EMC products, services and solutions to organizations in established and new markets around the world. Mr. Scannell was Executive Vice President, Americas and EMEA Sales from March 2011 to July 2012, in which role he oversaw customer operations in the Americas and EMEA, and he was Executive Vice President, Americas from August 2010 to March 2011. He served as Executive Vice President, Sales Americas and Global Sales Programs from March 2007 to August 2011. Mr. Scannell joined EMC in 1986 and has held various positions including Senior Vice President, Worldwide Sales and Vice President, North America Regional Sales.

Amit Yoran has been our President, RSA, The Security Division of EMC, since October 2014. Mr. Yoran served as Senior Vice President, Security Management and Compliance at RSA from August 2011 to September 2014 and Senior Vice President and General Manager, NetWitness at RSA from April 2011 to August 2011. Prior to RSA acquiring NetWitness in 2011, Mr. Yoran was its founder and served as the CEO. Mr. Yoran was Director, National Cyber Security Division of the U.S. Department of Homeland Security from 2003 to October 2004.

Harry L. You has been our Executive Vice President, Office of the Chairman, since February 2008. In this role, Mr. You focuses on EMC's corporate strategy. Prior to joining EMC, Mr. You served as Chief Executive Officer of BearingPoint, Inc., a management and technology consulting firm, from March 2005 to December 2007 and as BearingPoint's Interim Chief Financial Officer from July 2005 to October 2006. From 2004 to 2005, Mr. You was Executive Vice President and Chief Financial Officer of Oracle Corporation, a large enterprise software company, and from 2001 to 2004, he was the Chief Financial Officer of Accenture Ltd, a global management consulting, technology services and outsourcing company. Mr. You is a director of Korn/Ferry International, a global executive recruiting company.

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PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock, par value $.01 per share, trades on the New York Stock Exchange under the symbol EMC. The following table sets forth the range of high and low sales prices of our common stock on the New York Stock Exchange for the past two years during the fiscal periods shown and the dividends declared per share during such periods:

Fiscal 2015	High	Low	Dividends
First Quarter	$30.05	$25.07	$0.115
Second Quarter	27.73	25.22	0.115
Third Quarter	28.00	22.66	0.115
Fourth Quarter	28.77	23.71	0.115

Fiscal 2014	High	Low	Dividends
First Quarter	$28.26	$23.47	$0.10
Second Quarter	28.10	24.92	0.115
Third Quarter	30.18	26.34	0.115
Fourth Quarter	30.92	26.11	0.115

We had 8,808 holders of record of our common stock as of February 24, 2016.

In May 2013, our Board of Directors approved the initiation of a quarterly cash dividend to EMC shareholders of $0.10 per share and in April 2014, our Board of Directors approved an increase in the quarterly cash dividend paid to EMC shareholders of $0.115 per share. We currently expect that comparable cash dividends will continue to be paid in the future. In December 2014, our Board of Directors authorized the repurchase of an additional 250 million shares of our common stock. This repurchase authorization does not have a fixed termination date. We do not expect to use cash to repurchase our common stock during 2016.

ISSUER PURCHASES OF EQUITY SECURITIES IN THE FOURTH QUARTER OF 2015

During the fourth quarter of 2015, EMC did not repurchase any shares. At December 31, 2015, the maximum number of shares that may yet be purchased under the board authorization is 223 million.

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

	Year Ended December 31,				
	2015(1)	2014(2)	2013(3)	2012(4)	2011(5)
Summary of Operations:					
Revenues	$24,704	$24,440	$23,222	$21,714	$20,008
Operating income	2,841	4,037	4,150	3,964	3,442
Net income attributable to EMC Corporation	1,990	2,714	2,889	2,733	2,461
Net income attributable to EMC Corporation per weighted average share, basic	$1.02	$1.34	$1.39	$1.31	$1.20
Net income attributable to EMC Corporation per weighted average share, diluted	$1.01	$1.32	$1.33	$1.23	$1.10
Weighted average shares, basic	1,944	2,028	2,074	2,093	2,056
Weighted average shares, diluted	1,962	2,059	2,160	2,206	2,229
Dividend declared per common share	$0.46	$0.45	$0.30	$—	$—
Balance Sheet Data:					
Working capital (8)	$2,178	$2,953	$4,567	$961	$473
Total assets (7, 8)	46,612	45,585	45,396	37,494	34,017
Current obligations (6)	1,299	—	1,665	1,652	3,305
Long-term obligations (7)	5,475	5,469	5,462	—	—
Total shareholders' equity	22,719	23,525	23,786	23,524	20,280

(1) In 2015, EMC acquired all of the outstanding shares of 8 companies (see Note C to the consolidated financial statements).
(2) In 2014, EMC acquired all of the outstanding shares of 11 companies (see Note C to the consolidated financial statements).
(3) In 2013, EMC acquired all of the outstanding shares of 8 companies (see Note C to the consolidated financial statements).
(4) In 2012, EMC acquired all of the outstanding share of 17 companies.
(5) In 2011, EMC acquired all of the outstanding shares of 7 companies.
(6) Current obligations include commercial paper issued and credit facility borrowings outstanding at December 31, 2015 and the convertible debt and notes converted and payable, which were classified as current at December 31, 2013, 2012 and 2011 (see Note E to the consolidated financial statements).
(7) Long-term obligations include EMC issued long-term debt. During 2015, EMC retrospectively adopted the accounting guidance requiring the presentation of debt issuance costs to be presented in the balance sheet as a direct reduction from the carrying amount of the related debt liability rather than as an asset. The adoption is reflected in all relevant periods in the table above.
(8) During 2015, EMC retrospectively adopted the accounting guidance related to the balance sheet classification of deferred taxes which requires that all deferred taxes be presented as non-current. The adoption is reflected in all periods in the table above.

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

This Management's Discussion and Analysis ("MD&A") of Financial Condition and Results of Operations should be read in conjunction with our consolidated financial statements and notes thereto which appear elsewhere in this Annual Report on Form 10-K.

Certain tables may not add or recalculate due to rounding.

INTRODUCTION

We manage our company as a federation of businesses to capitalize on the emerging and rapidly growing trends of cloud computing, Big Data, mobile, social networking and security. Our federated businesses include EMC Information Infrastructure, Pivotal, VMware Virtual Infrastructure and Virtustream.

To capitalize on these trends and align our businesses effectively, we have developed a market growth strategy that has four main pillars: our best-in class products and solutions, our continued focus on cloud services for both on and off premise implementations, a coordinated go-to-market approach led by a federation go-to-market organization and our leadership team and global talent. We believe these pillars enable us to become a more trusted partner to our customers as they embark on their digital transformation and transition to the hybrid cloud, and to drive the overall revenue and growth opportunity of EMC Information Infrastructure and the faster growth opportunities of VMware Virtual Infrastructure, Pivotal and Virtustream.

Under our federation model, each of the businesses operate independently to build its own ecosystem and culture, operate with greater speed and agility and offer customers technology solutions that are free from vendor lock-in. At the same time, our businesses are strategically aligned in the mission to lead customers and partners through unprecedented transformational shifts occurring in IT. We believe this ability to draw on resources from across the federation to offer tightly integrated solutions that can be rapidly deployed while retaining choice for customers seeking flexibility is a distinct competitive advantage.

In the second quarter of 2015, we initiated a cost reduction and business transformation program to better align our expenses and improve the operations of our federation of businesses. This program is primarily in response to increased pressure on our traditional storage businesses and accordingly, the vast majority of this program will be focused on our EMC Information Infrastructure segment. The goal of this new cost reduction and business transformation program is to reduce our current annual cost base by $850 million and currently addresses eleven major areas including direct materials procurement, facilities and manufacturing optimization and SKU simplification. We expect the $850 million reduction in our annual cost base to be achieved in 2017. As part of this cost reduction plan, in the fourth quarter of 2015 we approved a restructuring plan which consists of a reduction in force which will be substantially completed by the end of the first quarter of 2016 and fully completed by the end of 2016.

Proposed Transaction with Dell

On October 12, 2015, EMC and Denali Holding Inc. ("Denali"), the parent company of Dell Inc. ("Dell"), signed a definitive agreement ("Merger Agreement") under which Denali will acquire EMC Corporation, with VMware remaining a publicly-traded company. The combined company will be a leader in numerous high-growth areas of the $2 trillion information technology market, with a complementary portfolio, sales team and research and development ("R&D") organization across four globally recognized technology franchises – servers, storage, virtualization and PCs – and brings together strong capabilities in the fast growing areas of the industry, including converged infrastructure, digital transformation, software-defined data center, hybrid cloud, mobile and security.

For additional information related to the Merger Agreement, please refer to the Preliminary Proxy Statement on Form 14-A filed with the Securities and Exchange Commission ("SEC") on February 12, 2016, which includes the full text of the Merger Agreement included as Annex A.

EMC Information Infrastructure

Our EMC Information Infrastructure business consists of three segments: Information Storage, Enterprise Content Division, formerly known as Information Intelligence Group, and RSA Information Security. Additionally, the results of Virtustream are included in our Information Storage segment. The objective for our EMC Information Infrastructure business is to simultaneously increase our market share through our strong portfolio of offerings while investing in the business. During 2015, we continued to invest in expanding our total addressable market through increased internal R&D and through business acquisitions. We have developed a product portfolio to address customer needs that enables the adoption of hybrid cloud approaches as most enterprises and organizations embark on IT transformation initiatives incorporating both new and traditional storage architectures including converged infrastructure, hybrid cloud, Flash, Big Data storage and software-defined and software-managed architectures.

Our go-to market model, where we continue to leverage our direct sales force and services organization, as well as our channel and services partners and service providers, positions us well to help enable customers to transition to cloud computing and benefit from Big Data in the most advantageous manner for their businesses. We offer three alternatives to help our customers transition to cloud architectures and leverage Big Data to meet these needs: our best-of-breed infrastructure products, proven infrastructure through our VSPEX reference architecture and converged infrastructure which support our federation-level solutions. Our service provider program continues to be an important part of our strategy to lead our customers to hybrid cloud infrastructures.

Pivotal

Pivotal is focused on building a platform comprising the next generation of data fabrics, application fabrics and a cloud independent platform-as-a-service (“PaaS”) to support cloud computing and Big and Fast Data Applications. The foundation of our technology platform, Pivotal Cloud Foundry (“Pivotal CF”), continues to gain momentum as an open platform for developing and operating new cloud applications that can be run on multiple leading private and public clouds, in addition to our own, and not lock a customer into any one cloud in particular. It continues to enable developers to produce next generation applications and user experiences as well as transform existing applications to operate with greater speed at lower costs. On top of this platform, Pivotal will continue to offer its own suite of big and fast data capabilities, the Big Data Suite (“BDS”), featuring innovations that use Hadoop Distributed File System (“HDFS”) and scalar processing technologies. Additionally, its agile development services business, Pivotal Labs, continues to help existing customers and digital era startups build industrial-strength applications with more agility, more speed, and better quality. Pivotal is becoming an increasingly important factor in our cross-federation solutions, which offer a combination of products, converged infrastructure and services that offer a unique value proposition to customers, positioning the business for rapid growth in the future.

VMware Virtual Infrastructure

VMware is a leader in virtualization and cloud infrastructure solutions utilized by organizations to help transform the way they build, deliver and consume IT resources. VMware has increased its 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 these three product groups: SDDC or Software-Defined Data Center, Hybrid Cloud and Computing and End-User Computing.

VMware generally sells its solutions using enterprise agreements (“EAs”) or as part of its non-EA, transactional business. EAs are comprehensive volume license offerings, offered both directly by VMware and through certain channel partners that also provide for multi-year maintenance and support.

Historically, the majority of VMware license sales have been from VMware vSphere, which is included in its compute product category within its SDDC product group. However, the market for its compute products is reaching maturity and VMware vSphere license sales have been declining. As the transformation of the IT industry continues, VMware expects that its growth of license sales within the SDDC product group will be increasingly derived from sales of its newer products, suites and services solutions across its SDDC portfolio. Hybrid cloud and computing is comprised of VMware vCloud Air Network, Service Providers Program and VMware vCloud Air offerings. Revenues derived from these offerings grew during 2015. VMware’s AirWatch business models include an on-premise solution that it offers through the sale of perpetual licenses and an off-premise solution that it offers as SaaS. AirWatch products and services continued to contribute to the growth of its end-user computing product group during 2015.

RESULTS OF OPERATIONS

Revenues

The following table presents total revenue by our segments (in millions):

	For the Twelve Months Ended			Percentage Change	
	2015	2014	2013	2015 vs 2014	2014 vs 2013
Information Storage	$16,301	$16,542	$16,262	(1)%	2 %
Enterprise Content Division	599	640	647	(6)%	(1)%
RSA Information Security	988	1,035	987	(5)%	5 %
Pivotal	267	227	179	18 %	27 %
VMware Virtual Infrastructure	6,625	5,996	5,147	10 %	16 %
Corporate Reconciling Items	(76)	—	—	100 %	— %
Total consolidated revenues	$24,704	$24,440	$23,222	1 %	5 %

Consolidated product revenues decreased 4% to $13,514 million in 2015. The decrease was primarily driven by the decrease in product revenue in the Information Storage segment. Our business continues to be impacted by the rapidly changing IT macro environment where our customers are changing their buying patterns and needs. During 2015, our business was also negatively impacted by economic trends in emerging markets including the Middle East, Russia and China as well as significant foreign currency fluctuations.

The Information Storage segment’s product revenues decreased 5% to $10,200 million in 2015. The decrease was driven by our traditional storage high-end and Unified and Backup Recovery product sales as customers continue to purchase these product categories primarily to cover short-term needs as they begin to drive digital transformation of their IT infrastructures. High-end and Unified and Backup Recovery product sales were also negatively impacted by increased pressure related to these business product cycles. Additionally, revenues were impacted by the negative impact of foreign currency fluctuations. These decreases were partially offset by an increase in Emerging Storage product revenue, primarily due to increased demand for XtremIO, Isilon and Software-Defined-Storage. XtremIO experienced triple-digit growth in the year ended December 31, 2015, maintaining its lead in the all-flash-array market segment. Isilon continued to gain traction in Big Data analytics running Hadoop workloads as well as the release of software-only versions and our Software-Defined-Storage portfolio that includes ViPR, Elastic Cloud Storage and ScaleIO continued to add new customers. The decrease in Information Storage product revenues was also partially offset as a result of the consolidation of VCE, which continues to grow considerably faster than the infrastructure market in general.

The Pivotal segment’s product revenues increased 34% to $87 million in 2015 due to a significant increase in subscription orders for Pivotal CF and BDS, partially offset by a decrease in up-front license revenue. Pivotal is benefiting from the transition to next-gen applications by the enterprise and continues to expand the number of customers adopting Pivotal CF.

The VMware Virtual Infrastructure segment’s product revenues increased 6% to $2,723 million in 2015. VMware’s license revenues increased during the year ended December 31, 2015 primarily due to increased sales from its emerging product offerings including VMware NSX, AirWatch mobile solutions and vSphere with Operations Management as well as revenues from its hybrid cloud offerings. Product revenues also benefited from a decrease in year over year deferred revenue balances. Partially offsetting these increases was the negative impact of certain factors including lower product sales of VMware’s core compute products, changes in foreign currency fluctuations and increased growth derived from its hybrid cloud and SaaS offerings for which revenue is recognized over time. Growth from its hybrid cloud and SaaS offerings has resulted in less revenue being recognized up-front which has had an adverse impact on its growth rate during 2015.

The RSA Information Security segment's product revenues decreased 8% to $424 million in 2015 resulting from declines in non-strategic products which more than offset growth from products in RSA's growth portfolio. Security remains a high customer priority and RSA is increasingly focused on the rapidly growing security analytics and next generation identity management solution as well as extending its market leadership in governance, risk and compliance ("GRC"), which enables them to help customers secure their cloud-based IT environments.

The Enterprise Content Division segment's product revenues decreased 5% to $156 million in 2015. The decrease during the year ended December 31, 2015 was primarily due to the timing of revenue recognition due to the increase in subscription-based offerings with ratable revenue recognition, partially offset by increased license sales during the second and third quarters. This business continues to innovate to meet customers' demand for technologies that work seamlessly in mobile cloud environments.

Included in EMC's 2015 consolidated product revenues is the VMware GSA settlement charge. During the second quarter of 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 to product revenues during the year ended December 31, 2015 and included in corporate reconciling items as noted above.

Consolidated product revenues increased 3% to $14,051 million in 2014. Despite a challenging and rapidly changing IT environment and the impact of foreign currency fluctuations, we demonstrated solid performance across our major segments within our federation of businesses. The growth was driven by continued demand for our leading portfolio of offerings that help customers optimize their existing infrastructures and build new ones that take advantage of opportunities created by cloud, mobile, social and Big Data.

Consolidated services revenues increased 8% to $11,190 million in 2015. The consolidated services revenues increases were primarily driven by the Information Storage and VMware Virtual Infrastructure segments' services revenues resulting from increased revenue associated with maintenance services and increased demand for VMware professional services due to growth in its license sales across its three product groups, including its newer products.

The Information Storage segment's services revenues increased 6% to $6,101 million in 2015. The increase in services revenues was primarily attributable to higher revenue associated with maintenance services due to a larger installed base as well as an increase in renewals associated with aforementioned customer caution on transactional spend. We have experienced a growing demand for professional services as we assist with customers' transitions to cloud architectures, transforming IT infrastructures and virtualizing mission-critical applications.

The Pivotal segment's services revenues increased 11% to $180 million in 2015 due to increases in professional services revenues resulting from continued strong demand for our Pivotal Labs agile development services.

The VMware Virtual Infrastructure segment's services revenues increased 14% to $3,902 million in 2015. The increase in services revenues was primarily attributable to growth in VMware's software maintenance revenues which benefited from renewals of its software maintenance contracts sold in previous periods and additional maintenance contracts sold in conjunction with new software license sales. In addition, professional services increased due to growth in VMware's license sales across its three product groups, including its newer products, resulting in increased demand for implementation and training services.

The RSA Information Security segment's services revenues decreased 2% to $564 million in 2015 primarily due to decreases in professional services revenues related to the overall decline in product revenue as the business focuses on its growth portfolio, somewhat offset by increases in maintenance revenues, resulting from continued demand for support from its installed base.

The Enterprise Content Division segment's services revenues decreased 7% to $443 million in 2015. Services revenues decreased due to decreases in both maintenance and professional services.

Consolidated services revenues increased 9% to $10,389 million in 2014. The consolidated services revenues increase was primarily driven by the Information Storage and VMware Virtual Infrastructure segments' services revenues resulting from increased revenue associated with maintenance services and increased demand for professional services due to an increased focus on delivering business outcomes, as well as from its role in assembling cross-federation solutions.

Consolidated revenues by geography were as follows (in millions):

				Percentage Change	
	2015	2014	2013	2015 vs 2014	2014 vs 2013
United States	$13,361	$12,835	$12,230	4 %	5 %
Europe, Middle East and Africa	6,845	6,981	6,355	(2)%	10 %
Asia Pacific	3,157	3,191	3,193	(1)%	— %
Latin America, Mexico and Canada	1,341	1,433	1,444	(6)%	(1)%
Total Revenues	$24,704	$24,440	$23,222	1 %	5 %

Revenues increased in 2015 compared to 2014 in our United States market due to greater demand for our products and services offerings. Revenues decreased in our Europe, Middle East and Africa, Asia Pacific and Latin America, Mexico and Canada markets.

Revenues increased in 2014 compared to 2013 in all of our markets except for Asia Pacific which stayed flat and Latin America, Mexico and Canada which declined slightly.

Changes in exchange rates negatively impacted the consolidated revenue growth by 4% in 2015 compared to 2014. Changes in exchange rates which impacted consolidated revenue include the negative impacts to growth in Europe, Middle East and Africa of 9%, Asia Pacific and Japan of 6% and Latin America of 11%. The negative impact of the change in rates was most significant for the euro, Australian dollar, Brazilian real, British pound and Japanese Yen. Changes in exchange rates negatively impacted the consolidated revenue growth by 1% in 2014 compared to 2013. The impact of the change in rates was most significant in the Asia Pacific markets, primarily Australia and Japan, and Brazil, partially offset by the United Kingdom.

Costs and Expenses

The following table presents our costs and expenses, operating income and net income attributable to EMC Corporation (in millions):

				Percentage Change	
	2015	2014	2013	2015 vs 2014	2014 vs 2013
Cost of revenue:					
Information Storage	$7,783	$7,362	$7,153	6 %	3 %
Enterprise Content Division	192	223	228	(14)%	(2)%
RSA Information Security	328	337	332	(3)%	2 %
Pivotal	163	121	88	34 %	38 %
VMware Virtual Infrastructure	845	755	558	12 %	35 %
Corporate reconciling items	402	393	390	2 %	1 %
Total cost of revenue	9,713	9,191	8,749	6 %	5 %
Gross margins:					
Information Storage	8,518	9,180	9,109	(7)%	1 %
Enterprise Content Division	407	417	419	(2)%	— %
RSA Information Security	660	698	655	(5)%	6 %
Pivotal	104	106	91	(1)%	16 %
VMware Virtual Infrastructure	5,780	5,241	4,589	10 %	14 %
Corporate reconciling items	(478)	(393)	(390)	22 %	1 %
Total gross margin	14,991	15,249	14,473	(2)%	5 %
Operating expenses:					
Research and development[(1)]	3,167	2,991	2,761	6 %	8 %
Selling, general and administrative[(2)]	8,533	7,982	7,338	7 %	9 %
Restructuring and acquisition-related charges	450	239	224	88 %	7 %
Total operating expenses	12,150	11,212	10,323	8 %	9 %
Operating income	2,841	4,037	4,150	(30)%	(3)%
Investment income, interest expense and other income (expense), net	41	(275)	(285)	(115)%	(4)%
Income before income taxes	2,882	3,762	3,865	(23)%	(3)%
Income tax provision	710	868	772	(18)%	12 %
Net income	2,172	2,894	3,093	(25)%	(6)%
Less: Net income attributable to non-controlling interests	(182)	(180)	(204)	1 %	(12)%
Net income attributable to EMC Corporation	$1,990	$2,714	$2,889	(27)%	(6)%

(1) Amount includes corporate reconciling items of $399 million, $387 million and $365 million for the years ended December 31, 2015, 2014 and 2013, respectively.

(2)

Amount includes corporate reconciling items of $877 million, $826 million and $603 million for the years ended December 31, 2015, 2014 and 2013, respectively.

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Gross Margins

Our gross margin percentages were 60.7%, 62.4% and 62.3% in 2015, 2014 and 2013, respectively. The decrease in the gross margin percentage in 2015 compared to 2014 was largely attributable to the Information Storage segment, which decreased overall gross margins by 208 basis points, the RSA Information Security segment, which decreased overall gross margins by 2 basis points, and the Pivotal segment, which decreased overall gross margins by 11 basis points. These decreases were partially offset by the VMware Virtual Infrastructure segment, which increased overall gross margins by 60 basis points, and the Enterprise Content Division segment, which increased overall gross margins by 6 basis points. The increase in corporate reconciling items, consisting of stock-based compensation, acquisition-related intangible asset amortization and the VMware GSA settlement charge, decreased the consolidated gross margin percentage by 15 basis points. The increase in the gross margin percentage in 2014 compared to 2013 was attributable to the VMware Virtual Infrastructure segment, which increased overall gross margins by 51 basis points, the RSA Information Security segment, which increased overall gross margins by 5 basis points, and the Enterprise Content Division segment, which increased overall gross margins by 1 basis point; these increases were largely offset by the Information Storage segment, which decreased overall gross margins by 43 basis points, and the Pivotal segment, which decreased overall gross margins by 6 basis points. The increase in corporate reconciling items, consisting of stock-based compensation and acquisition-related intangible asset amortization, decreased the consolidated gross margin percentage by 1 basis point.

For segment reporting purposes, stock-based compensation, acquisition and other related intangible asset amortization are recognized as corporate expenses in cost of revenues and are not allocated among our various operating segments. The increase of $9 million in the corporate reconciling items in 2015 was attributable to a $10 million increase in stock-based compensation expense driven by incremental growth in headcount, both organic and through the Virtustream acquisition offset by a $1 million decrease in intangible asset amortization expense. The increase of $3 million in the corporate reconciling items in 2014 was attributable to a $22 million increase in stock-based compensation expense driven by incremental growth in headcount, both organic and through acquisitions including AirWatch and DSSD and a $15 million increase in intangible asset amortization expense due to a larger intangible asset balance resulting from business acquisitions, partially offset by a $34 million decrease in amortization of VMware’s capitalized software from prior periods due to the capitalized balance being fully amortized in 2013.

The gross margin percentages for the Information Storage segment were 52.3%, 55.5% and 56.0% in 2015, 2014 and 2013, respectively. The decrease in gross margin percentage in 2015 compared to 2014 was primarily due to the consolidation of VCE and foreign currency impacts to revenue that do not impact costs in the same manner, as our costs of sales tend to have less exposure to currency volatility. In addition, there were lower product volumes during 2015 compared to 2014. These decreases were partially offset by an increase in the mix of services revenues which have higher gross margins. The decrease in gross margin percentage in 2014 compared to 2013 was primarily due to a decrease in product margins during the first half of 2014. The decrease in product margins was primarily due to lower sales volume without a corresponding decrease in fixed costs and pricing pressures on our high-end storage products.

The gross margin percentages for the Pivotal segment were 39.0%, 46.5% and 50.7% in 2015, 2014 and 2013, respectively. The decrease in gross margin percentage in 2015 compared to 2014 and 2014 compared to 2013 was primarily due to a shift from perpetual-based sales to subscription sales which resulted in an increase in the revenue mix of services. In addition, during 2015, costs of services revenues were higher than the comparable period in the prior year primarily due to costs incurred related to the expansion of our Pivotal Labs offices.

The gross margin percentages for the VMware Virtual Infrastructure segment were 87.3%, 87.4% and 89.2% in 2015, 2014 and 2013, respectively. The slight decrease in gross margin percentage in 2015 compared to 2014 was primarily attributable to a higher mix of services revenues which have lower margins. Costs of services revenues were higher than the comparable period in the prior year primarily due to employee-related expenses resulting from organic growth in headcount. Also contributing to the decrease in margin was the growth in its SaaS and professional services offerings which led to an increase in professional services costs. These decreases were mostly offset by increases in product margins driven by a decrease in royalty costs. The decrease in gross margin percentage in 2014 compared to 2013 was primarily attributable to a decrease in service margins driven by the investment in growth and in its SaaS and professional service offerings, which led to higher costs.

The gross margin percentages for the RSA Information Security segment were 66.8%, 67.4% and 66.4% in 2015, 2014 and 2013, respectively. The decrease in the gross margin percentage in 2015 compared to 2014 was primarily due to lower product margins. The increase in gross margin percentage in 2014 compared to 2013 was primarily due to higher product margins somewhat offset by a decline in service margins.

The gross margin percentages for the Enterprise Content Division segment were 67.9%, 65.2% and 64.8% in 2015, 2014 and 2013, respectively. The increase in gross margin percentage in 2015 compared to 2014 was attributable to higher support services revenues and margins as well as increases in product margins. The increase in gross margin percentage in 2014 compared to 2013 was attributable to an increase in services margins.

Research and Development

Research and development expenses include payroll, stock-based compensation expense and other personnel-related costs associated with product development. Also included in R&D expenses are infrastructure costs, which consist of equipment and material costs, facilities-related costs, depreciation expense, intangible asset amortization and capitalized software development costs.

The following table summarizes our consolidated R&D expenses (dollars in millions):

	Year Ended December 31,			2015 vs 2014		2014 vs 2013	
	2015	2014	2013	$ Change	% Change	$ Change	% Change
Research and development	$3,167	$2,991	$2,761	$176	6 %	$230	8 %
Percentage of revenue	13 %	12 %	12 %				

The increase in R&D expenses in 2015 compared to 2014 was attributable to the EMC Information Infrastructure business, which increased overall R&D expenses by $104 million and the VMware Virtual Infrastructure business, which increased overall R&D expenses by $79 million. In addition, corporate reconciling items increased consolidated R&D expenses by $12 million. These increases were partially offset by the Pivotal business, which decreased overall R&D expenses by $19 million.

The increase in R&D expenses in 2014 compared to 2013 was attributable to the EMC Information Infrastructure business, which increased overall R&D expenses by $28 million, the Pivotal business, which increased overall R&D expenses by $19 million, and the VMware Virtual Infrastructure business, which increased overall R&D expenses by $161 million. In addition, corporate reconciling items increased consolidated R&D expenses by $22 million.

The following table summarizes R&D expenses within EMC's Information Infrastructure business (dollars in millions):

	Year Ended December 31,			2015 vs 2014		2014 vs 2013	
	2015	2014	2013	$ Change	% Change	$ Change	% Change
Research and development	$1,593	$1,489	$1,461	$104	7 %	$28	2 %
Percentage of revenue	9 %	8 %	8 %				

R&D expenses increased $104 million in 2015 primarily due to increases in personnel-related costs, which are expenses driven by incremental headcount from strategic hiring and business acquisitions, depreciation expense and infrastructure costs. Personnel-related costs increased by $80 million primarily due to the consolidation of VCE, the acquisition of Virtustream and increased investments in our Emerging Storage business, partially offset by decreases in our traditional storage businesses. Depreciation expense also increased by $34 million and infrastructure costs increased by $38 million as EMC continues to develop product software and service offerings. Somewhat offsetting these increased costs were higher capitalized software development costs of $62 million, primarily due to the timing of products reaching technological feasibility.

R&D expenses increased $28 million in 2014 primarily due to increases in personnel-related costs, which are expenses driven by incremental headcount from strategic hiring and business acquisitions, material costs and depreciation expense. Personnel-related costs increased by $35 million, material costs increased by $27 million and depreciation expense increased by $19 million. Somewhat offsetting these increased costs was an increase in the capitalization of software development costs of $51 million, primarily due to the timing of products reaching technological feasibility.

The following table summarizes R&D expenses within the Pivotal business (dollars in millions):

	Year Ended December 31,			2015 vs 2014		2014 vs 2013	
	2015	2014	2013	$ Change	% Change	$ Change	% Change

Research and development	$109	$128	$109	$(19	)	(15	)%	$19	17	%
Percentage of revenue	41 %	56 %	61 %							

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R&D expenses decreased $19 million in 2015, primarily due to personnel-related costs, which decreased by $20 million in 2015 as the business continues to transition away from non-strategic offerings. R&D expenses increased $19 million in 2014, primarily due to personnel-related costs of $4 million driven by incremental headcount from strategic hiring, and a decrease in capitalized software development costs of $9 million.

The following table summarizes R&D expenses within the VMware Virtual Infrastructure business (dollars in millions):

	Year Ended December 31,			2015 vs 2014		2014 vs 2013	
	2015	2014	2013	$ Change	% Change	$ Change	% Change
Research and development	$1,066	$987	$826	$79	8 %	$161	19 %
Percentage of revenue	16 %	16 %	16 %				

R&D expenses within the VMware Virtual Infrastructure business increased $79 million in 2015 primarily due to increased personnel-related costs of $76 million driven by incremental headcount as well as increased infrastructure and depreciation costs of $6 million. These increased costs were partially offset by the favorable impact from fluctuations in the exchange rate between the U.S. dollar and foreign currencies in which we incur expenses. R&D expenses increased $161 million in 2014 primarily due to increased personnel-related costs of $131 million driven by incremental headcount from strategic hiring and acquisitions as well as increased depreciation costs of $22 million.

The following table summarizes corporate reconciling items within R&D expenses (dollars in millions):

	Year Ended December 31,			2015 vs 2014		2014 vs 2013	
	2015	2014	2013	$ Change	% Change	$ Change	% Change
Corporate Reconciling Items	$399	$387	$365	$12	3 %	$22	6 %

Corporate reconciling items within R&D consist of stock-based compensation expense and intangible asset amortization. During 2015, corporate reconciling items within R&D increased primarily due to stock-based compensation expense, which increased by $12 million due to the supplemental 401(k) matching contribution EMC instituted during 2015. During 2014, corporate reconciling items within R&D increased $22 million primarily due to stock-based compensation expense which increased $25 million primarily due to the issuance of restricted stock and stock options in connection with acquisitions including AirWatch and DSSD.

Selling, General and Administrative

Selling expenses include payroll, sales commissions, stock-based compensation expense and other personnel-related costs associated with the marketing and sale of product offerings. Also included in selling expenses are product launch and business development costs, including travel expenses, as well as equipment and facilities costs, including the rental depreciation expense and intangible asset amortization. General and administrative expenses include payroll, stock-based compensation expense and other personnel-related costs incurred to support the overall business. These expenses include costs associated with the finance, human resources, legal and other administrative functions and initiatives.

The following table summarizes our consolidated selling, general and administrative (“SG&A”) expenses (dollars in millions):

	Year Ended December 31,			2015 vs 2014		2014 vs 2013	
	2015	2014	2013	$ Change	% Change	$ Change	% Change
Selling, general and administrative	$8,533	$7,982	$7,338	$551	7 %	$644	9 %
Percentage of revenue	35 %	33 %	32 %				

The increase in SG&A expenses in 2015 compared to 2014 was attributable to the Information Infrastructure business, which increased overall SG&A expenses by $251 million, the Pivotal business, which increased overall SG&A expenses by $33 million, and the VMware Virtual Infrastructure business, which increased overall SG&A expenses by

$216 million. In addition, corporate reconciling items increased consolidated SG&A expenses by $51 million.
The increase in SG&A expenses in 2014 compared to 2013 was attributable to the Information Infrastructure business, which increased overall SG&A expenses by $12 million, the Pivotal business, which increased overall SG&A expenses by $22 million,

and the VMware Virtual Infrastructure business, which increased overall SG&A expenses by $387 million. In addition, corporate reconciling items increased consolidated SG&A expenses by $223 million.

The following table summarizes SG&A expenses within EMC's Information Infrastructure business (dollars in millions):

	Year Ended December 31,			2015 vs 2014		2014 vs 2013	
	2015	2014	2013	$ Change	% Change	$ Change	% Change
Selling, general and administrative	$4,834	$4,583	$4,571	$251	6 %	$12	— %
Percentage of revenue	27 %	25 %	26 %				

SG&A expenses increased $251 million in 2015 primarily due to increases in personnel-related costs and infrastructure costs. Personnel-related costs increased by $250 million driven by incremental headcount from strategic hiring and business acquisitions. Infrastructure costs increased by $10 million, primarily due to the consolidation of VCE, the acquisition of Virtustream and increased investments in our Emerging Storage business, partially offset by decreases in our traditional storage businesses. Partially offsetting the increased costs was a decrease in business development costs of $12 million in 2015.

SG&A expenses increased $12 million in 2014 primarily due to increases in personnel-related costs of $21 million and depreciation expense of $16 million. These increases were partially offset by a decrease in travel related costs of $29 million due to controlled discretionary spending.

The following table summarizes SG&A expenses within the Pivotal business (dollars in millions):

	Year Ended December 31,			2015 vs 2014		2014 vs 2013	
	2015	2014	2013	$ Change	% Change	$ Change	% Change
Selling, general and administrative	$216	$183	$161	$33	18 %	$22	14 %
Percentage of revenue	81 %	81 %	90 %				

SG&A expenses increased $33 million in 2015 primarily due to increases in personnel-related costs of $20 million and business development costs of $4 million in 2015 as the business continues to build out its go-to-market capabilities. SG&A expenses increased $22 million in 2014 primarily due to increases in personnel-related costs of $14 million as the business continued to transition to its new strategic focus.

The following table summarizes SG&A expenses within the VMware Virtual Infrastructure business (dollars in millions):

	Year Ended December 31,			2015 vs 2014		2014 vs 2013	
	2015	2014	2013	$ Change	% Change	$ Change	% Change
Selling, general and administrative	$2,606	$2,390	$2,003	$216	9 %	$387	19 %
Percentage of revenue	39 %	40 %	39 %				

SG&A expenses within the VMware Virtual Infrastructure business increased $216 million in 2015 primarily due to growth in personnel-related expenses of $117 million, due to incremental headcount. Infrastructure and depreciation costs increased by $55 million and business development costs increased by $13 million. In addition, professional services costs increased $18 million. These increased costs were partially offset by the favorable impact from fluctuations in the exchange rate between the U.S. dollar and foreign currencies in which we incur expenses.

SG&A expenses increased $387 million in 2014 primarily due to growth in personnel-related expenses of $280 million driven by incremental headcount from strategic hiring and acquisitions as well as compensation expense relating to specified future employment conditions of certain key AirWatch employees. In addition, there were increases to both business development costs of $29 million and infrastructure costs of $41 million.

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The following table summarizes corporate reconciling items within SG&A expenses (dollars in millions):

	Year Ended December 31,			2015 vs 2014		2014 vs 2013	
	2015	2014	2013	$ Change	% Change	$ Change	% Change
Corporate Reconciling Items	$877	$826	$603	$51	6 %	$223	37 %

Corporate reconciling items within SG&A, which consist of stock-based compensation, intangible asset amortization and acquisition and other related charges, increased $51 million in 2015, which was primarily due to an increase in stock-based compensation of $50 million. This increase relates primarily to the supplemental 401(k) matching contribution EMC instituted during 2015 as well as the consolidation of VCE.

During 2014, corporate reconciling items within SG&A increased $223 million primarily due to acquisition and other related costs relating to the specified future employment conditions of AirWatch and DSSD employees, which increased $173 million. Also contributing to this increase was stock-based compensation expense, which increased by $38 million, and VMware litigation and other contingencies of $11 million. The increase in stock-based compensation expense in 2014 was primarily driven by the issuance of restricted stock in connection with VMware's acquisition of AirWatch and EMC's acquisition of DSSD.

Restructuring and Acquisition-Related Charges

During 2015, we initiated a cost reduction and business transformation program to better align our expenses and improve the operations of our federation of businesses. In the fourth quarter of 2015, as part of the previously announced program to reduce our existing cost base by $850 million annually, and consistent with prior restructuring actions to keep pace with changes in the industry, we approved a restructuring plan which consists of a reduction in force which will be substantially completed by the end of the first quarter of 2016 and fully completed by the end of 2016. The total charge resulting from this plan is expected to be approximately $250 million, with total cash payments associated with the plan expected to be $220 million. Charges related to this restructuring action are included in the 2015 charges discussed below.

On January 22, 2016, VMware approved, subject to compliance with all applicable local legal obligations, a plan to streamline its operations, with plans to reinvest the associated savings in field, technical and support resources associated with growth products. The total charge resulting from this plan is estimated to be between $55 million and $65 million, consisting principally of employee-related charges to be paid in cash for the elimination of approximately 800 positions and personnel which are expected to be completed by June 30, 2016.

In 2015, 2014 and 2013, we incurred restructuring and acquisition-related charges of $450 million, $239 million and $224 million, respectively. In 2015, EMC incurred $420 million of restructuring charges, primarily related to our current year restructuring programs, and $4 million of charges in connection with acquisitions for financial, advisory, legal and accounting services. In 2014, EMC incurred $210 million of restructuring charges, primarily related to our 2014 restructuring programs, and $6 million of charges in connection with acquisitions for financial, advisory, legal and accounting services. In 2013, EMC incurred $139 million of restructuring charges, primarily related to our 2013 restructuring program, and $8 million of charges in connection with acquisitions for financial, advisory, legal and accounting services.

In 2015, VMware incurred $23 million of restructuring charges related to workforce reductions as part of its current year restructuring program and $3 million of charges in connection with acquisitions for financial, advisory, legal and accounting services. In 2014, VMware incurred $18 million of restructuring charges related to workforce reductions as part of its current year restructuring program and $7 million of charges in connection with acquisitions for financial, advisory, legal and accounting services. In 2013, VMware incurred $54 million of restructuring charges related to workforce reductions as part of its 2013 restructuring program and $5 million of charges in connection with acquisitions for financial, advisory, legal and accounting services. In addition, VMware incurred a benefit of $2 million and a charge of $18 million primarily related to impairment charges related to its business realignments in 2014 and 2013, respectively.

During 2015, 2014 and 2013, EMC implemented restructuring programs to create further operational efficiencies which will result or have resulted in workforce reductions of approximately 4,600, 2,100 and 1,900 positions, respectively. The actions impact positions around the globe covering our Information Storage, RSA Information Security, Enterprise Content Division and Pivotal segments. All of these actions are expected to be completed or were completed within a year of the start of each program.

During 2015 and 2014, VMware eliminated approximately 380 and 180 positions, respectively, across all major functional groups and geographies to streamline its operations. During 2013, VMware approved and initiated a business realignment plan to streamline its operations. The plan included the elimination of approximately 710 positions across all major functional groups and geographies. All of these actions are expected to be completed or were completed within a year of the program.

During 2015, 2014 and 2013, we recognized $18 million in each year, respectively, of lease termination costs for facilities vacated in the period in accordance with our plan as part of all of our restructuring programs and for costs associated with terminating other contractual obligations. These costs are expected to be utilized by the end of 2017. The remaining cash portion owed for these programs in 2016 is approximately $4 million, plus an additional $7 million over the period from 2017 and beyond.

Investment Income

Investment income was $94 million, $123 million and $128 million in 2015, 2014 and 2013, respectively. Investment income decreased in 2015 due to an increase in net realized losses. Interest income was $106 million, $99 million and $106 million in 2015, 2014 and 2013, respectively. Net realized losses were $16 million and net realized gains were $19 million and $17 million in 2015, 2014 and 2013, respectively.

Interest Expense

Interest expense was $164 million, $147 million and $156 million in 2015, 2014 and 2013, respectively. Interest expense during 2015 and 2014 consists primarily of interest on the $5.5 billion aggregate principal amount of senior notes (collectively, the “Notes”), which we issued in June 2013. The increase in interest expense in 2015 compared to 2014 is due primarily to the amortization of interest rate swap losses of $22 million during 2015 compared to $11 million in 2014.

Interest expense during 2013 consists primarily of interest on the $1.725 billion 1.75% convertible senior notes due 2013 (the “2013 Notes”). Included in interest expense are non-cash interest charges related to amortization of the debt discount attributable to the conversion feature of $58 million for the year ended December 31, 2013, as we accreted the 2013 Notes to their stated values over their terms. See Note E to the consolidated financial statements.

Other Income (Expense), Net

Other income, net was $111 million in 2015 and other expense, net was $251 million and $257 million in 2014 and 2013, respectively. Other income (expense), net primarily consists of net gains and losses on strategic investments and foreign exchange gains and losses. During 2014 and 2013, other income (expense), net also included our consolidated share of the losses from our converged infrastructure joint venture, VCE Company LLC (“VCE”).

During 2015, we recognized net gains from strategic investments of $98 million and foreign currency exchange gains of $18 million. These gains were partially offset by a fair value adjustment on an asset held for sale of $20 million in 2015.

During 2014, we recognized a gain on previously held interests in strategic investments and joint ventures of $101 million in conjunction with our business acquisitions. In addition, we recognized net gains from strategic investments of $27 million. These were partially offset by foreign currency exchange losses and an impairment of a strategic investment of $33 million. During 2013, we recognized net losses from strategic investments of $11 million which were partially offset by foreign currency exchange gains. Additionally, during 2013, we recorded net gains on the divestiture of businesses of $31 million.

Prior to EMC’s acquisition of the controlling interest in VCE in December 2014, the VCE joint venture had been accounted for under the equity method and our consolidated share of VCE’s losses was based upon our portion of the overall funding. This represented our share of the net losses of the joint venture, net of equity accounting adjustments. During 2014 and 2013, we incurred losses related to VCE of $357 million and $298 million, respectively.

Provision for Income Taxes

Our effective income tax rate was 24.6%, 23.1% and 20.0% in 2015, 2014 and 2013, respectively. Our effective income tax rate is based upon income before provision for income taxes for the year, composition of the income in different countries and adjustments, if any, for potential tax consequences, benefits and/or resolutions of tax audits or other tax contingencies. Our aggregate income tax rate in foreign jurisdictions is lower than our income tax rate in the United States; substantially all of our income before provision for income taxes from foreign operations has been earned by our Irish subsidiaries. Our effective income tax rate may be adversely affected by earnings being lower than anticipated in countries where we have lower statutory income tax rates and higher than anticipated in countries where we have higher statutory income tax rates.

In 2015, the lower aggregate income tax rate in foreign jurisdictions reduced our effective income tax rate by 12.8 percentage points compared to our statutory federal tax rate of 35.0%. On December 18, 2015, the Consolidated Appropriations Act, 2016 was signed into law. Some of the provisions were retroactive to January 1, 2015 including a permanent extension of the U.S.

federal tax credit for increasing research activities. The federal tax credit for increasing research activities reduced our 2015 effective income tax rate by 2.1 percentage points. The net effect of other tax credits, state taxes, change in valuation allowance, U.S. domestic production activities deduction, non-deductible permanent differences, prior year true up adjustments, change in tax contingency reserves and other items collectively increased the effective income tax rate by 4.5 percentage points.

In 2014, the lower aggregate income tax rate in foreign jurisdictions reduced our effective income tax rate by 11.6 percentage points compared to our statutory federal tax rate of 35.0%. On December 19, 2014, the Tax Increase Prevention Act was signed into law. Some of the provisions were retroactive to January 1, 2014 including an extension of the U.S. federal tax credit for increasing research activities through December 31, 2014. The federal tax credit for increasing research activities reduced our 2014 effective income tax rate by 1.6 percentage points. The net effect of other tax credits, state taxes, change in valuation allowance, U.S. domestic production activities deduction, non-deductible permanent differences, prior year true up adjustments, change in tax contingency reserves and other items collectively increased the effective income tax rate by 1.3 percentage points.

In 2013, the lower aggregate income tax rate in foreign jurisdictions reduced our effective income tax rate by 15.3 percentage points compared to our statutory federal tax rate of 35.0%. On January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law. Some of the provisions were retroactive to January 1, 2012 including an extension of the U.S. federal tax credit for increasing research activities through December 31, 2013. Because the extension was enacted after December 31, 2012, our 2013 income tax provision included the federal tax credit for increasing research activities for 2012 as well as for 2013, which reduced our 2013 effective income tax rate by 3.5 percentage points. The net effect of other tax credits, state taxes, change in valuation allowance, U.S. domestic production activities deduction, non-deductible permanent differences, prior year true up adjustments, change in tax contingency reserves and other items collectively increased the effective income tax rate by 3.8 percentage points.

The effective income tax rate increased from 2014 to 2015 by 1.5%, from 23.1% to 24.6%, respectively. This increase was principally attributable to a release of the valuation allowance against state tax credit carryforwards in 2014 partially offset by the impact of lower income before provision for income taxes in 2015.

The effective income tax rate increased from 2013 to 2014 by 3.1%, from 20.0% to 23.1%, respectively. This increase was principally attributable to higher income in the U.S. in 2014 and the inclusion of the 2012 federal tax credit for increasing research activities in 2013 as discussed above.

Non-controlling Interests

The net income attributable to the non-controlling interests was $182 million, $180 million and $204 million in 2015, 2014 and 2013, respectively. The net income attributable to the non-controlling interest in VMware was $189 million, $180 million and $204 million in 2015, 2014 and 2013, respectively. The increase in 2015 was due to an increase in VMware’s net income compared to 2014. The decrease in 2014 was due to a decrease in VMware’s net income compared to 2013. VMware’s reported net income was $997 million, $886 million and $1,014 million in 2015, 2014 and 2013, respectively. The weighted-average non-controlling interest in VMware was approximately 19% in 2015 and 20% in 2014 and 2013. As of December 31, 2015, EMC had purchased approximately 16 million shares of VMware common stock for $1.2 billion.

Financial Condition

Proposed Transaction with Dell

On October 12, 2015, EMC and Denali signed a definitive Merger Agreement. EMC has agreed to various customary covenants and agreements, including, among others, agreements to conduct its business in the ordinary course during the period between the execution of the Merger Agreement and the effective time of the Merger. In addition, without the consent of Denali, we may not take, authorize, agree or commit to do certain actions outside of the ordinary course of business, including acquiring businesses or incurring capital expenditures above specified thresholds, issuing additional debt facilities, and repurchasing outstanding EMC common stock. We do not believe these restrictions will prevent us from meeting our debt service obligations, ongoing costs of operations, working capital needs, or capital expenditure requirements for the next twelve months.

The Merger Agreement contains specified termination rights for each of Denali and EMC, including that, in general, either party may terminate if the Merger is not consummated on or before December 16, 2016. If EMC terminates the Merger Agreement, we are required to pay Denali a termination fee of $2.5 billion.

Cash, Cash Equivalents and Investments

At December 31, 2015, our total cash, cash equivalents, and short-term and long-term investments were $14.8 billion. This balance includes approximately $7.5 billion held by VMware, of which $5.8 billion is held outside the U.S. and $1.7 billion is held in the U.S., and $7.3 billion held by EMC, of which $6.1 billion is held outside the U.S. and $1.2 billion is held in the U.S. If these funds that are held outside the U.S. are needed for our operations in the U.S., we would be required to accrue and pay U.S. taxes to repatriate these funds. However, our intent is to permanently reinvest these funds outside of the U.S. and our current plans do not demonstrate a need to repatriate them to fund our U.S. operations.

Under the terms of the Merger Agreement, EMC is required to provide Denali with access to EMC's cash to help fund the Merger consideration. At this time, EMC has not finalized its plan to access such cash and has not determined if there would be a need to repatriate cash to meet the requirements of the Merger. If these overseas funds are required to be repatriated to the U.S. in accordance with the Merger Agreement, we may be required to accrue and pay U.S. taxes to repatriate these funds.

We expect that existing U.S. cash and cash equivalents, together with any cash generated from operations, will be sufficient to meet normal operating requirements for the next twelve months. We expect to continue to generate positive cash flows from operations and to use cash generated by operations as a primary source of liquidity. Should we require more capital than is generated by our operations to fund discretionary activities, such as business acquisitions, we have the ability to raise capital through the issuance of commercial paper or by drawing on our credit facility at reasonable interest rates.

Cash Flow

The following table summarizes our cash flow activity for the years ended December 31, 2015, 2014 and 2013 (in millions):

	For the Year Ended December 31,			$ Change	
	2015	2014	2013	2015 vs 2014	2014 vs 2013
Cash provided by operating activities	$5,386	$6,523	$6,923	$(1,137)	$(400)
Cash used in investing activities	(2,754)	(2,551)	(5,760)	(203)	3,209
Cash (used in) provided by financing activities	(2,292)	(5,437)	2,076	3,145	(7,513)
Effect of exchange rates on cash and cash equivalents	(134)	(83)	(62)	(51)	(21)
Net (decrease) increase in cash and cash equivalents	$206	$(1,548)	$3,177	$1,754	$(4,725)

Cash provided by operating activities consists primarily of cash collections from our customers somewhat offset by cash used for employee related expenditures, cash paid to suppliers for material and manufacturing costs and income tax payments.

The following table summarizes the primary drivers of the decrease in cash provided by operating activities for the years ended December 31, 2015, 2014 and 2013 (in millions):

	For the Year Ended December 31,			$ Change	
	2015	2014	2013	2015 vs 2014	2014 vs 2013
Cash received from customers	$25,737	$25,360	$24,319	$377	$1,041
Cash paid to suppliers and employees	(19,312)	(17,893)	(16,708)	(1,419)	(1,185)
Income taxes paid	(1,001)	(953)	(761)	(48)	(192)

Net cash provided by operating activities decreased by $1,137 million to $5,386 million and by $400 million to $6,523 million for the years ended December 31, 2015 and 2014, respectively, with respect to the comparable prior year periods. In each of these years, the decreases were primarily due to increases in cash paid to suppliers and employees due to general growth in the business to support the increased revenue base as well as income tax payments, which are comprised of estimated taxes for the current year, extension payments for the prior year and refunds or payments associated with income tax filings and tax audits, and which increased primarily due to higher pre-tax income in 2014 compared to 2013 and 2012 and the timing of various originating and reversing temporary book to tax differences. These were partially offset by increases in cash received from customers, attributable to an increase in sales volume.

Cash used in investing activities consists primarily of the timing of purchases, sales and maturities of our investments in available-for-sale securities, business acquisitions and the purchase of capital and other assets.

The following table summarizes the primary drivers of the increase in cash used in investing activities for the years ended December 31, 2015, 2014 and 2013 (in millions):

	For the Year Ended December 31,			$ Change	
	2015	2014	2013	2015 vs 2014	2014 vs 2013
Net (purchases) sales of available-for-sale securities	$(77)	$1,391	$(3,113)	$(1,468)	$4,504
Business acquisitions, net of cash acquired	(1,336)	(1,973)	(770)	637	(1,203)

Net cash used in investing activities increased by $203 million to $2,754 million for the year ended December 31, 2015 and decreased by $3,209 million to $2,551 million for the year ended December 31, 2014, with respect to the comparable prior year periods. The increase in 2015 compared to the same period in 2014 was primarily due to an increase in cash used in the net purchases and sales of available-for-sale securities, which was partially offset by a decrease in cash spent on business acquisitions. During 2015, EMC paid $1,220 million in net cash to acquire Virtustream. The decrease in 2014 compared to the same period in 2013 was primarily due to an increase in cash received in the net purchases and sales of available-for-sale securities, which was partially offset by an increase in cash spent on business acquisitions. During 2014, EMC had significant acquisition activity, including VMware's acquisition of AirWatch. Acquisition activity varies from period to period based upon the number and size of acquisitions in a given period. The net purchase and sales of available-for-sale securities varies from period to period based upon our cash collections, cash requirements and maturity dates of our investments as well as cash available after the issuance and payment of debt.

Cash used in financing activities consists primarily of net proceeds or payments from the issuance or repayment of short-term and long-term debt as well as proceeds from the issuance of common stock, stock repurchases and dividend payments.

The following table summarizes the primary drivers of the decrease in cash used in financing activities for the years ended December 31, 2015, 2014 and 2013 (in millions):

	For the Year Ended December 31,			$ Change	
	2015	2014	2013	2015 vs 2014	2014 vs 2013
Repurchase of EMC and VMware common stock	$(3,188)	$(3,669)	$(3,683)	$481	$14
Payment of long-term and short-term obligations	—	(1,665)	(46)	1,665	(1,619)
Net proceeds from the issuance of long-term and short-term obligations	1,295	—	5,460	1,295	(5,460)

Net cash used in financing activities decreased by $3,145 million to $2,292 million and increased by $7,513 million to $5,437 million for the years ended December 31, 2015 and 2014, respectively, with respect to the comparable prior year periods. The decrease in 2015 compared to the same period in 2014 was primarily due to cash inflows related to the net proceeds from the issuance of Commercial Paper and amounts borrowed under the credit facility in 2015 and cash outflows related to the repayment of convertible debt in 2014. Cash spent on EMC and VMware stock repurchases during 2015 decreased slightly compared to 2014. The increase in 2014 compared to the same period in 2013 was primarily due to proceeds received through the issuance of the long-term notes during 2013, somewhat offset by the repayment of convertible debt during 2014. During 2015, 2014 and 2013, we returned value to shareholders by repurchasing shares and paying dividends as part of our greater capital allocation strategy.

Share Repurchase

During the years ended December 31, 2015, 2014 and 2013 we spent $2,063 million, $2,969 million and $3,015 million respectively, to repurchase 76 million, 107 million and 122 million shares of our common stock, and VMware spent $1,125 million, $700 million and $508 million, respectively, to repurchase 13 million, 8 million and 7 million shares of their common stock.

Dividends

Our Board of Directors declared the following dividends during 2015, 2014 and 2013:

Declaration Date	Dividend Per Share	Record Date	Total Amount (in millions)	Payment Date
2015:				
February 27, 2015	$0.115	April 1, 2015	$229	April 23, 2015
May 20, 2015	$0.115	July 1, 2015	$226	July 23, 2015
July 30, 2015	$0.115	October 1, 2015	$229	October 23, 2015
December 17, 2015	$0.115	January 4, 2016	$230	January 22, 2016
2014:				
February 6, 2014	$0.10	April 1, 2014	$209	April 23, 2014
April 17, 2014	$0.115	July 1, 2014	$237	July 23, 2014
July 30, 2014	$0.115	October 1, 2014	$239	October 23, 2014
December 10, 2014	$0.115	January 2, 2015	$234	January 23, 2015
2013:				
May 28, 2013	$0.10	July 1, 2013	$212	July 23, 2013
August 1, 2013	$0.10	October 1, 2013	$210	October 23, 2013
December 12, 2013	$0.10	January 8, 2014	$206	January 23, 2014

Short-Term Debt

On February 27, 2015, we entered into a credit agreement with the lenders named therein, Citibank, N.A., as Administrative Agent, Bank of America, N.A. and JPMorgan Chase Bank, N.A., as Syndication Agents, and Citigroup Global Markets Inc., Merrill Lynch, Pierce, Fenner & Smith Incorporated and J.P. Morgan Securities LLC, as Joint Lead Arrangers and Joint Bookrunners (the “Credit Agreement”). The Credit Agreement provides for a $2.5 billion unsecured revolving credit facility to be used for general corporate purposes that is scheduled to mature on February 27, 2020. At our option, subject to certain conditions, any loan under the Credit Agreement will bear interest at a rate equal to, either (i) the LIBOR Rate or (ii) the Base Rate (defined as the highest of (a) the Federal Funds rate plus 0.50%, (b) Citibank, N.A.’s “prime rate” as announced from time to time, or (c) one-month LIBOR plus 1.00%), plus, in each case the Applicable Margin, as defined in the Credit Agreement. The Credit Agreement contains customary representations and warranties, covenants and events of default. We may also, upon the agreement of the existing lenders and/or additional lenders not currently parties to the agreement, increase the commitments under the credit facility by up to an additional $1.0 billion. In addition, we may request to extend the maturity date of the credit facility, subject to certain conditions, for additional one-year periods. As of December 31, 2015, we had $600 million outstanding under the credit facility. At February 24, 2016, we had no amounts borrowed under the credit facility.

On March 23, 2015, we established a short-term debt financing program whereby we may issue short-term unsecured commercial paper notes (“Commercial Paper”). Amounts available under the program may be borrowed, repaid and re-borrowed from time to time, with the aggregate face or principal amount of the notes outstanding at any time not to exceed $2.5 billion. The Commercial Paper will have maturities of up to 397 days from the date of issue. The net proceeds from the issuance of the Commercial Paper are expected to be used for general corporate purposes. As of December 31, 2015, we had $699 million of Commercial Paper outstanding. At February 24, 2016, we had $967 million of Commercial Paper outstanding.

Long-Term Debt

During 2013, we issued $5.5 billion aggregate principal amount of senior notes (collectively, the “Notes”) which pay a fixed rate of interest semi-annually in arrears. The first interest payment occurred on December 2, 2013. The proceeds from the Notes have been used to satisfy the cash payment obligation of the converted 2013 Notes as well as for general corporate purposes including stock repurchases, dividend payments, business acquisitions, working capital needs and other business opportunities. The Notes of each series are senior, unsecured obligations of EMC and are not convertible or exchangeable. Unless previously purchased and canceled, we will repay the Notes of each series at 100% of the principal amount, together with accrued and unpaid interest thereon, at maturity. However, EMC has the right to redeem any or all of the Notes at specified redemption prices. As of December 31, 2015, we were in compliance with all debt covenants, which are customary in nature.

Convertible Debt

During 2006, we issued the 2013 Notes. These 2013 Notes matured and a majority of the noteholders exercised their rights to convert the outstanding 2013 Notes as of December 31, 2013. Pursuant to the settlement terms, the majority of the converted 2013 Notes were settled on January 7, 2014. At that time, we paid the noteholders $1.7 billion in cash for the outstanding principal and 35 million shares for the $858 million excess of the conversion value over the principal amount, as prescribed in the terms of the 2013 Notes.

With respect to the conversion value in excess of the principal amount of the 2013 Notes converted, we elected to settle the excess with shares of our common stock based on a daily conversion value, determined in accordance with the indenture, calculated on a proportionate basis for each day of the relevant 20-day observation period. The actual conversion rate for the 2013 Notes was 62.6978 shares of our common stock per one thousand dollars of principal amount of 2013 Notes, which represents a 26.5% conversion premium from the date the 2013 Notes were issued and is equivalent to a conversion price of approximately $15.95 per share of our common stock.
In connection with the issuance of the 2013 Notes, we entered into separate convertible note hedge transactions with respect to our common stock (the “Purchased Options”). The Purchased Options allowed us to receive shares of our common stock and/or cash related to the excess conversion value that we would pay to the holders of the 2013 Notes upon conversion. We exercised 108 million of the Purchased Options in conjunction with the planned settlements of the 2013 Notes and received 35 million shares of net settlement on January 7, 2014, representing the excess conversion value of the options.

We also entered into separate transactions in which we sold warrants to acquire, subject to customary anti-dilution adjustments, approximately 215 million shares of our common stock at an exercise price of approximately $19.55 per share of our common stock. We received aggregate proceeds of $391 million from the sale of the associated warrants. Upon exercise, the value of the warrants was required to be settled in shares. The remaining 109 million associated warrants were exercised between February 18, 2014 and March 17, 2014 and were settled with 29 million shares of our common stock.

The Purchased Options and associated warrants had the effect of increasing the conversion price of the 2013 Notes to approximately $19.31 per share of our common stock, representing an approximate 53% conversion premium based on the closing price of $12.61 per share of our common stock on November 13, 2006, the issuance date of the 2013 Notes.
Use of Non-GAAP Financial Measures and Reconciliations to GAAP Results

The financial statements are prepared in accordance with accounting principles generally accepted in the United States of America (“GAAP”). EMC uses certain non-GAAP financial measures, which exclude stock-based compensation, intangible asset amortization, restructuring charges, acquisition and other related charges, infrequently occurring gains, losses, benefits and charges, and special tax items to measure its revenues, gross margin, operating margin, net income and diluted earnings per share for purposes of managing our business. EMC also assesses its financial performance by measuring its free cash flow which is also a non-GAAP financial measure. Free cash flow is defined as net cash provided by operating activities, less additions to property, plant and equipment and capitalized software development costs. These non-GAAP financial measures should be considered in addition to, not as a substitute for, measures of EMC's financial performance or liquidity prepared in accordance with GAAP. EMC's non-GAAP financial measures may be defined differently from time to time and may be defined differently than similar terms used by other companies, and accordingly, care should be exercised in understanding how EMC defines its non-GAAP financial measures.

EMC's management uses the non-GAAP financial measures to gain an understanding of EMC's comparative operating performance (when comparing such results with previous periods or forecasts) and future prospects and excludes these items from its internal financial statements for purposes of its internal budgets and each reporting segment's financial goals. These non-GAAP financial measures are used by EMC's management in their financial and operating decision-making because management believes they reflect EMC's ongoing business in a manner that allows meaningful period-to-period comparisons. EMC's management believes that these non-GAAP financial measures provide useful information to investors and others (a) in understanding and evaluating EMC's current operating performance and future prospects in the same manner as management does, if they so choose, and (b) in comparing in a consistent manner EMC's current financial results with EMC's past financial results.

Our non-GAAP operating results for the three months and years ended December 31, 2015 and 2014 were as follows (in millions, except percentages and per share data):

	For the Three Months Ended		For the Year Ended	
	December 31, 2015	December 31, 2014	December 31, 2015	December 31, 2014
Revenue	$7,014	$7,048	$24,780	$24,440
Gross margin	4,463	4,608	15,469	15,642
Gross margin percentage	63.6 %	65.4 %	62.4 %	64.0 %
Operating income	1,768	2,035	5,045	5,882
Operating income percentage	25.2 %	28.9 %	20.4 %	24.1 %
Income tax provision	437	468	1,217	1,327
Net income attributable to EMC	1,268	1,405	3,572	3,919
Diluted earnings per share attributable to EMC	$0.65	$0.69	$1.82	$1.90

The decreases in the non-GAAP gross margin compared to the prior year were attributable to the significant impacts of the consolidation of VCE, changes in foreign currencies and the VMware GSA settlement charge. The decrease in gross margin percentage was primarily attributable to decreases in Information Storage, VMware Virtual Infrastructure and Pivotal margins. Gross margin percentages decreased for the three and twelve months ended December 31, 2015 compared to the prior year. Information Storage and VMware Virtual Infrastructure gross margin percentages decreased compared to the prior year, however the mix of VMware, which is a higher margin business, increased which offset the decreases in gross margins. Information Storage gross margin percentage decreased year over year primarily due to the consolidation of VCE and foreign currency impacts to revenue that do not impact costs in the same manner, as our costs of sale tend to have less exposure to currency volatility. In addition, there were lower volumes during 2015 compared to 2014. VMware Virtual Infrastructure gross margin percentage decreased primarily due to a decrease in service margins as VMware continues to drive its strategic growth initiatives through investments in SaaS and professional service offerings.

The decrease in the non-GAAP operating income was attributable to higher costs during the three and twelve months ended December 31, 2015 compared to the prior year. Non-GAAP operating margin percentage for the three and twelve months ended December 31, 2015 decreased primarily due to the impacts of the consolidation of VCE and foreign currency impacts. In addition, operating expenses continued to increase as we continue to invest in our businesses and shift our focus to strategic high growth areas and acquisitions to meet the changing needs of our customers. The increases in operating expenses are driven by all of our operating segments.

The reconciliation of the above financial measures from GAAP to non-GAAP is as follows (in millions):

	For the Three Months Ended December 31, 2015				
	Gross margin	Operating income	Income tax provision	Net income attributable to EMC	Diluted Earnings per share attributable to EMC
GAAP	$4,360	$1,093	$290	$771	$0.39
Stock-based compensation expense	42	306	70	216	0.11
Intangible asset amortization	61	97	25	67	0.03
Restructuring charges	—	223	54	169	0.09

Acquisition and other related charges	—	35	11	21	0.01
R&D tax credit	—	—	31	(29)	(0.01)
Special tax items	—	—	(44)	39	0.02
Merger-related costs	—	14	—	14	0.01
Non-GAAP	$4,463	$1,768	$437	$1,268	$0.65

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	For the Three Months Ended December 31, 2014				
	Gross margin	Operating income	Income tax provision	Net income attributable to EMC	Diluted Earnings per share attributable to EMC
GAAP	$4,505	$1,570	$336	$1,147	$0.56
Stock-based compensation expense	39	260	49	190	0.10
Intangible asset amortization	64	102	28	68	0.03
Restructuring charges	—	47	12	34	0.02
Acquisition and other related charges	—	56	20	31	0.02
Gain on previously held interests in strategic investments and join venture	—	—	(11)	(33)	(0.02)
R&D tax credit	—	—	34	(32)	(0.02)
Non-GAAP	$4,608	$2,035	$468	$1,405	$0.69

	For the Year Ended December 31, 2015					
	Revenue	Gross margin	Operating income	Income tax provision	Net income attributable to EMC	Diluted Earnings per share attributable to EMC
GAAP	$24,704	$14,991	$2,841	$710	$1,990	$1.01
Stock-based compensation expense	—	156	1,093	250	767	0.39
Intangible asset amortization	—	246	395	112	263	0.13
Restructuring charges	—	—	443	103	336	0.17
Acquisition and other related charges	—	—	178	56	103	0.05
Fair value adjustment on assets held for sale	—	—	—	8	12	0.01
VMware litigation and other contingencies	—	—	11	4	6	—
GSA settlement	76	76	70	18	42	0.02
Special tax items	—	—	—	(44)	39	0.02
Merger-related costs	—	—	14	—	14	0.01
Non-GAAP	$24,780	$15,469	$5,045	$1,217	$3,572	$1.82

	For the Year Ended December 31, 2014				
	Gross margin	Operating income	Income tax provision	Net income attributable to EMC	Diluted Earnings per share attributable to EMC
GAAP	$15,249	$4,037	$868	$2,714	$1.32
Stock-based compensation expense	146	1,020	224	713	0.35
Intangible asset amortization	247	402	118	263	0.13
Restructuring charges	—	226	56	168	0.08
Acquisition and other related charges	—	186	60	108	0.05
Gain on previously held interests in strategic investments and joint venture	—	—	(11)	(77)	(0.04)
Impairment of strategic investment	—	—	10	23	0.01
VMware litigation and other contingencies	—	11	2	7	—
Non-GAAP	$15,642	$5,882	$1,327	$3,919	$1.90

We also monitor our ability to generate free cash flow in relationship to our non-GAAP net income attributable to EMC over comparable periods. For the year ended December 31, 2015, our free cash flow was $3,917 million, a decrease of 22% compared to the free cash flow generated for the year ended December 31, 2014. The free cash flow for the year ended December 31, 2015 exceeded our non-GAAP net income attributable to EMC by $345 million. EMC uses free cash flow, among other measures, to evaluate the ability of its operations to generate cash that is available for purposes other than capital expenditures and capitalized software development costs. Management believes that information regarding free cash flow provides investors with an important perspective on the cash available to make strategic acquisitions and investments, fund joint ventures, repurchase shares, service debt, pay dividends and fund ongoing operations. As free cash flow is not a measure of liquidity calculated in accordance with GAAP, free cash flow should be considered in addition to, but not as a substitute for, the analysis provided in the statements of cash flows.

The reconciliation of the above free cash flow from GAAP to non-GAAP is as follows (in millions):

	For the Three Months Ended		For the Year Ended	
	December 31, 2015	December 31, 2014	December 31, 2015	December 31, 2014
Cash Flow from Operations	$1,870	$2,231	$5,386	$6,523
Capital Expenditures	(231)	(286)	(902)	(979)
Capitalized Software Development Costs	(156)	(127)	(567)	(509)
Free Cash Flow	$1,483	$1,818	$3,917	$5,035

Free cash flow represents a non-GAAP measure related to operating cash flows. In contrast, our GAAP measures of cash flow consist of three components. These are cash flows provided by operating activities of $5,386 million and $6,523 million for the years ended December 31, 2015 and 2014, respectively, cash used in investing activities of $2,754 million and $2,551 million for the years ended December 31, 2015 and 2014, respectively, and cash used in financing activities of $2,292 million and $5,437 million for the years ended December 31, 2015 and 2014, respectively.

All of the foregoing non-GAAP financial measures have limitations. Specifically, the non-GAAP financial measures that exclude the items noted above do not include all items of income and expense that affect EMC's operations or cash flows. Further, these non-GAAP financial measures are not prepared in accordance with GAAP, may not be comparable to non-GAAP financial measures used by other companies and do not reflect any benefit that such items may confer on EMC. Management compensates for these limitations by also considering EMC's financial results as determined in accordance with GAAP.

Investments

The following table summarizes the composition of our investments at December 31, 2015 (in millions):

	Amortized Cost	Unrealized Gains	Unrealized (Losses)	Aggregate Fair Value
U.S. government and agency obligations	$2,449	$—	$(8)	$2,441
U.S. corporate debt securities	2,257	1	(10)	2,248
High yield corporate debt securities	307	2	(22)	287
Asset-backed securities	20	—	—	20
Municipal obligations	731	1	—	732
Auction rate securities	27	—	(2)	25
Foreign debt securities	2,332	—	(9)	2,323
Total fixed income securities	8,123	4	(51)	8,076
Publicly traded equity securities	126	40	(8)	158
Total	$8,249	$44	$(59)	$8,234

Under the terms of the Merger Agreement, EMC is required to provide Denali with access to EMC's cash to help fund the Merger consideration. At this time, EMC has not finalized its plan to access such cash and has not determined if there would be a need to liquidate our investment portfolio based on the likelihood of the Merger closing. For all of our securities for which the amortized cost basis was greater than the fair value at December 31, 2015, we currently have the ability and intent to hold until maturity or anticipated recovery. In making the determination as to whether the unrealized losses are other-than-temporary, we considered the length of time and extent the investment has been in an unrealized loss position, the financial condition and near-term prospects of the issuers, the issuers' credit rating and the time to maturity.

Our fixed income and equity investments are classified as available for sale and recorded at their fair market values. At December 31, 2015, with the exception of our auction rate securities, the vast majority of our investments were priced by third-party pricing vendors. These pricing vendors utilize the most recent observable market information in pricing these securities or, if specific prices are not available for these securities, use other observable inputs like market transactions involving identical or comparable securities. In the event observable inputs are not available, we assess other factors to determine the security's market value, including broker quotes or model valuations. Each month, we perform independent price verifications of all of our fixed income holdings. In the event a price fails a pre-established tolerance check, it is researched so that we can assess the cause of the variance to determine what we believe is the appropriate fair market value.

Off-Balance Sheet Arrangements, Contractual Obligations, Contingent Liabilities and Commitments

Contractual Obligations

We have various contractual obligations impacting our liquidity. The following represents our contractual obligations as of December 31, 2015 (in millions):

	Payments Due By Period				
	Total	Less than 1 year	1-2 years*	3-4 years**	More than 4 years
Operating leases	$2,008	$ 338	$510	$308	$852
Short-term debt	1,299	1,299	—	—	—
Long-term debt	5,475	—	2,491	1,989	995
Product warranty obligations	172	—	—	—	—
Other long-term obligations, including post retirement obligations	480	480	—	—	—
Purchase orders	3,149	—	—	—	—
Uncertain tax positions and related interest	582	—	—	—	—
Total	$13,165	$ 2,117	$3,001	$2,297	$1,847

*Includes payments from January 1, 2017 through December 31, 2018.

**Includes payments from January 1, 2019 through December 31, 2020.

As of December 31, 2015, we had $172 million of product warranty obligations, approximately $150 million of long-term post retirement obligations, $3,149 million of purchase orders and $582 million of liabilities for uncertain tax positions. We are not able to provide a reasonably reliable estimate of the timing of future payments relating to these obligations. The purchase orders are for manufacturing and non-manufacturing related goods and services. While the purchase orders are generally cancellable without penalty, certain vendor agreements provide for percentage-based cancellation fees or minimum restocking charges based on the nature of the product or service. Our operating leases are primarily for office space around the world. We believe leasing such space in most cases is more cost-effective than purchasing real estate. The short-term debt pertains to the Commercial Paper issued and credit facility borrowings outstanding at December 31, 2015. The long-term debt pertains to the $5.5 billion aggregate principal amount of senior notes issued in June 2013.

We have no other off-balance sheet arrangements.

Guarantees and Indemnification Obligations

EMC's subsidiaries have entered into arrangements with financial institutions for such institutions to provide guarantees for rent, taxes, insurance, leases, performance bonds, bid bonds and customs duties aggregating approximately $150 million as of December 31, 2015. The guarantees vary in length of time. In connection with these arrangements, we have agreed to guarantee substantially all of the guarantees provided by these financial institutions. EMC and certain of its subsidiaries have also entered into arrangements with financial institutions in order to facilitate the management of currency risk. EMC has agreed to guarantee the obligations of its subsidiaries under these arrangements.

We enter into agreements in the ordinary course of business with, among others, customers, resellers, original equipment manufacturers ("OEMs"), systems integrators and distributors. Most of these agreements require us to indemnify the other party against third-party claims alleging that an EMC product infringes a patent and/or copyright. Certain agreements in which we grant limited licenses to specific EMC-trademarks require us to indemnify the other party against third-party claims alleging that the use of the licensed trademark infringes a third-party trademark. Certain of these agreements require us to indemnify the other party against certain claims relating to the loss or processing of data, to real or tangible personal property damage, personal injury or the acts or omissions of EMC, its employees, agents or representatives. In addition, from time to time, we have made certain

guarantees regarding the performance of our systems to our customers. We have also made certain guarantees for obligations of our subsidiaries.
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 of EMC, its employees, agents or representatives.
We have procurement or license agreements with respect to technology that is used in our products and agreements in which we obtain rights to a product from an OEM. 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 the directors, executive officers and certain other officers of EMC and our 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 officer.
In connection with certain acquisitions, we have agreed to indemnify the current and former directors, officers and employees 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. In a substantial majority of instances, we have maintained the acquired company's directors' and officers' insurance, which should enable us to recover a portion of any future amounts paid. These indemnities vary in length of time.
Based upon our historical experience and information known as of December 31, 2015, we believe our liability on the above guarantees and indemnities at December 31, 2015 is not material.

Pension

We have a noncontributory defined benefit pension plan that was assumed as part of the Data General acquisition, which covers substantially all former Data General employees located in the United States. This plan has been frozen resulting in employees no longer accruing pension benefits for future services. The assets for this defined benefit plan are invested in common stocks and bonds. The market related value of the plan's assets is based upon the assets' fair value. The expected long-term rate of return on assets for the year ended December 31, 2015 was 6.50%.
The Company has begun to shift, and may continue to shift in the future as market conditions permit, its asset allocation to lower the percentage of investments in equity securities and increase the percentage of investments in fixed-income securities. The effect of such a change results in a reduction to the expected long-term rate of return on plan assets and an increase in future pension expense consistent with the sensitivity described below. The actual average annual rate of return for the ten years ended December 31, 2015 was 6.45%. Based upon current market conditions, the expected long-term rate of return for 2016 will be 6.50%. A 25 basis point change in the expected long-term rate of return on the plans' assets would have approximately a $1 million impact on the 2016 pension expense.
As of December 31, 2015, the pension plan had a $186 million unrecognized actuarial loss that will be expensed over the average future working lifetime of active participants. For the year ended December 31, 2015, the discount rate to determine the benefit obligation was 4.24%. The discount rate selected was based on highly rated long-term bond indices and yield curves that match the duration of the plan's benefit obligations. The bond indices and yield curve analyses include only bonds rated AA or higher from reputable rating agencies. The discount rate reflects the rate at which the pension benefits could be effectively settled. A 25 basis point change in the discount rate would have approximately a $1 million impact on the 2016 pension expense.

Critical Accounting Policies

Our consolidated financial statements are based on the selection and application of generally accepted accounting principles which require us to make estimates and assumptions about future events that affect the amounts reported in our financial statements and the accompanying notes. Future events and their effects cannot be determined with certainty. Therefore, the determination of estimates requires the exercise of judgment. Actual results could differ from those estimates, and any such differences may be material to our financial statements. We believe that the areas set forth below may involve a higher degree of judgment and complexity in their application than our other accounting policies and represent the critical accounting policies used in the preparation of our financial statements. If different assumptions or conditions were to prevail, the results could be materially different from our reported results. Our significant accounting policies are presented within Note A to the consolidated financial statements.

Revenue Recognition

The application of the appropriate guidance within the Accounting Standards Codification to our revenue is dependent upon the specific transaction and whether the sale or lease includes information systems, including hardware storage and hardware-related devices, software, including required storage operating systems and optional value-added software application programs, and services, including installation, professional, software and hardware maintenance and training, or a combination of these items. As our business evolves, the mix of products and services sold will impact the timing of when revenue and related costs are recognized. Additionally, revenue recognition involves judgments, including estimates of fair value and selling price in arrangements with multiples deliverables, assessments of expected returns and the likelihood of nonpayment. We analyze various factors, including a review of specific transactions, the credit-worthiness of our customers, our historical experience and market and economic conditions. Changes in judgments on these factors could materially impact the timing and amount of revenue and costs recognized. Should market or economic conditions deteriorate, our actual return experience could exceed our estimate.

Warranty Costs

We accrue for systems warranty costs at the time of shipment. We estimate systems warranty costs based upon historical experience, specific identification of system requirements and projected costs to service items under warranty. While we engage in extensive product quality programs and processes, our warranty obligation is affected by product failure rates, material usage and service delivery costs. To the extent that our actual systems warranty costs differed from our estimates by 5 percent, consolidated pre-tax income would have increased/decreased by approximately $9 million and $10 million in 2015 and 2014, respectively.

Asset Valuation

Asset valuation includes assessing the recorded value of certain assets, including accounts and notes receivable, investments, inventories, goodwill and other intangible assets. We use a variety of factors to assess valuation, depending upon the asset.

Accounts and notes receivable are evaluated based upon the credit-worthiness of our customers, our historical experience, the age of the receivable and current market and economic conditions. Should current market and economic conditions deteriorate, our actual bad debt experience could exceed our estimate.

The market value of our short- and long-term investments is based primarily upon the listed price of the security. At December 31, 2015, with the exception of our auction rate securities, the vast majority of our investments were priced by pricing vendors. These pricing vendors utilize the most recent observable market information in pricing these securities or, if specific prices are not available for these securities, use other observable inputs such as market transactions involving identical or comparable securities. In the event observable inputs are not available, we assess other factors to determine the security's market value, including broker quotes or model valuations. Each month, we perform independent price verifications of all of our fixed income holdings. In the event a price fails a pre-established tolerance check, it is researched so that we can assess the cause of the variance to determine what we believe is the appropriate fair market value. In the event the fair market values that we determine are not accurate or we are unable to liquidate our investments in a timely manner, we may not realize the recorded value of our investments.

We hold investments whose market values are below our cost. The determination of whether unrealized losses on investments are other-than-temporary is based upon the type of investments held, market conditions, financial condition and near-term prospects of the issuers, the time to maturity, length of the impairment, magnitude of the impairment and ability and intent to hold the investment to maturity or to the anticipated recovery. Should current market and economic conditions deteriorate, our ability to recover the cost of our investments may be impaired.

The recoverability of inventories is based upon the types and our levels of inventory held, forecasted demand, pricing, competition and changes in technology. Should current market and economic conditions deteriorate, our actual recovery could be less than our estimate.

Other intangible assets are evaluated based upon the expected period the asset will be utilized, forecasted cash flows, changes in technology and customer demand. Changes in judgments on any of these factors could materially impact the value of the asset. We perform an assessment of the recoverability of goodwill, at least annually, in the fourth quarter of each year. Our assessment is performed at the reporting unit level which, for certain of our operating segments, is one step below our segment reporting level. We employ both qualitative and quantitative tests of our goodwill. For some of our reporting units, we performed a qualitative assessment on goodwill to determine whether a quantitative assessment was necessary and determined there were no indicators of potential impairment. For other reporting units, we evaluated goodwill using a quantitative model. For all of our goodwill assessments, we determined that there was sufficient market value above the carrying value of those reporting units so that we would not expect any near term changes in the operating results that would trigger an impairment. The determination of relevant comparable industry companies impacts our assessment of fair value. Should the operating performance of our reporting units change in comparison to these companies or should the valuation of these companies change, this could impact our assessment of the fair value of the reporting units. Our discounted cash flow analyses factor in assumptions on revenue and expense growth rates. These estimates are based upon our historical experience and projections of future activity, factoring in customer demand, changes in technology and a cost structure necessary to achieve the related revenues. Additionally, these discounted cash flow analyses factor in expected amounts of working capital and weighted average cost of capital. Changes in judgments on any of these factors could materially impact the value of the reporting unit.

Restructuring Charges

We recognized restructuring charges in 2015, 2014, 2013 and prior years. The restructuring charges include, among other items, estimated employee termination benefit costs, subletting leased facilities and the cost of terminating various contracts. In addition, during 2014 and 2013, VMware incurred impairment charges related to its business realignment. The amount of the actual obligations may be different than our estimates due to various factors, including market conditions, negotiations with third parties and finalization of severance agreements with employees. Should the actual amounts differ from our estimates, the amount of the restructuring charges could be materially impacted.

Accounting for Income Taxes

As part of the process of preparing our financial statements, we are required to estimate our provision for income taxes in each of the jurisdictions in which we operate. This process involves estimating our actual current tax exposure, including assessing the risks associated with tax audits, together with assessing temporary differences resulting from the different treatment of items for tax and financial reporting purposes. These differences result in deferred tax assets and liabilities, which are included within our consolidated balance sheets. We assess the likelihood that our deferred tax assets will be realized through future taxable income and record a valuation allowance to reduce gross deferred tax assets to an amount we believe is more likely than not to be realized. In the event that actual results differ from these estimates, our provision for income taxes could be materially impacted.

Accounting for Stock-Based Compensation

For our share-based payment awards, we make estimates and assumptions to determine the underlying value of stock options, including volatility, expected life and forfeiture rates. Additionally, for awards which are performance-based, we make estimates as to the probability of the underlying performance being achieved. Changes to these estimates and assumptions may have a significant impact on the value and timing of stock-based compensation expense recognized, which could have a material impact on our consolidated financial statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risk

We are exposed to market risk, primarily from changes in foreign exchange rates, interest rates and credit risk. To manage the volatility relating to foreign exchange risk, we enter into various derivative transactions pursuant to our policies to hedge against known or forecasted market exposures.

Foreign Exchange Risk Management

As a multinational corporation, we are exposed to changes in foreign exchange rates. Any foreign currency transaction, defined as a transaction denominated in a currency other than the U.S. dollar, will be reported in U.S. dollars at the applicable exchange rate. Assets and liabilities are translated into U.S. dollars at exchange rates in effect at the balance sheet date and income and expense items are translated at average rates for the period. The primary foreign currency denominated transactions include revenue and expenses and the resultant accounts receivable and accounts payable balances are reflected on our balance sheet. Therefore, the change in the value of the U.S. dollar as compared to foreign currencies will have either a positive or negative effect on our financial position and results of operations. We enter into derivative contracts with the sole objective of decreasing the volatility of the impact of currency fluctuations. These exposures may change over time and could have a material adverse impact on our financial results. Historically, our primary exposure has related to sales denominated in the Euro, the Japanese yen, and the British pound. Additionally, we have exposure to emerging market economies, particularly in Latin America and Southeast Asia. We use foreign currency forward and option contracts to manage the risk of exchange rate fluctuations. In all cases, we use these derivative instruments to reduce our foreign exchange risk by essentially creating offsetting market exposures. The success of the hedging program depends on our forecasts of transaction activity in the various currencies. To the extent that these forecasts are overstated or understated during periods of currency volatility, we could experience unanticipated currency gains or losses. The instruments we hold are not leveraged and are not held for trading or speculative purposes.

We performed sensitivity analyses as of December 31, 2015, 2014 and 2013 based on scenarios in which market spot rates are hypothetically changed in order to produce a potential net exposure loss. The hypothetical change was based on a 10 percent strengthening or weakening in the U.S. dollar, whereby all other variables are held constant. The analyses include all of our foreign currency contracts outstanding as of December 31 for each year, as well as the offsetting underlying exposures. The sensitivity analyses indicated that a hypothetical 10 percent adverse movement in foreign currency exchange rates would result in a foreign exchange loss of $13 million, $10 million and $12 million at December 31, 2015, 2014 and 2013, respectively.

Interest Rate Risk

We maintain an investment portfolio consisting of debt and equity securities of various types and maturities. The investments are classified as available-for-sale and are all denominated in U.S. dollars. These securities are recorded on the consolidated balance sheet at market value, with any unrealized gain or temporary non-credit related loss recorded in other comprehensive loss. These instruments are not leveraged and are not held for trading purposes.

We employ a Historical Value-At-Risk calculation to calculate value-at-risk for changes in interest rates for our combined investment portfolios. This model assumes that the relationships among market rates and prices that have been observed daily over at least the last 105 days are valid for estimating risk over the next trading day. This model measures the potential loss in fair value that could arise from changes in interest rates, using a 95% confidence level and assuming a one-day holding period. The value-at-risk on the debt portion of the investment portfolio was $3 million as of December 31, 2015 and $8 million as of December 31, 2014. The average, high and low value-at-risk amounts for 2015 and 2014 were as follows (in millions):

	Average	High	Low
2015	$5	$6	$3
2014	5	8	2

The average value represents an average of the quarter-end values. The high and low valuations represent the highest and lowest values of the quarterly amounts.

Credit Risk

Financial instruments that potentially subject us to concentration of credit risk consist principally of bank deposits, money market investments, short- and long-term investments, accounts and notes receivable, and foreign currency exchange contracts. Deposits held with banks in the United States may exceed the amount of FDIC insurance provided on such deposits. Deposits held with banks outside the United States generally do not benefit from FDIC insurance. The majority of our day-to-day banking operations globally are maintained with Citibank. We believe that Citibank's position as a primary clearing bank, coupled with the substantial monitoring of their daily liquidity, both by their internal processes and by the Federal Reserve and the FDIC, mitigate some of our risk.

Our money market investments are placed with money market funds that are 2a-7 qualified. Rule 2a-7, adopted by the SEC under the Investment Company Act of 1940, establishes strict standards for quality, diversity and maturity, the objective of which is to maintain a constant net asset value of a dollar. We limit our investments in money market funds to those that are primarily associated with large, money center financial institutions and limit our exposure to Prime funds. Our short- and long-term investments are invested primarily in investment grade securities, and we limit the amount of our investment in any single issuer and institution. Due to the European financial crisis, in the fourth quarter of 2011, we took steps to limit exposure to investments and financial institutions in this region.

We provide credit to customers in the normal course of business. Credit is extended to new customers based upon checks of credit references, credit scores and industry reputation. Credit is extended to existing customers based on prior payment history and demonstrated financial stability. The credit risk associated with accounts and notes receivables is generally limited due to the large number of customers and their broad dispersion over many different industries and geographic areas. We establish an allowance for the estimated uncollectible portion of our accounts and notes receivable. The allowance was $92 million and $74 million at December 31, 2015 and 2014, respectively. We customarily sell the notes receivable we derive from our leasing activity. Generally, we do not retain any recourse on the sale of these notes. Our sales are generally dispersed to a large number of customers, minimizing the reliance on any particular customer or group of customers.

The counterparties to our foreign currency exchange contracts consist of a number of major financial institutions. In addition to limiting the amount of contracts we enter into with any one party, we monitor the credit quality of the counterparties on an ongoing basis.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

EMC CORPORATION AND SUBSIDIARIES
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS AND SCHEDULE

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

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of EMC is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) or 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, the company's principal executive and principal financial officers and effected by the company's board of directors, management and other personnel, 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 in the United States of America and includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the company;
- 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
- 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.

EMC's management assessed the effectiveness of the company's internal control over financial reporting as of December 31, 2015. In making this assessment, EMC's management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control – Integrated Framework (2013). Based on our assessment, EMC's management determined that, as of December 31, 2015, EMC's internal control over financial reporting is effective and operating at the reasonable assurance level based on those criteria.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, has audited the effectiveness of our internal control over financial reporting as stated in their report which appears on page 58 of this Annual Report on Form 10-K.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of EMC Corporation

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of EMC Corporation and its subsidiaries at December 31, 2015 and December 31, 2014 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2015 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, 2015 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 8. 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.

As discussed in Note A to the consolidated financial statements, the Company changed the manner in which it accounts for the classification of deferred taxes in the consolidated balance sheets in 2015.

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
February 25, 2016

EMC CORPORATION
CONSOLIDATED BALANCE SHEETS
(in millions, except per share amounts)

	December 31, 2015	2014
ASSETS		
Current assets:		
Cash and cash equivalents	$6,549	$6,343
Short-term investments	2,726	1,978
Accounts and notes receivable, less allowance for doubtful accounts of $90 and $72	3,977	4,413
Inventories	1,245	1,276
Other current assets	566	653
Total current assets	15,063	14,663
Long-term investments	5,508	6,334
Property, plant and equipment, net	3,850	3,766
Intangible assets, net	2,149	2,125
Goodwill	17,090	16,134
Deferred income taxes	1,164	952
Other assets, net	1,788	1,611
Total assets	$46,612	$45,585
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$1,644	$1,696
Accrued expenses	3,123	3,141
Income taxes payable	609	852
Short-term debt	1,299	—
Deferred revenue	6,210	6,021
Total current liabilities	12,885	11,710
Income taxes payable	461	306
Deferred revenue	4,592	4,144
Long-term debt	5,475	5,469
Other liabilities	480	431
Total liabilities	23,893	22,060
Commitments and contingencies (See Note M)		
Shareholders' equity:		
Preferred stock, par value $0.01; authorized 25 shares; none outstanding	—	—
Common stock, par value $0.01; authorized 6,000 shares; issued and outstanding 1,943 and 1,985 shares	19	20
Additional paid-in capital	—	—
Retained earnings	21,700	22,242
Accumulated other comprehensive income (loss), net	(579)	(366)
Total EMC Corporation's shareholders' equity	21,140	21,896
Non-controlling interests	1,579	1,629
Total shareholders' equity	22,719	23,525
Total liabilities and shareholders' equity	$46,612	$45,585

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

EMC CORPORATION
CONSOLIDATED INCOME STATEMENTS
(in millions, except per share amounts)

	For the Year Ended December 31,		
	2015	2014	2013
Revenues:			
Product sales	$13,514	$14,051	$13,690
Services	11,190	10,389	9,532
	24,704	24,440	23,222
Costs and expenses:			
Cost of product sales	5,809	5,738	5,650
Cost of services	3,904	3,453	3,099
Research and development	3,167	2,991	2,761
Selling, general and administrative	8,533	7,982	7,338
Restructuring and acquisition-related charges	450	239	224
Operating income	2,841	4,037	4,150
Non-operating income (expense):			
Investment income	94	123	128
Interest expense	(164)	(147)	(156)
Other income (expense), net	111	(251)	(257)
Total non-operating income (expense)	41	(275)	(285)
Income before provision for income taxes	2,882	3,762	3,865
Income tax provision	710	868	772
Net income	2,172	2,894	3,093
Less: Net income attributable to the non-controlling interests	(182)	(180)	(204)
Net income attributable to EMC Corporation	$1,990	$2,714	$2,889
Net income per weighted average share, basic attributable to EMC Corporation common shareholders	$1.02	$1.34	$1.39
Net income per weighted average share, diluted attributable to EMC Corporation common shareholders	$1.01	$1.32	$1.33
Weighted average shares, basic	1,944	2,028	2,074
Weighted average shares, diluted	1,962	2,059	2,160
Cash dividends declared per common share	$0.46	$0.45	$0.30

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

EMC CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions)

	For the Year Ended December 31,		
	2015	2014	2013
Net income	$2,172	$2,894	$3,093
Other comprehensive income (loss), net of taxes (benefits):			
Foreign currency translation adjustments	(169)	(135)	(44)
Changes in market value of investments:			
Changes in unrealized gains (losses), net of taxes (benefits) of $(9), $36 and $(13)	(16)	57	(22)
Reclassification adjustment for net gains realized in net income, net of taxes of $27, $23 and $6	(43)	(39)	(11)
Net change in market value of investments	(59)	18	(33)
Changes in market value of derivatives:			
Changes in unrealized gains, net of taxes of $3, $2 and $3	21	24	13
Reclassification adjustment for net gains included in net income, net of benefits (taxes) of $5, $0 and $(2)	(11)	(18)	(10)
Net change in the market value of derivatives	10	6	3
Change in actuarial net gain (loss) from pension and other postretirement plans:			
Recognition of actuarial net gain (loss) from pension and other postretirement plans, net of taxes (benefits) of $(6), $(12) and $20	(7)	(22)	34
Reclassification adjustments for net losses from pension and other postretirement plans, net of benefits $5, $3 and $6	8	6	9
Net change in actuarial gain (loss) from pension and other postretirement plans	1	(16)	43
Other comprehensive loss	(217)	(127)	(31)
Comprehensive income	1,955	2,767	3,062
Less: Net income attributable to the non-controlling interests	(182)	(180)	(204)
Less: Other comprehensive loss attributable to the non-controlling interests	4	—	—
Comprehensive income attributable to EMC Corporation	$1,777	$2,587	$2,858

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

EMC CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	For the Year Ended December 31,		
	2015	2014	2013
Cash flows from operating activities:			
Cash received from customers	$25,737	$25,360	$24,319
Cash paid to suppliers and employees	(19,312)	(17,893)	(16,708)
Dividends and interest received	100	143	169
Interest paid	(138)	(134)	(96)
Income taxes paid	(1,001)	(953)	(761)
Net cash provided by operating activities	5,386	6,523	6,923
Cash flows from investing activities:			
Additions to property, plant and equipment	(902)	(979)	(943)
Capitalized software development costs	(567)	(509)	(465)
Purchases of short- and long-term available-for-sale securities	(7,252)	(9,982)	(11,250)
Sales of short- and long-term available-for-sale securities	5,205	8,722	5,292
Maturities of short- and long-term available-for-sale securities	1,970	2,651	2,845
Business acquisitions, net of cash acquired	(1,336)	(1,973)	(770)
Purchases of strategic and other related investments	(182)	(144)	(131)
Sales of strategic and other related investments	235	101	35
Joint venture funding	—	(360)	(411)
Proceeds from divestiture of business	—	—	38
Decrease (increase) in restricted cash	75	(78)	—
Net cash used in investing activities	(2,754)	(2,551)	(5,760)
Cash flows from financing activities:			
Proceeds from the issuance of EMC’s common stock	322	503	342
Proceeds from the issuance of VMware’s common stock	126	164	197
EMC repurchase of EMC’s common stock	(2,063)	(2,969)	(3,015)
EMC purchase of VMware’s common stock	—	—	(160)
VMware repurchase of VMware’s common stock	(1,125)	(700)	(508)
Excess tax benefits from stock-based compensation	55	102	116
Payment of long-term and short-term obligations	—	(1,665)	(46)
Net proceeds from the issuance of long-term and short-term obligations	1,295	—	5,460
Contributions from non-controlling interests	5	7	105
Dividend payment	(907)	(879)	(415)
Net cash (used in) provided by financing activities	(2,292)	(5,437)	2,076
Effect of exchange rate changes on cash and cash equivalents	(134)	(83)	(62)
Net increase (decrease) in cash and cash equivalents	206	(1,548)	3,177
Cash and cash equivalents at beginning of period	6,343	7,891	4,714
Cash and cash equivalents at end of period	$6,549	$6,343	$7,891
Reconciliation of net income to net cash provided by operating activities:			
Net income	$2,172	$2,894	$3,093
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	1,907	1,864	1,665
Non-cash interest expense on debt	—	1	62
Non-cash restructuring and other special charges	40	19	8
Stock-based compensation expense	1,091	1,031	935

Provision for (recovery of) doubtful accounts	55	10	(1)
Deferred income taxes, net	(235)	(396)	(202)
Excess tax benefits from stock-based compensation	(55)	(102)	(116)
Gain on previously held interests in strategic investments and joint venture	—	(101)	—
Impairment of strategic investment	—	33	—
Other, net	6	20	40
Changes in assets and liabilities, net of acquisitions:			
Accounts and notes receivable	385	(309)	(377)
Inventories	(196)	(149)	(408)
Other assets	47	345	269
Accounts payable	(75)	167	380
Accrued expenses	(333)	(286)	(162)
Income taxes payable	(53)	314	222

EMC CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	For the Year Ended December 31,		
	2015	2014	2013
Deferred revenue	596	1,126	1,475
Other liabilities	34	42	40
Net cash provided by operating activities	$5,386	$6,523	$6,923
Non-cash investing and financing activity:			
Issuance of common stock and stock options exchanged in business acquisitions	$—	$35	$1
Dividends declared	$230	$242	$213
Interest rate swap losses	$22	$11	$—

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

EMC CORPORATION
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(in millions)

	Common Stock Shares	Common Stock Par Value	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Non-controlling Interests	Shareholders' Equity
Balance, January 1, 2013	2,107	$21	$3,691	$18,853	$(208)	$ 1,167	$23,524
Stock issued through stock option and stock purchase plans	24	—	342	—	—	—	342
Tax benefit from stock options exercised	—	—	90	—	—	—	90
Restricted stock grants, cancellations and withholdings, net	11	—	(126)	—	—	—	(126)
Repurchase of common stock	(122)	(1)	(2,999)	—	—	—	(3,000)
EMC purchase of VMware stock	—	—	(124)	—	—	(26)	(150)
Stock options issued in business acquisitions	—	—	1	—	—	—	1
Stock-based compensation	—	—	946	—	—	—	946
Cash dividends declared	—	—	—	(628)	—	—	(628)
Impact from equity transactions of non-controlling interests	—	—	(473)	—	—	140	(333)
Actuarial loss on pension plan	—	—	—	—	43	—	43
Change in market value of investments	—	—	—	—	(33)	—	(33)
Change in market value of derivatives	—	—	—	—	3	—	3
Translation adjustment	—	—	—	—	(44)	—	(44)
Reclassification of convertible debt from mezzanine	—	—	58	—	—	—	58
Net income	—	—	—	2,889	—	204	3,093
Balance, December 31, 2013	2,020	20	1,406	21,114	(239)	1,485	23,786
Stock issued through stock option and stock purchase plans	33	—	503	—	—	—	503
Tax benefit from stock options exercised	—	—	98	—	—	—	98
Restricted stock grants, cancellations and withholdings, net	10	—	(110)	—	—	—	(110)
Repurchase of common stock	(107)	—	(2,333)	(667)	—	—	(3,000)
Stock options issued in business acquisitions	—	—	35	—	—	—	35
Stock-based compensation	—	—	1,055	—	—	—	1,055

Cash dividends declared	—	—	—	(919)	—	—	(919)
Impact from equity transactions of non-controlling interests	—	—	(654)	—	—	(36)	(690)
Actuarial gain on pension plan	—	—	—	—	(16)	—	(16)
Change in market value of investments	—	—	—	—	18	—	18
Change in market value of derivatives	—	—	—	—	6	—	6
Translation adjustment	—	—	—	—	(135)	—	(135)
Convertible debt conversions and warrant settlement	29	—	—	—	—	—	—
Net income	—	—	—	2,714	—	180	2,894
Balance, December 31, 2014	1,985	20	—	22,242	(366)	1,629	23,525
Stock issued through stock option and stock purchase plans	21	—	322	—	—	—	322
Tax benefit from stock options exercised	—	—	32	—	—	—	32
Restricted stock grants, cancellations and withholdings, net	13	—	(150)	—	—	—	(150)
Repurchase of common stock	(76)	(1)	(409)	(1,623)	—	—	(2,033)

	Common Stock Shares	Common Stock Par Value	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Non-controlling Interests	Shareholders' Equity
Stock-based compensation	—	—	1,145	—	—	—	1,145
Cash dividends declared	—	—	—	(909)	—	—	(909)
Impact from equity transactions of non-controlling interests	—	—	(940)	—	—	(228)	(1,168)
Actuarial loss on pension plan	—	—	—	—	1	—	1
Change in market value of investments	—	—	—	—	(55)	(4)	(59)
Change in market value of derivatives	—	—	—	—	10	—	10
Translation adjustment	—	—	—	—	(169)	—	(169)
Net income	—	—	—	1,990	—	182	2,172
Balance, December 31, 2015	1,943	$19	$—	$21,700	$(579)	$ 1,579	$22,719

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

EMC CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

A. Summary of Significant Accounting Policies

Company

EMC Corporation ("EMC" or "the Company") and its subsidiaries develop, deliver and support the information technology ("IT") industry's broadest range of information infrastructure and virtual infrastructure technologies, solutions and services. EMC manages the Company as part of a federation of businesses: EMC Information Infrastructure, VMware Virtual Infrastructure, Pivotal and Virtustream.

EMC's Information Infrastructure business provides a foundation for organizations to store, manage, protect, analyze and secure ever-increasing quantities of information, while at the same time improving business agility, lowering cost, and enhancing competitive advantage. EMC's Information Infrastructure business comprises three segments – Information Storage, Enterprise Content Division and RSA Information Security. The results of Virtustream are currently reported within our Information Storage segment.

EMC's VMware Virtual Infrastructure business, which is represented by EMC's majority equity stake in VMware, Inc. ("VMware"), is a leader in virtualization and cloud infrastructure solutions that enable businesses to help transform the way they build, deliver and consume 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.

EMC's Pivotal business ("Pivotal") unites strategic technology, people and programs from EMC and VMware and has built a new platform comprised of next-generation data, agile development practices and a cloud independent platform-as-a-service ("PaaS"). These capabilities are made available through Pivotal's three primary offerings: Pivotal Cloud Foundry, the Pivotal Big Data Suite and Pivotal Labs.

Proposed Transaction with Dell

On October 12, 2015, EMC entered into an Agreement and Plan of Merger (the "Merger Agreement") among EMC, Denali Holding Inc., a Delaware corporation ("Denali"), Dell Inc., a Delaware corporation ("Dell"), and Universal Acquisition Co., a Delaware corporation and direct wholly owned subsidiary of Denali ("Merger Sub"), pursuant to which, among other things and subject to the conditions set forth therein, Merger Sub will merge with and into EMC (the "Merger"), with EMC continuing as the surviving corporation and a wholly owned subsidiary of Denali.

At the effective time of the Merger ("Effective Time"), each share of EMC common stock issued and outstanding will be canceled and converted into the right to receive (i) $24.05 in cash and (ii) a number of shares of common stock of Denali designated as Class V Common Stock, par value $0.01 per share (the "Class V Common Stock"), equal to the quotient obtained by dividing (A) 222,966,450 by (B) the aggregate number of shares of EMC common stock issued and outstanding immediately prior to the Effective Time. The aggregate number of shares of Class V Common Stock issued as Merger Consideration in the transaction is intended to represent 65% of EMC's economic interest in the approximately 81% of the outstanding shares of VMware currently owned by the EMC, reflecting approximately 53% of the total economic interest in the outstanding shares of VMware. Upon completion of the transaction, Denali will retain the remaining 28% of the total economic interest in the outstanding shares of VMware. Based on the estimated number of shares of EMC common stock at the closing of the transaction, EMC shareholders are expected to receive approximately 0.111 shares of Class V Common Stock for each share of EMC common stock.

The Merger Agreement contains specified termination rights for both Denali and EMC, including that, in general, either party may terminate if the Merger is not consummated on or before December 16, 2016. If EMC terminates the Merger Agreement, EMC is required to pay Denali a termination fee of $2.5 billion. If Denali terminates the Merger Agreement, they are required to pay a termination fee of $4 billion under specified circumstances, and in certain instances, an alternative termination fee of $6 billion.

The transaction is expected to close in mid-2016. The completion of the Merger is subject to certain conditions including EMC shareholder approval, the expiration or termination of the applicable waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, the receipt of certain other regulatory approvals in various jurisdictions and the effectiveness of the registration statement on Form S-4 to be filed by Denali in connection with the registration of shares of Class V Common Stock issuable in connection with the Merger.

The Merger Agreement contains representations and warranties customary for transactions of this nature. EMC has agreed to various customary covenants and agreements, including, among others, agreements to conduct its business in the ordinary course during the period between the execution of the Merger Agreement and the effective time of the Merger. In addition, without the consent of Denali, EMC may not take, authorize, agree or commit to do certain actions outside of the ordinary course of business, including acquiring businesses or incurring capital expenditures above specified thresholds, issuing additional debt facilities and repurchasing outstanding EMC common stock.

Under the terms of the Merger Agreement, EMC is required to provide Denali with access to EMC's cash to help fund the Merger consideration. At this time, EMC has not finalized its plan to access such cash and has not determined if there would be a need to repatriate cash to meet the requirements of the Merger. To date, we have asserted our overseas cash as indefinitely reinvested; however if these overseas funds are required to be repatriated to the U.S. in accordance with the Merger Agreement, we may be required to accrue and pay U.S. taxes to repatriate these funds. Other than transaction expenses associated with the proposed Merger, the terms of the Merger Agreement did not impact EMC's consolidated financial statements as of and for the year ended December 31, 2015.

Accounting Principles

The financial statements and accompanying notes are prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP").

Principles of Consolidation

These consolidated financial statements include the accounts of EMC, its wholly-owned subsidiaries, and Pivotal and VMware, companies which are majority-owned by EMC. All intercompany transactions have been eliminated.

EMC's interest in VMware was approximately 81% and 80% at December 31, 2015 and 2014, respectively. VMware's financial results have been consolidated with that of EMC for all periods presented as EMC is VMware's controlling stockholder. The portion of the results of operations of VMware allocable to its other owners is shown as net income attributable to the non-controlling interests on EMC's consolidated income statements. Additionally, the cumulative portion of the results of operations of VMware allocable to its other owners, along with the interest in the net assets of VMware attributable to those other owners, is shown as a component of non-controlling interests on EMC's consolidated balance sheets and as a reduction of net income attributable to EMC shareholders.

EMC's economic interest in Pivotal was approximately 83% and 84% at December 31, 2015 and 2014, respectively. Pivotal's financial results have been consolidated with that of EMC for all periods presented as EMC is Pivotal's controlling stockholder. Because the GE non-controlling interest in Pivotal is in the form of a preferred equity instrument, there is no net income attributable to GE's non-controlling interest on EMC's consolidated income statements. The portion of the results of operations of Pivotal allocable to its other owners, along with the interest in the net assets of Pivotal attributable to those other owners are shown as a component of non-controlling interests on EMC's consolidated balance sheets and as a reduction of net income attributable to EMC shareholders.

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 at the date of the financial statements, the reported amounts of revenues and expenses during the reporting period and the disclosure of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates.

Revenue Recognition

We derive revenue from sales of systems, software licenses and services. We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable and collectability is reasonably assured. This policy is applicable to all sales, including sales to resellers and end-users. Delivery is achieved when our product has been physically shipped or made available for use by electronic delivery and the risk of loss has been transferred which, for most of our product sales, occurs upon shipment. The following summarizes the major terms of our contractual relationships with our customers and the manner in which we account for sales transactions.

- Product revenue

Product revenue consists of systems and software licenses sales that are delivered, sold as a subscription or sold on a consumption basis. System sales include storage hardware, required system software and other hardware-related devices. Software license sales include optional, stand-alone software applications. Our software applications provide customers with resource

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management, backup and archiving, information security, information management and intelligence, data analytics and server virtualization capabilities. Depending on the nature of the arrangement, revenue for system and software license sales is generally recognized upon shipment or electronic delivery. For certain arrangements, revenue is recognized based on usage or ratably over the term of the arrangement. License revenue from royalty arrangements is recognized upon either receipt of royalty reports or payments from third parties.

• Services revenue

Services revenue consists of installation services, professional services, software maintenance, hardware maintenance, training and software sold as a service.

We recognize revenue from fixed-price support or maintenance contracts sold for both hardware and software, including extended warranty contracts, ratably over the contract period and recognize the costs associated with these contracts as incurred. Generally, installation and professional services are not considered essential to the functionality of our products as these services do not alter the product capabilities and may be performed by our customers or other vendors. Installation services revenues are recognized as the services are being performed. Professional services revenues on engagements for which reasonably dependable estimates of progress toward completion are capable of being made are recognized using the proportional performance method, which recognizes revenue based on labor costs incurred in proportion to total expected labor costs to perform the service. Where services are considered essential to the functionality of our products, revenue for the products and services is recorded over the service period. Professional services engagements that are sold on a time and materials basis are recognized based upon the labor costs incurred. Revenues from software sold as a service is recognized based on usage or ratably over the term of the service period depending upon the nature of the arrangement. Revenues on all other professional services engagements are recognized upon completion.

• Multiple element arrangements

When more than one element, such as hardware, software and services are contained in a single arrangement, we first allocate revenue based upon the relative selling price into two categories: (1) non-software components, such as hardware and any hardware-related items, such as required system software that functions with the hardware to deliver the essential functionality of the hardware and related post-contract customer support, software as a service subscriptions and other services and (2) software components, such as optional software applications and related items, such as post-contract customer support and other services. We then allocate revenue within the non-software category to each element based upon their relative selling price using a hierarchy of vendor-specific objective evidence (“VSOE”), third-party evidence of selling price (“TPE”) or estimated selling prices (“ESP”), if VSOE or TPE does not exist. We allocate revenue within the software category to the undelivered elements based upon their fair value using VSOE with the residual revenue allocated to the delivered elements. If we cannot objectively determine the VSOE of the fair value of any undelivered software element, we defer revenue for all software components until all elements are delivered and services have been performed, until fair value can objectively be determined for any remaining undelivered elements, or until software maintenance is the only undelivered element in which case revenue is recognized over the maintenance term for all software elements.

We allocate the amount of revenue recognized for delivered elements to the amount that is not subject to forfeiture or refund or contingent on the future delivery of products or services.

Customers under software maintenance agreements are entitled to receive updates and upgrades on a when-and-if-available basis, and various types of technical support based on the level of support purchased. In the event specific features, functionality, entitlements, or the release version of an upgrade or new product have been announced but not delivered, and customers will receive that upgrade or new product as part of a current software maintenance contract, a specified upgrade is deemed created and product revenues are deferred on purchases made after the announcement date until delivery of the upgrade or new product. The amount and elements to be deferred are dependent on whether we have established VSOE of fair value for the upgrade or new product.

• Indirect channel sales

We market and sell our products through our direct sales force and indirect channels such as independent distributors and value-added resellers. For substantially all of our indirect sales, we recognize revenues on products sold to resellers and distributors on a sell through basis. These product sales are evidenced by a master distribution agreement, together with evidence of an end-user arrangement, on a transaction-by-transaction basis.

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We offer rebates to certain channel partners. We generally recognize the amount of the rebates as a reduction of revenues when the underlying revenue is recognized. We also offer marketing development funds to certain channel partners. We generally record the amount of the marketing development funds, based on the maximum potential liability, as a marketing expense as the funds are earned by the channel partners.

- Shipping terms

Our sales contracts generally provide for the customer to accept risk of loss when the product leaves our facilities. When shipping terms or local laws do not allow for passage of risk of loss at shipping point, we defer recognizing revenue until risk of loss transfers to the customer.

- Leases

Revenue from sales-type leases is recognized at the net present value of future lease payments. Revenue from operating leases is recognized over the lease period.

- Other

We accrue for the estimated costs of systems’ warranty at the time of sale. We reduce revenue for estimated sales returns at the time of sale. Systems’ warranty costs are estimated based upon our historical experience and specific identification of systems’ requirements. Sales returns are estimated based upon our historical experience and specific identification of probable returns.

Deferred Revenue

Our deferred revenue consists primarily of deferred hardware and software maintenance and unearned license fees, which are recognized ratably over the contract term as either product or services revenue depending on the nature of the item, and deferred professional services, including education and training, which are recognized in services revenue as the services are provided.

Shipping and Handling

Shipping and handling reimbursements from our customers are included in product sales revenues with the associated costs included in cost of product sales.

Foreign Currency Translation

The local currency is the functional currency of the majority of our subsidiaries. Assets and liabilities are translated into U.S. dollars at exchange rates in effect at the balance sheet date. Income and expense items are translated at daily rates.

Gains and losses from foreign currency transactions are included in other income (expense), net, and consist of net gains of $18 million in 2015 and net losses of $30 million and $2 million in 2014 and 2013, respectively. Foreign currency translation adjustments are included in other comprehensive income (loss).

Derivatives

We use derivatives to hedge foreign currency exposures related to foreign currency denominated assets and liabilities and forecasted revenue and expense transactions.

We hedge our exposure in foreign currency denominated monetary assets and liabilities with foreign currency forward and option contracts. Since these derivatives hedge existing exposures that are denominated in foreign currencies, the contracts do not qualify for hedge accounting. Accordingly, these outstanding non-designated derivatives are recognized on the consolidated balance sheet at fair value and the changes in fair value from these contracts are recorded in other income (expense), net, in the consolidated income statements. These derivative contracts mature in less than one year.

We also use foreign currency forward and option contracts to hedge our exposure on a portion of our forecasted revenue and expense transactions. These derivatives are designated as cash flow hedges. We did not have any derivatives designated as fair value hedges as of December 31, 2015. All outstanding cash flow hedges are recognized on the consolidated balance sheets at fair value with changes in their fair value recorded in accumulated other comprehensive income (loss) until the underlying forecasted transactions occur. To achieve hedge accounting, certain criteria must be met, which includes (i) ensuring at the inception of the hedge that formal documentation exists for both the hedging relationship and the entity's risk management objective and strategy for undertaking the hedge, and (ii) at the inception of the hedge and on an ongoing basis, the hedging relationship is expected to be highly effective in achieving offsetting changes in fair value attributed to the hedged risk during the period that the hedge is designated. Further, an assessment of effectiveness is required at a minimum on a quarterly basis. Absent meeting these criteria, changes in fair value are recognized currently in other income (expense), net, in the consolidated income statements. Once the underlying forecasted transaction occurs, the gain or loss from the derivative designated as a hedge of the transaction is reclassified from accumulated other comprehensive income (loss) to the consolidated income statements, in the related revenue or expense caption, as appropriate. In the event the underlying forecasted transaction does not occur, the amount recorded in accumulated other comprehensive income (loss) will be reclassified to other income (expense), net, in the consolidated income statements in the then-current period. Any ineffective portion of the derivatives designated as cash flow hedges is recognized in current earnings. The ineffective portion of the derivatives includes gains or losses associated with differences between actual and forecasted amounts. Our cash flow hedges generally mature within six months or less. The notional amount of cash flow hedges outstanding as of December 31, 2015, 2014 and 2013 were $473 million, $245 million and $384 million, respectively.

We do not engage in currency speculation. For purposes of presentation within the consolidated statement of cash flows, derivative gains and losses are presented within net cash provided by operating activities.

Our derivatives and their related activities are not material to our consolidated balance sheets or consolidated income statements.

Cash and Cash Equivalents

Cash and cash equivalents include highly liquid investments with a maturity of ninety days or less at the time of purchase. Cash equivalents consist primarily of money market securities, U.S. Treasury bills, U.S. Agency discount notes and commercial paper. Cash equivalents are stated at fair value. See Note F.

Allowance for Doubtful Accounts

We maintain an allowance for doubtful accounts for the estimated probable losses on uncollectible accounts and notes receivable. The allowance is based upon the creditworthiness of our customers, our historical experience, the age of the receivable and current market and economic conditions. Uncollectible amounts are charged against the allowance account. The allowance for doubtful accounts is maintained against both our current and non-current accounts and notes receivable balances. The balances in the allowance accounts at December 31, 2015 and 2014 were as follows (table in millions):

	December 31,	
	2015	2014
Current	$90	$72
Non-current (included in other assets, net)	2	2
	$92	$74

Investments

Unrealized gains and temporary loss positions on investments classified as available-for-sale are included within accumulated other comprehensive income (loss), net of any related tax effect. Upon realization, those amounts are reclassified from accumulated other comprehensive income (loss) to investment income. Realized gains and losses and other-than-temporary impairments are reflected in the consolidated income statement in investment income. For investments accounted for utilizing the fair value option, changes to fair value are recognized in the consolidated income statement in other income (expense), net.

Inventories

Inventories are stated at the lower of cost (first-in, first-out) or market, not in excess of net realizable value.

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Property, Plant and Equipment

Property, plant and equipment are recorded at cost. Buildings under development are included in building construction in progress. Depreciation commences upon placing the asset in service and is recognized on a straight-line basis over the estimated useful lives of the assets, as follows:

Furniture and fixtures	5-10 years
Equipment and software	2-10 years
Improvements	5-31 years
Buildings	15-51 years

Upon retirement or disposition, the asset cost and related accumulated depreciation are removed with any gain or loss recognized in the consolidated income statements. Repair and maintenance costs, including planned maintenance, are expensed as incurred.

Research and Development and Capitalized Software Development Costs

Research and development ("R&D") costs are expensed as incurred. R&D costs include salaries and benefits, stock-based compensation and other personnel-related costs associated with product development. Also included in R&D expenses are infrastructure costs, which consist of equipment and material costs, facilities-related costs, depreciation expense and intangible asset amortization. Material software development costs incurred subsequent to establishing technological feasibility through the general release of the software products are capitalized. Technological feasibility is demonstrated by the completion of a detailed program design or working model, if no program design is completed. GAAP requires that annual amortization expense of the capitalized software development costs be the greater of the amounts computed using the ratio of gross revenue to a products' total current and anticipated revenues, or the straight-line method over the products' remaining estimated economic life. Capitalized costs are amortized over periods ranging from eighteen months to two years which represents the products' estimated economic life.

Unamortized software development costs were $934 million and $829 million at December 31, 2015 and 2014, respectively, and are included in other assets, net. Amortization expense was $514 million, $482 million and $427 million in 2015, 2014 and 2013, respectively. Amounts capitalized were $619 million, $549 million and $487 million in 2015, 2014 and 2013, respectively. The amounts capitalized include stock-based compensation which is not reflected in the consolidated statements of cash flows as it is a non-cash item.

Long-lived Assets

Purchased intangible assets, other than goodwill, are amortized over their estimated useful lives which range from one to twenty years. Intangible assets include purchased technology, trademarks and tradenames, customer relationships and customer lists, software licenses, patents, leasehold interest and other intangible assets, which include backlog, non-competition agreements and non-solicitation agreements. Most of our intangible assets are amortized based upon the pattern in which the economic benefits of the intangible assets are being utilized; the remainder are amortized on a straight-line basis. Goodwill is not amortized; it is carried at its historical cost.

We periodically review our long-lived assets for impairment. We initiate reviews for impairment whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable or that the useful lives of these assets are no longer appropriate. Each impairment test, other than goodwill, is based on a comparison of the un-discounted cash flows to the recorded value of the asset. If an impairment is indicated, the asset is written down to its estimated fair value.

We test goodwill for impairment in the fourth quarter of each year or more frequently if events or changes in circumstances indicate that the asset might be impaired. The test is based on a comparison of the reporting unit's book value to its estimated fair market value. We perform both qualitative and quantitative tests of our goodwill.

Investments in Joint Ventures

We make investments in joint ventures. For each joint venture investment, we consider the facts and circumstances in order to determine whether it qualifies for cost, equity or fair value method accounting or whether it should be consolidated.

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In 2009, Cisco and EMC formed VCE Company LLC ("VCE"), with investments from VMware and Intel. In December 2014, EMC acquired the controlling interest in VCE and, since the date of acquisition, has consolidated VCE's financial position and results of operations as part of EMC's consolidated financial statements.

Prior to the acquisition of the controlling interest in VCE, we considered VCE a variable interest entity and accounted for the investment under the equity method with our portion of the gains and losses recognized in other income (expense), net in the consolidated income statements for the majority of 2014 and all of 2013. Our consolidated share of VCE's losses, based upon our portion of the overall funding, was approximately 64% and 63% for the years ended December 31, 2014 and 2013, respectively. During the years ended December 31, 2014 and 2013, we recorded $357 million and $298 million, respectively, in net losses from VCE and $803 million and $439 million, respectively, in revenue from sales of product and services to VCE.

Advertising

Advertising costs are expensed as incurred. Advertising expense was $29 million, $25 million and $23 million in 2015, 2014 and 2013, respectively.

Legal Costs

Legal costs incurred in connection with loss contingencies are recognized when the costs are probable of occurrence and can be reasonably estimated.

Income Taxes

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

Accounting for uncertainty in income taxes recognized in the financial statements is in accordance with accounting authoritative guidance, which prescribes a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination. If the tax position is deemed "more-likely-than-not" to be sustained, the tax position is then assessed to determine the amount of benefit to recognize in the financial statements. The amount of the benefit that may be recognized is the largest amount that has a greater than 50 percent likelihood of being realized upon ultimate settlement.

We do not provide for a U.S. income tax liability on undistributed earnings of our foreign subsidiaries. The earnings of non-U.S. subsidiaries, which reflect full provision for non-U.S. income taxes, are currently indefinitely reinvested in non-U.S. operations or are expected to be remitted substantially free of additional tax. Under the terms of the Merger Agreement, EMC is required to provide Denali with access to EMC's cash to help fund the Merger consideration. At this time, EMC has not finalized its plan to access such cash and has not determined if there would be a need to repatriate cash to meet the requirements of the Merger. If these overseas funds are required to be repatriated to the U.S. in accordance with the Merger Agreement, we may be required to accrue and pay U.S. taxes to repatriate these funds.

Sales Taxes

Sales and other taxes collected from customers and subsequently remitted to government authorities are recorded as cash or accounts receivable with a corresponding offset recorded to sales taxes payable. These balances are removed from the consolidated balance sheet as cash is collected from the customers and remitted to the tax authority.

Earnings Per Share

Basic net income per share is computed using the weighted-average number of shares of our common stock outstanding during the period. Diluted net income per share is computed using the weighted-average number of common and dilutive common equivalent shares outstanding during the period. Common equivalent shares consist of stock options, unvested restricted stock and restricted stock units, the shares issuable under our $1.725 billion 1.75% convertible senior notes due 2013 (the “2013 Notes”)

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and the associated warrants. See Note E for further information regarding the 2013 Notes and the associated warrants and Note N for further information regarding the calculation of diluted net income per weighted-average share. Additionally, for purposes of calculating diluted net income per common share, net income is adjusted for the difference between VMware's reported diluted and basic earnings per share, if any, multiplied by the number of shares of VMware held by EMC.

Retirement Benefits

Pension cost for our domestic defined benefit pension plan is funded to the extent that the current pension cost is deductible for U.S. Federal tax purposes and to comply with the Employee Retirement Income Security Act and the General Agreement on Tariff and Trade Bureau additional minimum funding requirements. Net pension cost for our international defined benefit pension plans are generally funded as accrued.

Concentrations of Risks

Financial instruments that potentially subject us to concentration of credit risk consist principally of bank deposits, money market investments, short- and long-term investments, accounts and notes receivable, and foreign currency exchange contracts. Deposits held with banks in the United States may exceed the amount of FDIC insurance provided on such deposits. Deposits held with banks outside the United States generally do not benefit from FDIC insurance. The majority of our day-to-day banking operations globally are maintained with Citibank. We believe that Citibank's position as a primary clearing bank, coupled with the substantial monitoring of their daily liquidity, both by their internal processes and by the Federal Reserve and the FDIC, mitigate some of our risk.

Our money market investments are placed with money market funds that are 2a-7 qualified. Rule 2a-7, adopted by the United States Securities and Exchange Commission (the "SEC") under the Investment Company Act of 1940, establishes strict standards for quality, diversity and maturity, the objective of which is to maintain a constant net asset value of a dollar. We limit our investments in money market funds to those that are primarily associated with large, money center financial institutions and limit our exposure to Prime funds. Our short- and long-term investments are invested primarily in investment grade securities, and we limit the amount of our investment in any single issuer.

We provide credit to customers in the normal course of business. Credit is extended to new customers based on checks of credit references, credit scores and industry reputation. Credit is extended to existing customers based on prior payment history and demonstrated financial stability. The credit risk associated with accounts and notes receivables is generally limited due to the large number of customers and their broad dispersion over many different industries and geographic areas. We establish an allowance for the estimated uncollectible portion of our accounts and notes receivable. We customarily sell the notes receivable we derive from our leasing activity. Generally, we do not retain any recourse on the sale of these notes. Our sales are generally dispersed among a large number of customers, minimizing the reliance on any particular customer or group of customers.

The counterparties to our foreign currency exchange contracts consist of a number of major financial institutions. In addition to limiting the amount of contracts we enter into with any one party, we monitor the credit quality of the counterparties on an ongoing basis.

We purchase or license many sophisticated components and products from one or a limited number of qualified suppliers. If any of our suppliers were to cancel or materially change contracts or commitments with us or fail to meet the quality or delivery requirements needed to satisfy customer orders for our products, we could lose customer orders. We attempt to minimize this risk by finding alternative suppliers or maintaining adequate inventory levels to meet our forecasted needs.

Accounting for Stock-Based Compensation

We have selected the Black-Scholes option-pricing model to determine the fair value of our stock option awards. For stock options, restricted stock and restricted stock units, we recognize compensation cost on a straight-line basis over the awards' vesting periods for those awards which contain only a service vesting feature. For awards with a performance condition vesting feature, when achievement of the performance condition is deemed probable, we recognize compensation cost on a graded-vesting basis over the awards' expected vesting periods.

Reclassifications

Certain prior year amounts have been reclassified to conform with the current year's presentation.

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In November 2015, the Financial Accounting Standards Board ("FASB") issued new accounting guidance on the balance sheet classification of deferred taxes which requires that all deferred taxes be presented as non-current. We elected to early adopt this new accounting guidance for the year ended December 31, 2015 and applied it retrospectively to all years presented in these financial statements. As a result of adopting this guidance, we reclassified current deferred income tax assets and liabilities to non-current deferred income tax assets and liabilities. This resulted in $1,070 million being reclassified from deferred income taxes (current asset), $156 million being reclassified from other assets, net and $274 million being reclassified from deferred income taxes (non-current liability) to deferred income taxes (non-current asset) on the consolidated balance sheets for the year ended December 31, 2014. There was no impact to our consolidated income statements or statements of cash flows for any of the periods presented.
In April 2015, the FASB issued updated guidance to clarify the required presentation of debt issuance costs. The amended guidance requires that debt issuance costs be presented in the balance sheet as a direct reduction from the carrying amount of the related debt liability rather than as an asset. We adopted the guidance during the second quarter of 2015, and accordingly, reclassified the debt issuance costs on our consolidated balance sheets. There was no impact to our consolidated income statements or statements of cash flows for any of the periods presented.

Recent Accounting Pronouncements

In September 2015, the FASB issued updated guidance related to simplifying the accounting for measurement period adjustments related to business combinations. The amended guidance eliminates the requirement to retrospectively account for adjustments made during the measurement period. The standard is effective beginning January 1, 2016, with early adoption permitted. We do not expect it to have a material impact on our consolidated financial position, results of operations or cash flows.

In April 2015, the FASB issued guidance to customers about whether a cloud computing arrangement includes software and how to account for that software license. The new guidance does not change the accounting for a customer's accounting for service contracts. The standard is effective beginning January 1, 2016, with early adoption permitted, and may be applied prospectively or retrospectively. We do not expect it to have a material impact on our consolidated financial position, results of operations or cash flows.

In May 2014, the FASB issued a standard on revenue recognition providing a single, comprehensive revenue recognition model for all contracts with customers. The revenue standard is based on the principle that revenue should be recognized to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard, as amended, is effective beginning January 1, 2018, with early adoption permitted but not earlier than the original effective date of January 1, 2017. The principles may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of initial application. We are currently evaluating the adoption method options and the impact of the new guidance on our consolidated financial statements.
B. Non-controlling Interests
The non-controlling interests' share of equity in VMware is reflected as a component of the non-controlling interests in the accompanying consolidated balance sheets and was $1,481 million and $1,524 million as of December 31, 2015 and 2014, respectively. At December 31, 2015, EMC held approximately 97% of the combined voting power of VMware's outstanding common stock and approximately 81% of the economic interest in VMware.

The non-controlling interests' share of equity in Pivotal is reflected as a component of the non-controlling interests in the accompanying consolidated balance sheets as $98 million at December 31, 2015 and $105 million at December 31, 2014. At December 31, 2015 and 2014, EMC consolidated held approximately 83% and 84%, respectively, of the economic interest in Pivotal.

GE’s interest in Pivotal is in the form of a preferred equity instrument. Consequently, there is no net income attributable to the GE non-controlling interest related to Pivotal on the consolidated income statements. Additionally, due to the terms of the preferred instrument, GE’s non-controlling interest on the consolidated balance sheets is generally not impacted by Pivotal’s equity related activity. The preferred equity instrument is convertible into common shares at GE’s election at any time.

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The effect of changes in our ownership interest in VMware and Pivotal on our equity was as follows (table in millions):

	For the Year Ended	
	December 31, 2015	December 31, 2014
Net income attributable to EMC Corporation	$1,990	$2,714
Transfers (to) from the non-controlling interests:		
Increase in EMC Corporation's additional paid-in-capital for VMware and Pivotal equity issuances	60	87
Decrease in EMC Corporation's additional paid-in-capital for VMware's and Pivotal's other equity activity	(1,000)	(741)
Net transfers (to) from non-controlling interests	(940)	(654)
Change from net income attributable to EMC Corporation and transfers from the non-controlling interests	$1,050	$2,060

C. Acquisitions

2015 Acquisitions

Acquisition of Virtustream

On July 9, 2015, EMC acquired all of the outstanding capital stock of Virtustream Group Holdings, Inc. ("Virtustream"), a cloud software and services company that delivers mission-critical enterprise applications in the cloud. This acquisition represents a key element of EMC's strategy to help customers move applications to cloud-based IT environments. The consideration paid for Virtustream was $1,220 million, net of cash acquired.

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

Current assets	$20
Property, plant and equipment, net	14
Intangible assets:	
Purchased technology (weighted-average useful life of 8.6 years)	302
Customer relationships and customer lists (weighted-average useful life of 12.3 years)	50
Trademarks and tradenames (weighted-average useful life of 7.6 years)	27
Total intangible assets, net, excluding goodwill	379
Goodwill	873
Other assets, net	12
Total assets acquired	1,298
Current liabilities	(28)
Deferred income taxes	(41)
Other liabilities	(9)
Total liabilities assumed	(78)
Fair value of assets acquired and net liabilities assumed	$1,220

The total weighted-average amortization period for the intangible assets is 9.0 years. The intangible assets are being amortized over the pattern in which the economic benefits of the intangible assets are being utilized, which in general reflects the cash flows generated from such assets. Goodwill is calculated as the excess of the consideration over the fair value of the net assets, including intangible assets, recognized and is primarily related to expected synergies from the transaction, including complementary products that will enhance our overall product portfolio, which we believe will result in incremental revenue and profitability. The goodwill associated with this acquisition is currently reported within our Information Storage segment. None of the goodwill is deductible for tax purposes. The results of this acquisition have been included in the consolidated financial statements from the date of purchase. Pro forma results of operations have not been presented as the results of the acquired company were not material to our consolidated results of operations for the years ended 2015 or 2014.

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Other 2015 Acquisitions

During the year ended December 31, 2015, EMC acquired seven businesses, excluding Virtustream, which were not material either individually or in the aggregate to our December 31, 2015 results. Complementing the Information Storage segment, we acquired all of the outstanding capital stock of Renasar Technologies, Inc., a provider of extensible physical middleware, CloudLink, a provider of cloud data security software and Graphite Systems, a developer of server-side flash storage. Complementing our Pivotal segment, we acquired all of the outstanding capital stock of Quickstep Technologies, LLC, a query execution technology developer and CloudCredo, a provider of CloudFoundry. VMware acquired all of the outstanding capital stock of Immidio B.V. and Boxer, Inc.

The aggregate consideration for these seven acquisitions, excluding Virtustream, was $120 million which represents cash consideration, net of cash acquired during 2015. The consideration was allocated to the fair value of the assets acquired and liabilities assumed based on estimated fair values as of the respective acquisition dates. The aggregate allocation to goodwill, intangibles, and net liabilities was approximately $89 million, $39 million and $8 million, respectively. EMC did not issue common stock for any of its acquisitions during 2015.

The following represents the aggregate allocation of the purchase price for all of the aforementioned acquisitions, excluding Virtustream, to intangible assets (table in millions):

Purchased technology (weighted-average useful life of 3.7 years)	$37
Non-compete agreement (weighted-average useful life of 2.1 years)	2
Total intangible assets	$39

The total weighted-average amortization period for the intangible assets is 3.7 years. Most of our intangible assets are being amortized based upon the pattern in which the economic benefits of the intangible assets are being utilized; the remainder is amortized on a straight-line basis. Goodwill is calculated as the excess of the consideration over the fair value of the net assets, including intangible assets, and is primarily related to expected synergies from the transaction. The goodwill is not deductible for U.S. federal income tax purposes. The results of these acquisitions have been included in the consolidated financial statements from the date of purchase. Pro forma results of operations have not been presented as the results of the acquired companies were not material to our consolidated results of operations for the years ended 2015 or 2014.

2014 Acquisitions

Acquisition of AirWatch

During the year ended December 31, 2014, VMware acquired all of the outstanding capital stock 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 its solutions within the enterprise mobile and security space. The aggregate consideration paid for AirWatch was $1,128 million, net of cash acquired, including cash of $1,104 million and the fair value of assumed unvested equity attributed to pre-combination services totaling $24 million.

Merger consideration totaling $300 million is payable to certain employees of AirWatch subject to specified future employment conditions and will be recognized as expense over the requisite service period. Compensation expense totaling $145 million and $141 million was recognized during the years ended December 31, 2015 and 2014, respectively.

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

Other current assets	$61
Intangible assets:	
Purchased technology (weighted-average useful life of 6 years)	118
Customer relationships and customer lists (weighted-average useful life of 8 years)	78
Trademarks and tradenames (weighted-average useful life of 8 years)	40
Other (weighted-average useful life of 3 years)	14
Total intangible assets, net, excluding goodwill	250
Goodwill	868
Other assets	30
Total assets acquired	1,209
Unearned revenue	(45)
Other assumed liabilities, net of acquired assets	(72)
Total net liabilities assumed	(117)
Fair value of assets acquired and net liabilities assumed	$1,092

Other 2014 Acquisitions

During the year ended December 31, 2014, EMC acquired seven businesses which were not material either individually or in the aggregate to our 2014 results. Complementing the Information Storage segment, we acquired the controlling interest in VCE, a joint venture with Cisco, which delivers through Vblock infrastructure platforms an integrated IT offering that combines network, computing, storage, management, security and virtualization technologies for converged infrastructures and cloud based computing models; all of the outstanding capital stock of DSSD, Inc., a developer of an innovative new rack-scale flash storage architecture for I/O-intensive in-memory databases and Big Data workloads; and TwinStrata, Inc., a provider of advanced tiering cloud technology. We also acquired all of the outstanding capital stock of the Cloudscaling Group, Inc., a leading provider of OpenStack Powered Infrastructure-as-a-Service ("IaaS") for private and hybrid cloud solutions; Maginatics, Inc., a cloud technology provider offering a highly consistent global namespace accessible from any device or location; and Spanning Cloud Apps, Inc., a leading provider of subscription-based backup and recovery for cloud based applications and data.

Complementing our RSA Information Security segment, we acquired Symplified, Inc., a provider of a comprehensive cloud identity solution that helps service-oriented IT organizations simplify user access, regain visibility and control over application usage and meet security and compliance requirements.

In addition to the acquisition of AirWatch, during the year ended December 31, 2014, VMware completed three business combinations which were not material either individually or in the aggregate. VMware acquired all of the outstanding common stock of CloudVolumes, Inc., a provider of real-time application delivery technology that enables enterprises to deliver native applications to virtualized environments on-demand, and two other immaterial business combinations.

The aggregate consideration for these ten acquisitions, excluding AirWatch, was $1,515 million, which consisted of $1,404 million of cash consideration, net of cash acquired and $10 million for the fair value of assumed unvested equity attributed to pre-combination services. In connection with these acquisitions, we recognized a $101 million gain on previously held interests in strategic investments and joint ventures which was recognized in other income (expense), net in the consolidated income statements in 2014. The consideration was allocated to the fair value of the assets acquired and liabilities assumed based on estimated fair values as of the respective acquisition dates. The aggregate allocation to goodwill, intangibles, and net liabilities was approximately $847 million, $484 million and $184 million, respectively.

The fair value of our stock options for all of the aforementioned acquisitions, excluding AirWatch, in 2014 was estimated using the following weighted-average assumptions:

Expected term (in years)	2.6	
Expected volatility	27.3	%
Risk-free interest rate	0.7	%
Dividend yield	1.7	%

The following represents the aggregate allocation of the purchase price for all of the aforementioned acquisitions, excluding AirWatch, to intangible assets (table in millions):

Purchased technology (weighted-average useful life of 6 years)	$460
Customer relationships (weighted-average useful life of 5 years)	10
Trademarks and tradenames (weighted-average useful life of 4 years)	14
Total intangible assets	$484

The total weighted-average amortization period for the intangible assets is 6 years. Most of our intangible assets are being amortized based upon the pattern in which the economic benefits of the intangible assets are being utilized; the remainder are amortized on a straight-line basis.

2013 Acquisitions

During the year ended December 31, 2013, EMC acquired eight businesses. Complementing the Information Storage segment, we acquired substantially all of the assets of Adaptivity, Inc., a provider of software solutions that automate and accelerate enterprise IT migration to the cloud and all of the outstanding capital stock of ScaleIO, a provider of server-side storage software. A member of our board of directors is an investor in a limited partnership which held an equity interest in ScaleIO. The director did not participate in any votes of the board of directors or any committee thereof approving the acquisition, and the terms of the acquisition were negotiated at arms' length.

Complementing the Enterprise Content Division segment, we also acquired all of the outstanding capital stock of Sitrof Technologies, a document management consultancy provider. Complementing the RSA Information Security segment, we acquired all of the outstanding common stock of Aveksa, Inc., a provider of cloud-based identity and access management solutions and PassBan Corporation, a developer of mobile and cloud-based multi-factor authentication technology. Complementing the Pivotal segment, Pivotal acquired all of the outstanding common stock of Xtreme Labs, a provider of mobile strategy and product development.

Additionally, during the year ended December 31, 2013, VMware acquired all of the outstanding common stock of two companies, which were not material either individually or in the aggregate, including Virsto Software, a provider of software that optimizes storage performance and utilization in virtual environments and Desktone, Inc., a provider of desktop-as-a-service for delivering Windows desktops and applications as a cloud service.

The aggregate consideration for these eight acquisitions was $771 million, which consisted of $770 million of cash consideration, net of cash acquired. The consideration paid was allocated to the fair value of the assets acquired and liabilities assumed based on estimated fair values as of the respective acquisition dates. The aggregate allocation to goodwill, intangibles and net liabilities was approximately $596 million, $182 million and $8 million, respectively. The results of these acquisitions have been included in the consolidated financial statements from the date of purchase.

The fair value of our stock options for all of the aforementioned acquisitions in 2013 was estimated using the following weighted-average assumptions:

Expected term (in years)	1.8	
Expected volatility	26.4	%
Risk-free interest rate	0.3	%
Dividend yield	1.5	%

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The following represents the aggregate allocation of the purchase price for all of the aforementioned acquisitions to intangible assets (table in millions):

Developed technology (weighted-average useful life of 5 years)	$138
Customer relationships (weighted-average useful life of 4 years)	34
In-process research and development	10
Total intangible assets	$182

The total weighted-average amortization period for the intangible assets is 4 years. Most of our intangible assets are being amortized based upon the pattern in which the economic benefits of the intangible assets are estimated to be utilized and the remainder are amortized on a straight-line basis.

D. Intangibles and Goodwill

Intangible Assets

Intangible assets, excluding goodwill, as of December 31, 2015 and 2014 consist of (tables in millions):

	December 31, 2015		
	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Purchased technology	$3,272	$(1,903)	$1,369
Patents	225	(132)	93
Software licenses	112	(94)	18
Trademarks and tradenames	254	(157)	97
Customer relationships and customer lists	1,523	(1,087)	436
Leasehold interest	152	(20)	132
Other	46	(42)	4
Total intangible assets, excluding goodwill	$5,584	$(3,435)	$2,149

	December 31, 2014		
	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Purchased technology	$2,935	$(1,668)	$1,267
Patents	225	(117)	108
Software licenses	108	(93)	15
Trademarks and tradenames	226	(136)	90
Customer relationships and customer lists	1,473	(974)	499
Leasehold interest	152	(16)	136
Other	44	(34)	10
Total intangible assets, excluding goodwill	$5,163	$(3,038)	$2,125

Amortization expense on intangibles was $395 million, $402 million and $389 million in 2015, 2014 and 2013, respectively. As of December 31, 2015, amortization expense on intangible assets for the next five years is expected to be as follows (table in millions):

2016	$350
2017	329
2018	317
2019	274
2020	193
Total	$1,463

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Goodwill
Changes in the carrying amount of goodwill, net, on a consolidated basis and by segment, for the years ended December 31, 2015 and 2014 consists of the following (table in millions):

	Information Storage	Enterprise Content Division	RSA Information Security	Pivotal	VMware Virtual Infrastructure	Total
Balance, January 1, 2014	$7,486	$1,487	$2,203	$177	$3,071	$14,424
Goodwill resulting from acquisitions	774	—	—	—	941	1,715
Finalization of purchase price allocations and other, net	—	(1)	—	—	(4)	(5)
Goodwill transferred in formation of Pivotal	6	—	—	(6)	—	—
Balance, December 31, 2014	$8,266	$1,486	$2,203	$171	$4,008	$16,134
Goodwill resulting from acquisitions	917	—	—	16	29	962
Finalization of purchase price allocations and other, net	2	(8)	—	—	—	(6)
Balance, December 31, 2015	$9,185	$1,478	$2,203	$187	$4,037	$17,090

The transfer of goodwill pursuant to the Information Storage segment acquisition of the Data Computing Appliance and implementation services businesses from the Pivotal segment is shown above for the year ended December 31, 2014. The amount of transferred goodwill was determined using the relative fair value method.

Valuation of Goodwill and Intangibles

We perform an assessment of the recoverability of goodwill, at least annually, in the fourth quarter of each year. Our assessment is performed at the reporting unit level which, for certain of our operating segments, is one step below our reporting segment level. We employ both qualitative and quantitative tests of our goodwill. For some of our reporting units, we performed a qualitative assessment on goodwill to determine whether a quantitative assessment was necessary and determined there were no indicators of potential impairment. For other reporting units we evaluated goodwill using a quantitative model. For all of our goodwill assessments, we concluded that there was sufficient market value above the carrying value of those reporting units so that we would not expect any near term changes in the operating results that would trigger an impairment. Accordingly, there was no impairment in 2015, 2014 or 2013. The determination of relevant comparable industry companies impacts our assessment of fair value. Should the operating performance of our reporting units change in comparison to these companies or should the valuation of these companies change, this could impact our assessment of the fair value of the reporting units. Our discounted cash flow analyses factor in assumptions on revenue and expense growth rates. These estimates are based upon our historical experience and projections of future activity, factoring in customer demand, changes in technology and a cost structure necessary to achieve the related revenues. Additionally, these discounted cash flow analyses factor in expected amounts of working capital and weighted average cost of capital. Changes in judgments on any of these factors could materially impact the value of the reporting unit.

Other intangible assets are evaluated based upon the expected period the asset will be utilized, forecasted cash flows, changes in technology and customer demand. Changes in judgments on any of these factors could materially impact the value of the assets.

E. Debt

Short-Term Debt

On February 27, 2015, we entered into a credit agreement with the lenders named therein, Citibank, N.A., as Administrative Agent, Bank of America, N.A. and JPMorgan Chase Bank, N.A., as Syndication Agents, and Citigroup Global Markets Inc., Merrill Lynch, Pierce, Fenner & Smith Incorporated and J.P. Morgan Securities LLC, as Joint Lead Arrangers and Joint Bookrunners (the “Credit Agreement”). The Credit Agreement provides for a $2.5 billion unsecured revolving credit facility to be used for general corporate purposes that is scheduled to mature on February 27, 2020. At our option, subject to certain conditions, any loan under the Credit Agreement will bear interest at a rate equal to, either (i) the LIBOR Rate or (ii) the Base Rate (defined as the highest of (a) the Federal Funds rate plus 0.50%, (b) Citibank, N.A.’s “prime rate” as announced from time to time, or (c) one-month LIBOR plus 1.00%), plus, in each case the Applicable Margin, as defined in the Credit Agreement. The Credit Agreement contains customary representations and warranties, covenants and events of default. We may also, upon the agreement of the existing lenders and/or additional lenders not currently parties to the agreement, increase the commitments under the credit facility by up to an additional $1.0 billion. In addition, we may request to extend the maturity date of the credit facility, subject to certain conditions, for additional one-year periods. As of December 31, 2015, we were in compliance with customary required covenants. At December 31, 2015, we had $600 million outstanding under the credit facility, with a weighted-average interest rate of 1.08%. Amounts outstanding under the credit facility are presented in short-term debt in the consolidated balance sheets with the issuances and proceeds presented on a net basis in the consolidated statement of cash flows due to their short term nature. At February 24, 2016, we had no amounts borrowed under the credit facility.

On March 23, 2015, we established a short-term debt financing program whereby we may issue short-term unsecured commercial paper notes ("Commercial Paper"). Amounts available under the program may be borrowed, repaid and re-borrowed from time to time, with the aggregate face or principal amount of the notes outstanding at any time not to exceed $2.5 billion. The Commercial Paper will have maturities of up to 397 days from the date of issue. The net proceeds from the issuance of the Commercial Paper are expected to be used for general corporate purposes. As of December 31, 2015, we were in compliance with customary required covenants. At December 31, 2015, we had $699 million of Commercial Paper outstanding, with a weighted-average interest rate of 0.73% and maturities ranging from 26 days to 97 days at the time of issuance. Commercial Paper outstanding is presented in short-term debt in the consolidated balance sheets, and the issuances and proceeds of the Commercial Paper are presented on a net basis in the consolidated statement of cash flows due to their short term nature. At February 24, 2016, we had $967 million of Commercial Paper outstanding.

Long-Term Debt

During 2013, we issued $5.5 billion aggregate principal amount of senior notes (collectively, the "Notes") which pay a fixed rate of interest semi-annually in arrears. The first interest payment occurred on December 2, 2013. The proceeds from the Notes have been used to satisfy the cash payment obligation of the converted 2013 Notes as well as for general corporate purposes including stock repurchases, dividend payments, business acquisitions, working capital needs and other business opportunities. The Notes of each series are senior, unsecured obligations of EMC and are not convertible or exchangeable. Unless previously purchased and canceled, we will repay the Notes of each series at 100% of the principal amount, together with accrued and unpaid interest thereon, at maturity. However, EMC has the right to redeem any or all of the Notes at specified redemption prices. As of December 31, 2015, we were in compliance with all debt covenants, which are customary in nature.

Our long-term debt as of December 31, 2015 and December 31, 2014 was as follows (dollars in millions):

Senior Notes	Issued at Discount to Par	Carrying Value December 31, 2015	Carrying Value December 31, 2014
$2.5 billion 1.875% Notes due 2018	99.943 %	$2,499	$2,499
$2.0 billion 2.650% Notes due 2020	99.760 %	1,996	1,996
$1.0 billion 3.375% Notes due 2023	99.925 %	1,000	1,000
		$5,495	$5,495
Debt issuance costs		(20)	(26)
Net long-term debt		$5,475	$5,469

The unamortized discount on the Notes consists of $4 million, which will be fully amortized by June 1, 2023. The effective interest rate on the Notes was 2.55% for the year ended December 31, 2015.

Convertible Debt

During 2006, we issued the 2013 Notes. These 2013 Notes matured and a majority of the noteholders exercised their rights to convert the outstanding 2013 Notes as of December 31, 2013. Pursuant to the settlement terms, the majority of the converted 2013 Notes were settled on January 7, 2014. At that time, we paid the noteholders $1.7 billion in cash for the outstanding principal and 35 million shares for the $858 million excess of the conversion value over the principal amount, as prescribed in the terms of the 2013 Notes.

With respect to the conversion value in excess of the principal amount of the 2013 Notes converted, we elected to settle the excess with shares of our common stock based on a daily conversion value, determined in accordance with the indenture, calculated on a proportionate basis for each day of the relevant 20-day observation period. The actual conversion rate for the 2013 Notes was 62.6978 shares of our common stock per one thousand dollars of principal amount of 2013 Notes, which represents a 26.5%

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conversion premium from the date the 2013 Notes were issued and is equivalent to a conversion price of approximately $15.95 per share of our common stock.

The 2013 Notes paid interest in cash at a rate of 1.75% semi-annually in arrears on December 1 and June 1 of each year. The effective interest rate on the 2013 Notes was 5.6% for the year ended December 31, 2013. The following table represents the key components of interest expense on the convertible debt (table in millions):

	For the year ended December 31, 2013
Contractual interest expense on the coupon	$27
Amortization of the discount component recognized as interest expense	58
Total interest expense on the convertible debt	$85

In connection with the issuance of the 2013 Notes, we entered into separate convertible note hedge transactions with respect to our common stock (the "Purchased Options"). The Purchased Options allowed us to receive shares of our common stock and/or cash related to the excess conversion value that we would pay to the holders of the 2013 Notes upon conversion. We exercised 108 million of the Purchased Options in conjunction with the planned settlements of the 2013 Notes and received 35 million shares of net settlement on January 7, 2014, representing the excess conversion value of the options.

We also entered into separate transactions in which we sold warrants to acquire, subject to customary anti-dilution adjustments, approximately 215 million shares of our common stock at an exercise price of approximately $19.55 per share of our common stock. We received aggregate proceeds of $391 million from the sale of the associated warrants. Upon exercise, the value of the warrants was required to be settled in shares. The remaining 109 million associated warrants were exercised between February 18, 2014 and March 17, 2014 and were settled with 29 million shares of our common stock.

The Purchased Options and associated warrants had the effect of increasing the conversion price of the 2013 Notes to approximately $19.31 per share of our common stock, representing an approximate 53% conversion premium based on the closing price of $12.61 per share of our common stock on November 13, 2006, the issuance date of the 2013 Notes.

Interest Rate Swap Contracts

In 2010, EMC entered into interest rate swap contracts with an aggregate notional amount of approximately $900 million. These swaps were designated as cash flow hedges of the semi-annual interest payments of the forecasted issuance of debt in 2011. In 2012, the interest rate swap contracts were settled and accumulated losses of $176 million were deferred as they were expected to be realized over the life of the new debt issued under the related interest rate swap contracts. The accumulated realized losses related to the settled swaps included in accumulated other comprehensive income are being realized over the remaining life of the ten year Notes. During the year ended 2015 and 2014, $22 million and $11 million, respectively, in losses were reclassified from other comprehensive income and recognized as interest expense in the consolidated income statements.

F. Fair Value of Financial Assets and Liabilities

Our fixed income and equity investments are classified as available for sale and recorded at their fair market values. We determine 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 not 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.
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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.

Most of our fixed income securities are classified as Level 2, with the exception of some of our U.S. government and agency obligations and our investments in publicly traded equity securities, which are classified as Level 1, and all of our auction rate securities, which are classified as Level 3. In addition, our strategic investments held at cost are classified as Level 3. At December 31, 2015 and 2014, the vast majority of our Level 2 securities were priced by pricing vendors. These pricing vendors utilize the most recent observable market information in pricing these securities or, if specific prices are not available for these securities, use other observable inputs like market transactions involving identical or comparable securities. In the event observable

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inputs are not available, we assess other factors to determine the security's market value, including broker quotes or model valuations. Each month, we perform independent price verifications of all of our fixed income holdings. In the event a price fails a pre-established tolerance check, it is researched so that we can assess the cause of the variance to determine what we believe is the appropriate fair market value.
In general, investments with remaining effective maturities of 12 months or less from the balance sheet date are classified as short-term investments. Investments with remaining effective maturities of more than 12 months from the balance sheet date are classified as long-term investments. Our publicly traded equity securities are classified as long-term investments and our strategic investments held at cost are classified as other assets. As a result of the lack of liquidity for auction rate securities, we have classified these as long-term investments as of December 31, 2015 and 2014. At December 31, 2015 and 2014, all of our short- and long-term investments, excluding auction rate securities, were recognized at fair value, which was determined based upon observable inputs from our pricing vendors for identical or similar assets. At December 31, 2015 and 2014, auction rate securities were valued using a discounted cash flow model.
The following tables summarize the composition of our short- and long-term investments at December 31, 2015 and 2014 (tables in millions):

	December 31, 2015			
	Amortized Cost	Unrealized Gains	Unrealized (Losses)	Aggregate Fair Value
U.S. government and agency obligations	$2,449	$—	$(8)	$2,441
U.S. corporate debt securities	2,257	1	(10)	2,248
High yield corporate debt securities	307	2	(22)	287
Asset-backed securities	20	—	—	20
Municipal obligations	731	1	—	732
Auction rate securities	27	—	(2)	25
Foreign debt securities	2,332	—	(9)	2,323
Total fixed income securities	8,123	4	(51)	8,076
Publicly traded equity securities	126	40	(8)	158
Total	$8,249	$44	$(59)	$8,234

	December 31, 2014			
	Amortized Cost	Unrealized Gains	Unrealized (Losses)	Aggregate Fair Value
U.S. government and agency obligations	$1,951	$2	$(2)	$1,951
U.S. corporate debt securities	1,998	1	(4)	1,995
High yield corporate debt securities	570	9	(16)	563
Asset-backed securities	53	—	—	53
Municipal obligations	948	2	—	950
Auction rate securities	29	—	(2)	27
Foreign debt securities	2,566	2	(4)	2,564
Total fixed income securities	8,115	16	(28)	8,103
Publicly traded equity securities	117	103	(11)	209
Total	$8,232	$119	$(39)	$8,312

We held approximately $2,323 million in foreign debt securities at December 31, 2015. These securities have an average credit rating of A+, and approximately 4% of these securities are deemed sovereign debt with an average credit rating of AA+. None of the securities deemed sovereign debt are from Argentina, Greece, Italy, Ireland, Portugal, Spain, Cyprus or Puerto Rico.

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The following tables represent our fair value hierarchy for our financial assets and liabilities measured at fair value as of December 31, 2015 and 2014 (tables in millions):

	December 31, 2015			
	Level 1	Level 2	Level 3	Total
Cash	$2,095	$—	$—	$2,095
Cash equivalents	3,861	593	—	4,454
U.S. government and agency obligations	1,495	946	—	2,441
U.S. corporate debt securities	—	2,248	—	2,248
High yield corporate debt securities	—	287	—	287
Asset-backed securities	—	20	—	20
Municipal obligations	—	732	—	732
Auction rate securities	—	—	25	25
Foreign debt securities	—	2,323	—	2,323
Publicly traded equity securities	158	—	—	158
Total cash and investments	$7,609	$7,149	$25	$14,783
Other items:				
Strategic investments carried at cost	$—	$—	$384	$384
Investment in joint venture	—	—	39	39
Long-term debt carried at discounted issuance cost	—	(4,999)	—	(4,999)
Foreign exchange derivative assets	—	39	—	39
Foreign exchange derivative liabilities	—	(78)	—	(78)
Commodity derivative liabilities	—	(4)	—	(4)

	December 31, 2014			
	Level 1	Level 2	Level 3	Total
Cash	$2,022	$—	$—	$2,022
Cash equivalents	3,710	611	—	4,321
U.S. government and agency obligations	1,141	810	—	1,951
U.S. corporate debt securities	—	1,995	—	1,995
High yield corporate debt securities	—	563	—	563
Asset-backed securities	—	53	—	53
Municipal obligations	—	950	—	950
Auction rate securities	—	—	27	27
Foreign debt securities	—	2,564	—	2,564
Publicly traded equity securities	209	—	—	209
Total cash and investments	$7,082	$7,546	$27	$14,655
Other items:				
Strategic investments carried at cost	$—	$—	$333	$333
Investment in joint venture	—	—	37	37
Long-term debt carried at discounted issuance cost	—	(5,544)	—	(5,544)
Foreign exchange derivative assets	—	44	—	44
Foreign exchange derivative liabilities	—	(71)	—	(71)
Commodity derivative assets	—	12	—	12

Our auction rate securities are predominantly rated investment grade and are primarily collateralized by student loans. The underlying loans of all but one of our auction rate securities, with a market value of $6 million, have partial guarantees by the U.S. government as part of the Federal Family Education Loan Program ("FFELP") through the U.S. Department of Education. FFELP guarantees at least 95% of the loans which collateralize the auction rate securities. We believe the quality of the collateral underlying most of our auction rate securities will enable us to recover our principal balance.

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To determine the estimated fair value of our investment in auction rate securities, we used a discounted cash flow model using a five year time horizon. As of December 31, 2015, the coupon rates used ranged from 1% to 3% and the discount rate was 1%, which rate represents the rate at which similar FFELP backed securities with a five year time horizon outside of the auction rate securities market were trading at December 31, 2015. The assumptions used in preparing the discounted cash flow model include an incremental discount rate for the lack of liquidity in the market ("liquidity discount margin") for an estimated period of time. The discount rate we selected was based on AA- rated banks as the majority of our portfolio is invested in student loans where EMC acts as a financier to these lenders. The liquidity discount margin represents an estimate of the additional return an investor would require for the lack of liquidity of these securities over an estimated five-year holding period. The rate used for the discount margin was 1% at both December 31, 2015 and 2014, due to narrow credit spreads on AA- rated banks during the years ended December 31, 2015 and 2014.

Significant changes in the unobservable inputs discussed above could result in a significantly lower or higher fair value measurement. Generally, an increase in the discount rate, liquidity discount margin or coupon rate results in a decrease in our fair value measurement and a decrease in the discount rate, liquidity discount margin or coupon rate results in an increase in our fair value measurement.

During the year ended December 31, 2015, there were no material changes to the fair value of our auction rate securities. During the year ended December 31, 2014, we had $34 million of our auction rate securities called.

EMC has a 49% ownership percentage of LenovoEMC Limited, a joint venture with Lenovo that was formed in 2012. We account for our LenovoEMC joint venture using the fair value method of accounting. To determine the estimated fair value at inception of our investment, we used a discounted cash flow model using a three year time horizon, and utilized a discount rate of 6%, which represented the incremental borrowing rate for a market participant. The assumptions used in preparing the discounted cash flow model include an analysis of estimated Lenovo NAS revenue against a prescribed target as well as consideration of the purchase price put and call features included in the joint venture agreement. The put and call features create a floor and a cap on the fair value of the investment. As such, there is a limit to the impact on the fair value that would result from significant changes in the unobservable inputs. We had no changes to the assumptions utilized in the fair value calculation in the fourth quarter of 2015. There was no material change to the fair value of this joint venture during the years ended December 31, 2015 and 2014.

The carrying value of the strategic investments held at cost were accounted for under the cost method. As part of our quarterly impairment review, we perform a fair value calculation of our strategic investments held at cost using the most currently available information. To determine the estimated fair value of private strategic investments held at cost, we use a combination of several valuation techniques including discounted cash flow models, acquisition and trading comparables. In addition, we evaluate the impact of pre- and post-money valuations of recent financing events and the impact of those on our fully diluted ownership percentages, and we consider any available information regarding the issuer's historical and forecasted performance as well as market comparables and conditions. The fair value of these investments is considered in our review for impairment if any events and changes in circumstances occur that might have a significant adverse effect on their value.

Investment Losses

Unrealized losses on investments at December 31, 2015 and 2014 by investment category and length of time the investment has been in a continuous unrealized loss position are as follows (tables in millions):

December 31, 2015	Less Than 12 Months		12 Months or Greater		Total	
	Fair	Gross	Fair	Gross	Fair	Gross

	Value	Unrealized Losses	Value	Unrealized Losses	Value	Unrealized Losses
U.S. government and agency obligations	$1,921	$(8)	$—	$—	$1,921	$(8)
U.S. corporate debt securities	1,818	(10)	—	—	1,818	(10)
High yield corporate debt securities	181	(14)	33	(8)	214	(22)
Asset-backed securities	—	—	—	—	—	—
Auction rate securities	—	—	25	(2)	25	(2)
Foreign debt securities	1,753	(8)	86	(1)	1,839	(9)
Publicly traded equity securities	3	—	2	(8)	5	(8)
Total	$5,676	$(40)	$146	$(19)	$5,822	$(59)

EMC CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

December 31, 2014	Less Than 12 Months		12 Months or Greater		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
U.S. government and agency obligations	$1,168	$(2)	$—	$—	$1,168	$(2)
U.S. corporate debt securities	1,383	(4)	—	—	1,383	(4)
High yield corporate debt securities	244	(16)	—	—	244	(16)
Auction rate securities	—	—	27	(2)	27	(2)
Foreign debt securities	1,563	(4)	—	—	1,563	(4)
Publicly traded equity securities	17	(9)	3	(2)	20	(11)
Total	$4,375	$(35)	$30	$(4)	$4,405	$(39)

Under the terms of the Merger Agreement, EMC is required to provide Denali with access to EMC's cash to help fund the Merger consideration. At this time, EMC has not finalized its plan to access such cash and has not determined if there would be a need to liquidate our investment portfolio based on the likelihood of the Merger closing. For all of our securities for which the amortized cost basis was greater than the fair value at December 31, 2015, we currently have the ability and intent to hold until maturity or anticipated recovery. In making the determination as to whether the unrealized losses are other-than-temporary, we considered the length of time and extent the investment has been in an unrealized loss position, the financial condition and near-term prospects of the issuers, the issuers' credit rating and the time to maturity.

During 2014, net realized gains of $101 million were recorded in other income (expense), net on the consolidated income statements for gains related to previously held interests in strategic investments and joint venture.

Contractual Maturities

The contractual maturities of fixed income securities held at December 31, 2015 are as follows (table in millions):

	December 31, 2015	
	Amortized Cost Basis	Aggregate Fair Value
Due within one year	$2,722	$2,721
Due after 1 year through 5 years	4,726	4,704
Due after 5 years through 10 years	413	393
Due after 10 years	262	258
Total	$8,123	$8,076

Short-term investments on the consolidated balance sheet include $5 million in variable rate notes which have contractual maturities in 2016, and are not classified within investments due within one year above.

G. Inventories

Inventories consist of (table in millions):

	December 31, 2015	December 31, 2014
Work-in-process	$592	$627
Finished goods	653	649
	$1,245	$1,276

H. Accounts and Notes Receivable and Allowance for Credit Losses

Accounts and notes receivable are recorded at cost. The portion of our notes receivable due in one year or less are included in accounts and notes receivable and the long-term portion is included in other assets, net on the consolidated balance sheets. Lease receivables arise from sales-type leases of products. We typically sell, without recourse, the contractual right to the lease payment stream and assets under lease to third parties. For certain customers, we retain the lease.

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EMC CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The contractual amounts due under the leases we retained as of December 31, 2015 were as follows (table in millions):

Year	Contractual Amounts Due Under Leases
Due within one year	$69
Due within two years	46
Due within three years	35
Thereafter	4
Total	154
Less amounts representing interest	(7)
Present value	147
Current portion (included in accounts and notes receivable)	64
Long-term portion (included in other assets, net)	$83

Subsequent to December 31, 2015, we sold $35 million of these notes to third parties without recourse.

We maintain an allowance for credit losses on our accounts and notes receivable. The allowance is based on the credit worthiness of our customers, including an assessment of the customer's financial position, operating performance and their ability to meet their contractual obligation. We assess the creditworthiness for our customers each quarter. In addition, we consider our historical experience, the age of the receivable and current market and economic conditions. Uncollectible amounts are charged against the allowance account.

In the event we determine that a lease may not be paid, we include in our allowance an amount for the outstanding balance related to the lease receivable. As of December 31, 2015, amounts from lease receivables past due for more than 90 days were not significant.

During the years ended December 31, 2015 and 2014, there were no material changes to our allowance for credit losses related to lease receivables. Gross lease receivables totaled $154 million and $233 million in 2015 and 2014, respectively, before the allowance. The components of these balances were individually evaluated for impairment and included in our allowance determination as necessary.

I. Property, Plant and Equipment

Property, plant and equipment consist of (table in millions):

	December 31, 2015	December 31, 2014
Furniture and fixtures	$283	$255
Equipment and software	7,378	6,684
Buildings and improvements	2,373	2,308
Land	171	162
Building construction in progress	83	134
	10,288	9,543
Accumulated depreciation	(6,438)	(5,777)
	$3,850	$3,766

Depreciation expense was $1,019 million, $998 million and $867 million in 2015, 2014 and 2013, respectively. Building construction in progress at December 31, 2015 includes $44 million for facilities not yet placed in service that we are holding for future use.

EMC CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

J. Accrued Expenses

Accrued expenses consist of (table in millions):

	December 31, 2015	December 31, 2014
Salaries and benefits	$1,189	$1,260
Product warranties	172	207
Dividends payable (see Note N)	234	237
Partner rebates	221	235
Restructuring, current (See Note P)	333	115
Derivatives	82	75
Other	892	1,012
	$3,123	$3,141

Product Warranties

Systems sales include a standard product warranty. At the time of the sale, we accrue for systems' warranty costs. The initial systems' warranty accrual is based upon our historical experience, expected future costs and specific identification of systems' requirements. Upon sale or expiration of the initial warranty, we may sell additional maintenance contracts to our customers. Revenue from these additional maintenance contracts is included in deferred revenue and recognized ratably over the service period. The following represents the activity in our warranty accrual for the years ended December 31, 2015, 2014 and 2013 (table in millions):

	Year Ended December 31,		
	2015	2014	2013
Balance, beginning of the period	$207	$286	$270
Provision	148	146	179
Amounts charged to the accrual	(183)	(225)	(163)
Balance, end of the period	$172	$207	$286

The provision includes amounts accrued for systems at the time of shipment, adjustments for changes in estimated costs for warranties on systems shipped in the period and changes in estimated costs for warranties on systems shipped in prior periods. It is not practicable to determine the amounts applicable to each of the components.

K. Income Taxes

Our provision (benefit) for income taxes consists of (table in millions):

	2015	2014	2013
Federal:			
Current	$673	$955	$698
Deferred	(152)	(308)	(163)
	521	647	535
State:			
Current	65	81	84
Deferred	(58)	(70)	(23)
	7	11	61
Foreign:			
Current	206	228	192
Deferred	(24)	(18)	(16)
	182	210	176
Total provision for income taxes	$710	$868	