EMC CORP
Form 10-Q
August 08, 2016
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-Q
(Mark One)
x QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 2016
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 (State or other jurisdiction of incorporation or organization)	04-2680009 (I.R.S. Employer Identification Number)
176 South Street Hopkinton, Massachusetts (Address of principal executive offices)	01748 (Zip Code)

(508) 435-1000
(Registrant's telephone number, including area code)
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 x No o
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 x No o
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 x	Accelerated filer o
Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes o No x
The number of shares of common stock, par value $.01 per share, of the registrant outstanding as of June 30, 2016 was 1,956,842,060.

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EMC CORPORATION

FACTORS THAT MAY AFFECT FUTURE RESULTS

This Quarterly Report on Form 10-Q 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 those described in Item 1A of Part II (Risk Factors). The forward-looking statements speak only as of the date of this Quarterly 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 Quarterly Report.

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PART I
FINANCIAL INFORMATION

Item 1. FINANCIAL STATEMENTS
EMC CORPORATION
CONSOLIDATED BALANCE SHEETS
(in millions, except per share amounts)
(unaudited)

	June 30, 2016	December 31, 2015
ASSETS		
Current assets:		
Cash and cash equivalents	$9,354	$ 6,549
Short-term investments	2,407	2,726
Accounts and notes receivable, less allowance for doubtful accounts of $89 and $90	2,896	3,977
Inventories	1,243	1,245
Other current assets	650	566
Total current assets	16,550	15,063
Long-term investments	4,387	5,508
Property, plant and equipment, net	3,725	3,850
Intangible assets, net	1,998	2,149
Goodwill	17,137	17,090
Deferred income taxes	1,169	1,164
Other assets, net	1,779	1,788
Total assets	$46,745	$ 46,612
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$1,158	$ 1,644
Accrued expenses	2,739	3,123
Income taxes payable	285	609
Short-term debt (See Note 4)	800	1,299
Deferred revenue	6,421	6,210
Total current liabilities	11,403	12,885
Income taxes payable	487	461
Deferred revenue	4,750	4,592
Long-term debt (See Note 4)	5,479	5,475
Other liabilities	471	480
Total liabilities	22,590	23,893
Commitments and contingencies (See Note 13)		
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 1,957 and 1,943 shares	20	19
Additional paid-in capital	—	—
Retained earnings	22,679	21,700
Accumulated other comprehensive loss, net	(561)	(579)
Total EMC Corporation's shareholders' equity	22,138	21,140
Non-controlling interests	2,017	1,579

Total shareholders’ equity	24,155	22,719
Total liabilities and shareholders’ equity	$46,745	$ 46,612

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

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

	For the Three Months Ended		For the Six Months Ended	
	June 30, 2016	June 30, 2015	June 30, 2016	June 30, 2015
Revenues:				
Product sales	$3,161	$3,225	$5,843	$6,130
Services	2,856	2,772	5,649	5,480
	6,017	5,997	11,492	11,610
Costs and expenses:				
Cost of product sales	1,307	1,433	2,557	2,762
Cost of services	974	977	1,939	1,922
Research and development	821	782	1,635	1,570
Selling, general and administrative	2,034	2,102	4,021	4,139
Restructuring and acquisition-related charges	(1)	23	48	158
Operating income	882	680	1,292	1,059
Non-operating income (expense):				
Investment income	26	26	39	51
Interest expense	(42)	(41)	(84)	(81)
Other income (expense), net	(14)	24	(9)	34
Total non-operating income (expense)	(30)	9	(54)	4
Income before provision for income taxes	852	689	1,238	1,063
Income tax provision	222	170	311	252
Net income	630	519	927	811
Less: Net income attributable to the non-controlling interests	(49)	(32)	(78)	(72)
Net income attributable to EMC Corporation	$581	$487	$849	$739
Net income per weighted average share, basic attributable to EMC Corporation common shareholders	$0.30	$0.25	$0.43	$0.38
Net income per weighted average share, diluted attributable to EMC Corporation common shareholders	$0.29	$0.25	$0.43	$0.37
Weighted average shares, basic	1,955	1,927	1,952	1,950
Weighted average shares, diluted	1,973	1,947	1,969	1,971
Cash dividends declared per common share	$0.12	$0.12	$0.23	$0.23

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

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EMC CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions)
(unaudited)

	For the Three Months Ended		For the Six Months Ended	
	June 30, 2016	June 30, 2015	June 30, 2016	June 30, 2015
Net income	$630	$ 519	$927	$ 811
Other comprehensive income (loss), net of taxes (benefits):				
Foreign currency translation adjustments	(24)	18	(21)	(86)
Changes in market value of investments:				
Changes in unrealized gains, net of taxes of $6, $0, $18 and $12	12	1	32	20
Reclassification adjustment for net gains realized in net income, net of benefits (taxes) of $2, $(7), $2 and $(13)	2	(13)	4	(21)
Net change in market value of investments	14	(12)	36	(1)
Changes in market value of derivatives:				
Changes in unrealized gains (losses), net of taxes (benefits) of $2, $(2), $1 and $1	4	(5)	—	9
Reclassification adjustment for net losses (gains) included in net income, net of benefits of $2, $2, $4 and $2	5	—	9	(11)
Net change in the market value of derivatives	9	(5)	9	(2)
Other comprehensive income (loss)	(1)	1	24	(89)
Comprehensive income	629	520	951	722
Less: Net income attributable to the non-controlling interests	(49)	(32)	(78)	(72)
Less: Other comprehensive income attributable to the non-controlling interests	(2)	(2)	(6)	(3)
Comprehensive income attributable to EMC Corporation	$578	$ 486	$867	$ 647

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

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EMC CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)
(unaudited)

	For the Six Months Ended June 30, 2016	June 30, 2015
Cash flows from operating activities:		
Cash received from customers	$12,953	$13,137
Cash paid to suppliers and employees	(9,749)	(10,076)
Dividends and interest received	57	68
Interest paid	(72)	(67)
Income taxes paid	(649)	(949)
Net cash provided by operating activities	2,540	2,113
Cash flows from investing activities:		
Additions to property, plant and equipment	(299)	(449)
Capitalized software development costs	(310)	(262)
Purchases of short- and long-term available-for-sale securities	(2,458)	(4,212)
Sales of short- and long-term available-for-sale securities	2,140	2,667
Maturities of short- and long-term available-for-sale securities	1,771	913
Business acquisitions, net of cash acquired	(59)	(61)
Purchases of strategic and other related investments	(25)	(160)
Sales of strategic and other related investments	41	109
Increase in restricted cash	(4)	—
Net cash provided by (used in) investing activities	797	(1,455)
Cash flows from financing activities:		
Proceeds from the issuance of EMC’s common stock	144	170
Proceeds from the issuance of VMware’s common stock	52	69
EMC repurchase of EMC’s common stock	—	(2,063)
VMware repurchase of VMware’s common stock	—	(850)
Excess tax benefits from stock-based compensation	9	54
Net proceeds (payments) for the issuance of short-term obligations	(503)	1,948
Dividend payment	(453)	(456)
Contributions from non-controlling interests	233	4
Net cash used in financing activities	(518)	(1,124)
Effect of exchange rate changes on cash and cash equivalents	(14)	(74)
Net increase (decrease) in cash and cash equivalents	2,805	(540)
Cash and cash equivalents at beginning of period	6,549	6,343
Cash and cash equivalents at end of period	$9,354	$5,803
Reconciliation of net income to net cash provided by operating activities:		
Net income	$927	$811
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	985	942
Non-cash restructuring and other special charges	3	13
Stock-based compensation expense	607	502
Provision for doubtful accounts	9	25
Deferred income taxes, net	(29)	(48)

Excess tax benefits from stock-based compensation	(9)	(54)
Impairment of joint venture	39	—
Other, net	17	18
Changes in assets and liabilities, net of acquisitions:		
Accounts and notes receivable	1,077	1,017
Inventories	(103)	(45)
Other assets	(76)	(3)
Accounts payable	(501)	(443)
Accrued expenses	(460)	(480)
Income taxes payable	(325)	(650)
Deferred revenue	389	509
Other liabilities	(10)	(1)
Net cash provided by operating activities	$2,540	$2,113

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

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

For the six months ended June 30, 2016:

	Common Stock Shares	Par Value	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Non-controlling Interests	Shareholders' Equity
Balance, January 1, 2016	1,943	$ 19	$ —	$21,700	$ (579)	$ 1,579	$ 22,719
Stock issued through stock option and stock purchase plans	8	1	144	—	—	—	145
Tax benefit from stock options exercised	—	—	(24)	—	—	—	(24)
Restricted stock grants, cancellations and withholdings, net	4	—	(45)	—	—	—	(45)
Reversal of reclass of previously repurchased common stock	—	—	(590)	590	—	—	—
Stock-based compensation	2	—	660	—	—	—	660
Cash dividends declared	—	—	—	(460)	—	—	(460)
Impact from equity transactions of non-controlling interests	—	—	(145)	—	—	354	209
Change in market value of investments	—	—	—	—	30	6	36
Change in market value of derivatives	—	—	—	—	9	—	9
Translation adjustment	—	—	—	—	(21)	—	(21)
Net income	—	—	—	849	—	78	927
Balance, June 30, 2016	1,957	$ 20	$ —	$22,679	$ (561)	$ 2,017	$ 24,155

For the six months ended June 30, 2015:

	Common Stock Shares	Par Value	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Non-controlling Interests	Shareholders' Equity
Balance, January 1, 2015	1,985	$ 20	$ —	$22,242	$ (366)	$ 1,629	$ 23,525
Stock issued through stock option and stock purchase plans	10	—	170	—	—	—	170
Tax benefit from stock options exercised	—	—	43	—	—	—	43
Restricted stock grants, cancellations and withholdings, net	6	—	(71)	—	—	—	(71)
Repurchase of common stock	(76)	(1)	(20)	(2,012)	—	—	(2,033)
Stock-based compensation	—	—	560	—	—	—	560
Cash dividends declared	—	—	—	(453)	—	—	(453)
Impact from equity transactions of non-controlling interests	—	—	(682)	—	—	(219)	(901)
Change in market value of investments	—	—	—	—	(5)	4	(1)
Change in market value of derivatives	—	—	—	—	(1)	(1)	(2)
Translation adjustment	—	—	—	—	(86)	—	(86)

Net income	—	—	—	739	—	72	811
Balance, June 30, 2015	1,925	$ 19	$ —	$20,516	$ (458)	$ 1,485	$ 21,562

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

EMC CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Basis of Presentation
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 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 fabrics, application fabrics and a cloud independent platform-as-a-service ("PaaS") to support Big and Fast Data applications. On top of this platform is the Company's agile development services business. 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 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 outstanding 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 the agreement 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 during the third quarter of 2016. The completion of the Merger is subject to certain conditions including EMC shareholder approval, 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 registration statement on Form S-4 was declared effective on June 6, 2016 and EMC shareholders approved the Merger Agreement at a Special Meeting of Shareholders which was held on July 19, 2016.

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. If there is a need to transfer cash to the U.S. in order to meet the requirements of the Merger, EMC does not expect that taxes and other costs incurred would be material.
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 three and six months ended June 30, 2016.

General

The accompanying interim consolidated financial statements are unaudited and have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") for interim financial information. These consolidated financial statements include the accounts of EMC, its wholly owned subsidiaries, as well as VMware and Pivotal, companies majority-owned by EMC. All intercompany transactions have been eliminated. Certain information and footnote disclosures normally included in our annual consolidated financial statements have been condensed or omitted. Accordingly, these interim consolidated financial statements should be read in conjunction with the audited consolidated financial statements for the year ended December 31, 2015 which are contained in our Annual Report on Form 10-K filed with the Securities and Exchange Commission on February 25, 2016.
The results of operations for the interim periods are not necessarily indicative of the results of operations to be expected for any future period or the entire fiscal year. The interim consolidated financial statements, in the opinion of management, reflect all adjustments necessary to fairly state the results as of and for the three- and six-month periods ended June 30, 2016 and 2015.

Net Income Per Share

Basic net income per weighted average share has been computed using the weighted average number of shares of common stock outstanding during the period. Diluted net income per weighted average 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, restricted stock and restricted stock units. Additionally, for purposes of calculating diluted net income per weighted average share, net income is adjusted for the difference between VMware's reported diluted and basic net income per weighted average share, if any, multiplied by the number of shares of VMware held by EMC.

Recent Accounting Pronouncements

In March 2016, the Financial Accounting Standards Board ("FASB") issued updated guidance related to stock-based compensation which is intended to simplify several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. This standard is effective beginning January 1, 2017, with early application permitted. We are currently evaluating the impact of the new guidance on our consolidated financial statements and related disclosures.

In February 2016, the FASB issued a standard on leases which amends a number of aspects of lease accounting, including requiring lessees to recognize operating leases with a term greater than one year on their balance sheet as a right-of-use asset and corresponding lease liability, measured at the present value of the lease payments. The guidance also requires qualitative and quantitative disclosures designed to assess the amount, timing, and uncertainty of cash flows arising from leases. The standard requires modified retrospective adoption and is effective beginning January 1, 2019, with early adoption permitted. We are currently evaluating the impact of the new guidance on our consolidated financial statements and related disclosures.

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.

2. 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 $1,678 million and $1,481 million as of June 30, 2016 and December 31, 2015, respectively. At June 30, 2016, EMC held approximately 97% of the combined voting power of VMware's outstanding common stock and approximately 81% of the economic interest in VMware.

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. In May 2016, Pivotal sold an additional $233 million of preferred equity instruments to GE, Ford and Microsoft, with similar terms as the initial GE preferred instrument.

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 reduction of net income attributable to EMC shareholders and as a component of non-controlling interests on EMC's consolidated balance sheets, respectively. 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 $339 million and $98 million as of June 30, 2016 and December 31, 2015, respectively. At June 30, 2016, EMC consolidated held approximately 78% of the economic interest in Pivotal.

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

	For the Six Months Ended	
	June 30, 2016	June 30, 2015
Net income attributable to EMC Corporation	$849	$ 739
Transfers (to) from the non-controlling interests:		
Increase in EMC Corporation's additional paid-in-capital for VMware and Pivotal equity issuances	21	29
Decrease in EMC Corporation's additional paid-in-capital for VMware's and Pivotal's other equity activity	(166)	(711)
Net transfers to non-controlling interest	(145)	(682)
Change from net income attributable to EMC Corporation and transfers from the non-controlling interests	$704	$ 57

3. Business Combinations, Intangibles and Goodwill

During the three months ended June 30, 2016, VMware acquired all of the remaining outstanding shares of Arkin Net, Inc. ("Arkin"), a provider of software-defined data center security and operations, as part of a strategy to accelerate customers' adoption of VMware NSX and software-defined data centers, for $67 million of cash, net of liabilities assumed. 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 preliminary aggregate allocation to goodwill, intangibles and net assets was approximately $38 million, $26 million and $3 million, respectively. The intangible assets acquired were primarily comprised of purchased technology which have an amortization period of four to five years. The proforma financial information assuming the acquisition had occurred as of the beginning of the calendar year prior to the year of acquisition, as well as the revenues and earnings generated during the current year, were not material for disclosure purposes. During the six months ended June 30, 2016, Pivotal acquired two businesses, which were not material either individually or in the aggregate to the June 30, 2016 results.

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. 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 expected to be deductible for U.S. federal income tax purposes.

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EMC CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Intangible Assets
Intangible assets, excluding goodwill, as of June 30, 2016 and December 31, 2015 consist of (tables in millions):

	June 30, 2016		
	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Purchased technology	$3,298	$ (2,017)	$ 1,281
Patents	225	(139)	86
Software licenses	115	(94)	21
Trademarks and tradenames	254	(168)	86
Customer relationships and customer lists	1,524	(1,131)	393
Leasehold interest	152	(23)	129
Other	46	(44)	2
Total intangible assets, excluding goodwill	$5,614	$ (3,616)	$ 1,998

	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

Goodwill
Changes in the carrying amount of goodwill, net, on a consolidated basis and by segment, for the six months ended June 30, 2016 consist of (table in millions):

	Six Months Ended June 30, 2016					
	Information Storage	Enterprise Content Division	RSA Information Security	Pivotal	VMware Virtual Infrastructure	Total
Balance, beginning of the period	$9,185	$ 1,478	$ 2,203	$ 187	$ 4,037	$17,090
Goodwill resulting from acquisitions	—	—	—	9	38	47
Balance, end of the period	$9,185	$ 1,478	$ 2,203	$ 196	$ 4,075	$17,137

4. 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 June 30, 2016, we were in compliance with customary required covenants. At June 30, 2016, we had no funds borrowed and at December 31, 2015, we had $600 million outstanding under the credit facility. 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 August 8, 2016, we had $900 million outstanding 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 June 30, 2016, we were in compliance with customary required covenants. At June 30, 2016, we had $800 million of Commercial Paper outstanding, with a weighted-average interest rate of 0.81% and maturities ranging from 8 days to 29 days at the time of issuance. At December 31, 2015, we had $699 million of Commercial Paper outstanding. 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 August 8, 2016, we had no Commercial Paper outstanding.

Long-Term Debt

During 2013, we issued $5.5 billion of Notes which pay a fixed rate of interest semi-annually in arrears. The proceeds from the Notes were used to repay the $1.725 billion 1.75% convertible senior notes due 2013 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 June 30, 2016, we were in compliance with all debt covenants, which are customary in nature.

Our long-term debt as of June 30, 2016 was as follows (dollars in millions):

Senior Notes	Issued at Discount to Par	Carrying Value
$2.5 billion 1.875% Notes due 2018	99.943 %	$ 2,499
$2.0 billion 2.650% Notes due 2020	99.760 %	1,997
$1.0 billion 3.375% Notes due 2023	99.925 %	1,000
		$ 5,496
Debt issuance costs		(17)
Net long-term debt		$ 5,479

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 both the three and six months ended June 30, 2016.

5. 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.
- 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 June 30, 2016, 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 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. During the three months ended June 30, 2016, EMC sold all of our auction rate securities. At June 30, 2016 and December 31, 2015, 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, 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 June 30, 2016 and December 31, 2015 (tables in millions):

	June 30, 2016			
	Amortized Cost	Unrealized Gains	Unrealized (Losses)	Aggregate Fair Value
U.S. government and agency obligations	$1,639	$ 8	$ (1)	$ 1,646
U.S. corporate debt securities	2,172	14	—	2,186
High yield corporate debt securities	68	1	(2)	67
Asset-backed securities	8	—	—	8
Municipal obligations	517	—	—	517
Foreign debt securities	2,236	11	—	2,247
Total fixed income securities	6,640	34	(3)	6,671
Publicly traded equity securities	113	18	(8)	123
Total	$6,753	$ 52	$ (11)	$ 6,794

	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

We held approximately $2,247 million in foreign debt securities at June 30, 2016. 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.

The following tables represent our fair value hierarchy for our financial assets and liabilities measured at fair value as of June 30, 2016 and December 31, 2015 (tables in millions):

	June 30, 2016			
	Level 1	Level 2	Level 3	Total
Cash	$2,284	$—	$—	$2,284
Cash equivalents	6,560	510	—	7,070
U.S. government and agency obligations	1,005	641	—	1,646
U.S. corporate debt securities	—	2,186	—	2,186
High yield corporate debt securities	—	67	—	67
Asset-backed securities	—	8	—	8
Municipal obligations	—	517	—	517
Foreign debt securities	—	2,247	—	2,247
Publicly traded equity securities	123	—	—	123
Total cash and investments	$9,972	$6,176	$—	$16,148
Other items:				
Strategic investments held at cost	$—	$—	$404	$404
Long-term debt carried at discounted cost	—	(5,281)	—	(5,281)
Foreign exchange derivative assets	—	45	—	45
Foreign exchange derivative liabilities	—	(61)	—	(61)
Commodity derivative liabilities	—	(4)	—	(4)

	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 held at cost	$—	$—	$384	$384
Investment in joint venture	—	—	39	39
Long-term debt carried at discounted cost	—	(4,999)	—	(4,999)
Foreign exchange derivative assets	—	39	—	39
Foreign exchange derivative liabilities	—	(78)	—	(78)
Commodity derivative liabilities	—	(4)	—	(4)

EMC had a 49% ownership percentage of LenovoEMC Limited, a joint venture with Lenovo that was formed in 2012. During the three months ended June 30, 2016, EMC and Lenovo entered into an agreement to terminate the joint venture. Accordingly, EMC recognized an impairment loss of $39 million which is reflected in other income (expense), net on the consolidated income statements.

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 June 30, 2016 by investment category and length of time the investment has been in a continuous unrealized loss position are as follows (table in millions):

	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	$128	$ (1)	$—	$ —	$128	$ (1)
High yield corporate debt securities	20	(1)	15	(1)	35	(2)
Publicly traded equity securities	2	(1)	2	(7)	4	(8)
Total	$150	$ (3)	$17	$ (8)	$167	$ (11)

For all of our securities for which the amortized cost basis was greater than the fair value at June 30, 2016, we have concluded that currently we neither plan to sell the security nor is it more likely than not that we would be required to sell the security before its anticipated recovery. In making the determination as to whether the unrealized loss is 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.

Contractual Maturities

The contractual maturities of fixed income securities held at June 30, 2016 are as follows (table in millions):

	June 30, 2016	
	Amortized Cost Basis	Aggregate Fair Value
Due within one year	$2,378	$ 2,379
Due after 1 year through 5 years	3,910	3,938
Due after 5 years through 10 years	162	163
Due after 10 years	190	191
Total	$6,640	$ 6,671

Short-term investments on the consolidated balance sheet include $28 million in variable rate notes which have contractual maturities in 2016, and are not classified within investments due within one year above.

6. Inventories

Inventories consist of (table in millions):

	June 30, 2016	December 31, 2015
Work-in-process	$ 676	$ 592
Finished goods	567	653

$ 1,243	$ 1,245

7. 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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The contractual amounts due under the leases we retained as of June 30, 2016 were as follows (table in millions):

Year	Contractual Amounts Due Under Leases
Due within one year	$ 72
Due within two years	49
Due within three years	38
Thereafter	3
Total	162
Less: Amounts representing interest	7
Present value	155
Current portion (included in accounts and notes receivable)	68
Long-term portion (included in other assets, net)	$ 87

Subsequent to June 30, 2016, we sold $3 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 credit scores 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 June 30, 2016, amounts from lease receivables past due for more than 90 days were not significant.

During the three and six months ended June 30, 2016 and 2015, there were no material changes to our allowance for credit losses related to lease receivables. Gross lease receivables totaled $162 million and $154 million as of June 30, 2016 and December 31, 2015, respectively, before the allowance. The components of these balances were individually evaluated for impairment and included in our allowance determination as necessary.

8. Property, Plant and Equipment

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

	June 30, 2016	December 31, 2015
Furniture and fixtures	$283	$ 283
Equipment and software	7,439	7,378
Buildings and improvements	2,401	2,373
Land	172	171
Building construction in progress	106	83
	10,401	10,288
Accumulated depreciation	(6,676)	(6,438)
	$3,725	$ 3,850

Property, plant and equipment at June 30, 2016 includes $66 million for facilities not yet placed in service that we are holding for future use.

9. Accrued Expenses

Accrued expenses consist of (table in millions):

	June 30, 2016	December 31, 2015
Salaries and benefits	$ 1,037	$ 1,189
Product warranties	136	172
Dividends payable (see Note 11)	242	234
Partner rebates	204	221
Restructuring, current (See Note 12)	153	333
Derivatives	73	82
Other	894	892
	$ 2,739	$ 3,123

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 three and six months ended June 30, 2016 and 2015 (table in millions):

	For the Three Months Ended		For the Six Months Ended	
	June 30, 2016	June 30, 2015	June 30, 2016	June 30, 2015
Balance, beginning of the period	$ 151	$ 188	$ 172	$ 207
Provision	26	44	51	77
Amounts charged against the accrual	(41)	(43)	(87)	(95)
Balance, end of the period	$ 136	$ 189	$ 136	$ 189

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.

10. Income Taxes

Our effective income tax rates were 26.1% and 25.1% for the three and six months ended June 30, 2016, respectively. Our effective income tax rates were 24.6% and 23.7% for the three and six months ended June 30, 2015, respectively. Our effective income tax rate is based upon estimated income before provision for income taxes for the year, composition of the income in different countries, and adjustments, if any, in the applicable quarterly periods for potential tax consequences, benefits and/or resolutions of tax audits or other tax contingencies. For the three and six months ended June 30, 2016, the effective income tax rate varied from the statutory income tax rate principally as a result of the mix of income attributable to foreign versus domestic jurisdictions and federal tax credit for increasing research activities. 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. For the three and six months ended June 30, 2015, the effective income tax rate varied from the statutory income tax rate principally as a result of the mix of income attributable to foreign versus domestic jurisdictions and state taxes. 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. 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. Our effective income tax rates for the three and six months ended June 30, 2015 do not reflect any federal tax credit for increasing research activities.

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Our effective income tax rate increased in the three and six months ended June 30, 2016 from the three and six months ended June 30, 2015 due primarily to a lower tax rate differential for international jurisdictions. There were also differences in change in tax contingency reserves and discrete items, the net impact of which is immaterial.

We are routinely under audit by the Internal Revenue Service (the "IRS"). We have concluded all U.S. federal income tax matters for years through 2008. In the third quarter of 2012, the IRS commenced a federal income tax audit for the tax years 2009 and 2010. The IRS completed their field audit for the tax years 2009 and 2010 and issued Revenue Agent Reports ("RARs") in the first quarter of 2016. We disagree with certain proposed adjustments and have filed a formal protest to the IRS Appeals Division. In the first quarter of 2015, the IRS commenced a federal income tax audit for the tax year 2011, which is still ongoing. We also have income tax audits in process in numerous state, local and international jurisdictions. In our international jurisdictions that comprise a significant portion of our operations, the years that may be examined vary, with the earliest year being 2004. Based on the timing and outcome of examinations of EMC, the result of the expiration of statutes of limitations for specific jurisdictions or the timing and result of ruling requests from taxing authorities, it is reasonably possible that the related unrecognized tax benefits could change from those recorded in our statement of financial position. We anticipate that several of these audits may be finalized within the next twelve months. While we expect the amount of unrecognized tax benefits to change in the next twelve months, we do not expect the change to have a significant impact on our consolidated results of operations or financial position.

11. Shareholders' Equity

The reconciliation from basic to diluted earnings per share for both the numerators and denominators is as follows (table in millions):

	For the Three Months Ended		For the Six Months Ended	
	June 30, 2016	June 30, 2015	June 30, 2016	June 30, 2015
Numerator:				
Net income attributable to EMC Corporation	$581	$ 487	$849	$ 739
Incremental dilution from VMware	(1)	(1)	(1)	(2)
Net income – dilution attributable to EMC Corporation	$580	$ 486	$848	$ 737
Denominator:				
Weighted average shares, basic	1,955	1,927	1,952	1,950
Weighted common stock equivalents	18	20	17	21
Weighted average shares, diluted	1,973	1,947	1,969	1,971

Restricted stock awards, restricted stock units and options to acquire shares of our common stock in the amount of 1 million for the six months ended June 30, 2016 and 1 million for both the three and six months ended June 30, 2015, were excluded from the calculation of diluted earnings per share because they were anti-dilutive. The incremental dilution from VMware represents the impact of VMware's dilutive securities on EMC's consolidated diluted net income per share and is calculated by multiplying the difference between VMware's basic and diluted earnings per share by the number of VMware shares owned by EMC.

Repurchase of Common Stock

We utilize both authorized and unissued shares (including repurchased shares) for all issuances under our equity plans. Our Board of Directors authorized the repurchase of 250 million shares of our common stock in December 2014. For the six months ended June 30, 2016, we did not repurchase any shares of our common stock. Of the 250 million shares authorized for repurchase, we have repurchased 27 million shares to-date at a total cost of $715 million, leaving a remaining balance of 223 million shares authorized for future repurchases.

During April 2016, VMware’s Board of Directors authorized the repurchase of up to an aggregate of $1.2 billion of VMware’s Class A common stock through the end of 2016, which includes the amount remaining from VMware’s previous stock repurchase authorization announced on January 27, 2015, which was $835 million as of June 30, 2016. All shares repurchased under VMware’s stock repurchase programs are retired. For the six months ended June 30, 2016, VMware did not repurchase any shares of its Class A common stock as it was subject to a number of legal and regulatory constraints resulting from the Merger Agreement, which impacted the timing and ability to execute repurchases of VMware’s shares.

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Cash Dividend on Common Stock

EMC pays a quarterly dividend of $0.115 per share of common stock to EMC shareholders, subject to the approval of our Board of Directors. Our Board of Directors declared the following dividends during 2016 and 2015:

Declaration Date	Dividend Per Share	Record Date	Total Amount (in millions)	Payment Date
2016:				
February 11, 2016	$ 0.115	April 1, 2016	$ 229	April 22, 2016
May 12, 2016	$ 0.115	July 1, 2016	$ 231	July 22, 2016
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

Accumulated Other Comprehensive Income (Loss)

Changes in accumulated other comprehensive income (loss), which is presented net of tax, for the six months ended June 30, 2016 and 2015 consist of the following (tables in millions):

	Foreign Currency Translation Adjustments	Unrealized Net Gains on Investments	Unrealized Net Losses on Derivatives	Recognition of Actuarial Net Loss from Pension and Other Postretirement Plans	Accumulated Other Comprehensive Income Attributable to the Non-controlling Interest in VMware, Inc.	Total
Balance as of December, 31 2015[(a)]	$ (356)	$ (10)	$ (89)	$ (125)	$ 1	$(579)
Other comprehensive income (loss) before reclassifications	(21)	32	—	—	(6)	5
Net losses (gains) reclassified from accumulated other comprehensive income	—	4	9	—	—	13
Net current period other comprehensive income (loss)	(21)	36	9	—	(6)	18
Balance as of June 30, 2016[(b)]	$ (377)	$ 26	$ (80)	$ (125)	$ (5)	$(561)

(a) Net of taxes (benefits) of $(5) million for unrealized net gains on investments, $(56) million for unrealized net losses on derivatives and $(71) million for actuarial net loss on pension plans.

(b) Net of taxes (benefits) of $15 million for unrealized net gains on investments, $(51) million for unrealized net losses on derivatives and $(71) million for actuarial net loss on pension plans.

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	Foreign Currency Translation Adjustments	Unrealized Net Gains on Investments	Unrealized Net Losses on Derivatives	Recognition of Actuarial Net Loss from Pension and Other Postretirement Plans	Accumulated Other Comprehensive Income Attributable to the Non-controlling Interest in VMware, Inc.	Total
Balance as of December, 31 2014[(a)]	$ (187)	$ 49	$ (99)	$ (126)	$ (3)	$ (366)
Other comprehensive income (loss) before reclassifications	(86)	20	9	—	(3)	(60)
Net losses (gains) reclassified from accumulated other comprehensive income	—	(21)	(11)	—	—	(32)
Net current period other comprehensive income (loss)	(86)	(1)	(2)	—	(3)	(92)
Balance as of June 30, 2015[(b)]	$ (273)	$ 48	$ (101)	$ (126)	$ (6)	$ (458)

(a) Net of taxes (benefits) of $31 million for unrealized net gains on investments, $(64) million for unrealized net losses on derivatives and $(70) million for actuarial net loss on pension plans.

(b) Net of taxes (benefits) of $31 million for unrealized net gains on investments, $(61) million for unrealized net losses on derivatives and $(70) million for actuarial net loss on pension plans.

The amounts reclassified out of accumulated other comprehensive income (loss) for the three and six months ended June 30, 2016 and 2015 are as follows (tables in millions):

Accumulated Other Comprehensive Income Components	For the Three Months Ended June 30, 2016	June 30, 2015	Impacted Line Item on Consolidated Income Statements
Net (loss) gain on investments:	$ (4)	$ 20	Investment income
	2	(7)	Provision for income tax
Net of tax	$ (2)	$ 13	
Net (loss) gain on derivatives:			
Foreign exchange contracts	$ (2)	$ 1	Product sales revenue
Foreign exchange contracts	—	3	Cost of product sales
Interest rate swap	(5)	(6)	Other interest expense
Total net (loss) gain on derivatives before tax	(7)	(2)	
	2	2	Provision for income tax
Net of tax	$ (5)	$ —	

For the Six Months

Accumulated Other Comprehensive Income Components	Ended June 30, 2016	June 30, 2015	Impacted Line Item on Consolidated Income Statements
Net (loss) gain on investments:	$(6)	$34	Investment income
	2	(13)	Provision for income tax
Net of tax	$(4)	$21	
Net (loss) gain on derivatives:			
Foreign exchange contracts	$(2)	$21	Product sales revenue
Foreign exchange contracts	—	(1)	Cost of product sales
Interest rate swap	(11)	(11)	Other interest expense
Total net (loss) gain on derivatives before tax	(13)	9	
	4	2	Provision for income tax
Net of tax	$(9)	$11	

12. Restructuring and Acquisition-Related Charges

For the three months ended June 30, 2016, we recorded a restructuring and acquisition-related credit of $1 million and for the six months ended June 30, 2016, we incurred restructuring and acquisition-related charges of $48 million. For the three and six months ended June 30, 2015, we incurred restructuring and acquisition-related charges of $23 million and $158 million, respectively.

For the three and six months ended June 30, 2016, EMC recorded a $1 million credit and a $6 million credit, respectively, related to our prior restructuring programs. For the three months ended June 30, 2016, VMware incurred a $1 million credit related to its restructuring programs. For the six months ended June 30, 2016, VMware incurred $52 million of restructuring charges, primarily related to its current year restructuring program. Additionally, for the three and six months ended June 30, 2016, VMware incurred $1 million and $2 million, respectively, of charges in connection with acquisitions for financial, advisory, legal and accounting services.

For the three and six months ended June 30, 2015, EMC incurred $23 million and $133 million, respectively, of restructuring charges, primarily related to our 2015 restructuring programs, and $2 million and $3 million, respectively, of charges in connection with acquisitions for financial, advisory, legal and accounting services. For the three months ended June 30, 2015, VMware recognized a credit of $2 million related to its restructuring program and for the six months ended June 30, 2015, VMware incurred $21 million of restructuring charges, primarily related to its 2015 program. For the six months ended June 30, 2015, VMware incurred $1 million of charges in connection with acquisitions for financial, advisory, legal and accounting services.

In the first quarter of 2016, VMware approved a plan to streamline its operations, with plans to reinvest the associated savings in field, technical and support resources associated with growth products. As a result, approximately 800 positions at VMware were eliminated during the six months ended June 30, 2016. Actions relating to VMware's plan were substantially completed by June 30, 2016.

In the first and second quarters of 2015, EMC implemented restructuring programs to create further operational efficiencies which resulted in a workforce reduction of approximately 1,320 and 160 positions, respectively. The actions impacted positions around the globe covering our Information Storage, RSA Information Security, Enterprise Content Division and Pivotal segments. All of these actions were completed within a year of the start of the program. In the first quarter of 2015, VMware eliminated approximately 350 positions across all major functional groups and geographies to streamline its operations. All of these actions were completed within a year of the start of the program.

For the three and six months ended June 30, 2016, we recognized $5 million and $10 million, 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. For the three and six months ended June 30, 2015, we recognized $10 million and $16 million, 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 accruals are expected to be utilized by the end of 2022.

The activity for the restructuring programs is presented below (tables in millions):

Three Months Ended June 30, 2016:
EMC Programs

Category	Utilization

	Balance as of March 31, 2016	Adjustments to the Provision		Balance as of June 30, 2016
Workforce reductions	$ 213	$ (6)	$ (67)	$ 140
Consolidation of excess facilities and other contractual obligations	22	5	(5)	22
Total	$ 235	$ (1)	$ (72)	$ 162

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VMware Programs

Category	Balance as of March 31, 2016	Adjustments to the Provision	Utilization	Balance as of June 30, 2016
Workforce reductions	$ 27	$ (1)	$ (24)	$ 2
Consolidation of excess facilities and other contractual obligations	3	—	—	3
Total	$ 30	$ (1)	$ (24)	$ 5

Six Months Ended June 30, 2016:
EMC Programs

Category	Balance as of December 31, 2015	Adjustments to the Provision	Utilization	Balance as of June 30, 2016
Workforce reductions	$ 322	$ (16)	$ (166)	$ 140
Consolidation of excess facilities and other contractual obligations	20	10	(8)	22
Total	$ 342	$ (6)	$ (174)	$ 162

VMware Programs

Category	Balance as of December 31, 2015	2016 Charges	Utilization	Balance as of June 30, 2016
Workforce reductions	$ 3	$ 49	$ (50)	$ 2
Consolidation of excess facilities and other contractual obligations	—	3	—	3
Total	$ 3	$ 52	$ (50)	$ 5

Three Months Ended June 30, 2015:
2015 EMC Programs

Category	Balance as of March 31, 2015	2015 Charges	Utilization	Balance as of June 30, 2015
Workforce reductions	$ 96	$ 17	$ (24)	$ 89
Consolidation of excess facilities and other contractual obligations	6	10	(4)	12
Total	$ 102	$ 27	$ (28)	$ 101

Other EMC Programs

Category	Balance as of March 31, 2015	Adjustments to the Provision	Utilization	Balance as of June 30, 2015

Workforce reductions	$ 61	$ (4)	$ (14)	$ 43
Consolidation of excess facilities and other contractual obligations	14	—	(1)	13
Total	$ 75	$ (4)	$ (15)	$ 56

VMware Programs

Category	Balance as of March 31, 2015	Adjustments to the Provision	Utilization	Balance as of June 30, 2015
Workforce reductions	$ 16	$ (2)	$ (12)	$ 2
Consolidation of excess facilities and other contractual obligations	—	—	—	—
Total	$ 16	$ (2)	$ (12)	$ 2

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Six Months Ended June 30, 2015:
2015 EMC Programs

Category	Balance as of December 31, 2014	2015 Charges	Utilization	Balance as of June 30, 2015
Workforce reductions	$ —	$ 123	$ (34)	$ 89
Consolidation of excess facilities and other contractual obligations	—	16	(4)	12
Total	$ —	$ 139	$ (38)	$ 101

Other EMC Programs

Category	Balance as of December 31, 2014	Adjustments to the Provision	Utilization	Balance as of June 30, 2015
Workforce reductions	$ 102	$ (6)	$ (53)	$ 43
Consolidation of excess facilities and other contractual obligations	19	—	(6)	13
Total	$ 121	$ (6)	$ (59)	$ 56

VMware Programs

Category	Balance as of December 31, 2014	2015 Charges	Utilization	Balance as of June 30, 2015
Workforce reductions	$ 8	$ 21	$ (27)	$ 2
Consolidation of excess facilities and other contractual obligations	—	—	—	—
Total	$ 8	$ 21	$ (27)	$ 2

13. Commitments and Contingencies

Litigation

We are involved in a variety of claims, demands, suits, investigations and proceedings that arise from time to time relating to matters incidental to the ordinary course of our business, including actions with respect to contracts, intellectual property, product liability, employment, benefits and securities matters. As required by authoritative guidance, we have estimated the amount of probable losses that may result from all currently pending matters, and such amounts are reflected in our consolidated financial statements. These recorded amounts are not material to our consolidated financial position or results of operations and no additional material losses related to these pending matters are reasonably possible. While it is not possible to predict the outcome of these matters with certainty, we do not expect the results of any of these actions to have a material adverse effect on our business, results of operations or financial condition. Because litigation is inherently unpredictable, however, the actual amounts of loss may prove to be larger or smaller than the amounts reflected in our consolidated financial statements, and we could incur judgments or enter into settlements of claims that could adversely affect our operating results or cash flows in a particular period.

Merger-Related Litigation

As of August 8, 2016, fifteen putative shareholder class action lawsuits challenging the Merger have been filed, of which thirteen were filed purportedly on behalf of Company shareholders and two purportedly on behalf of VMware shareholders. The lawsuits name various combinations of the Company, its current and former directors, VMware, certain of VMware's directors, Denali, Dell and Merger Sub, among others, as defendants. The fifteen lawsuits seek, 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 monetary damages. The suits are captioned as follows:

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Case	Court	Filing Date
1. IBEW Local No. 129 Benefit Fund v. Tucci, Civ. No. 1584-3130-BLS1	Mass. Superior Court, Suffolk County	10/15/2015
2. Barrett v. Tucci, Civ. No. 15-6023-A	Mass. Superior Court, Middlesex County	10/16/2015
3. Graulich v. Tucci, Civ. No. 1584-3169-BLS1	Mass. Superior Court, Suffolk County	10/19/2015
4. Vassallo v. EMC Corp., Civ. No. 1584-3173-BLS1	Mass. Superior Court, Suffolk County	10/19/2015
5. City of Miami Police Relief & Pension Fund v. Tucci, Civ. No. 1584-3174-BLS1	Mass. Superior Court, Suffolk County	10/19/2015
6. Lasker v. EMC Corp., Civ. No. 1584-3214-BLS1	Mass. Superior Court, Suffolk County	10/23/2015
7. Walsh v. EMC Corp., Civ. No. 15-13654	U.S. District Court, District of Massachusetts	10/27/2015
8. Local Union No. 373 U.A. Pension Plan v. EMC Corp., Civ. No. 1584-3253-BLS1	Mass. Superior Court, Suffolk County	10/28/2015
9. City of Lakeland Emps.' Pension & Ret. Fund v. Tucci, Civ. No. 1584-3269-BLS1	Mass. Superior Court, Suffolk County	10/28/2015
10. Ma v. Tucci, Civ. No. 1584-3281-BLS1	Mass. Superior Court, Suffolk County	10/29/2015
11. Stull v. EMC Corp., Civ. No. 15-13692	U.S. District Court, District of Massachusetts	10/30/2015
12. Jacobs v. EMC Corp., Civ. No. 15-6318-H	Mass. Superior Court, Middlesex County	11/12/2015
13. Ford v. VMware, Inc., C.A. No. 11714-VCL	Delaware Chancery Court	11/17/2015
14. Pancake v. EMC Corp., Civ. No. 16-10040	U.S. District Court, District of Massachusetts	1/11/2016
15. Booth Family Trust v. EMC Corp., Civ. No. 16-10114	U.S. District Court, District of Massachusetts	1/26/2016

Of the thirteen lawsuits filed purportedly on behalf of Company shareholders, nine were filed in Massachusetts state court, and four in the United States District Court for the District of Massachusetts. Eleven of the lawsuits initially advanced substantially the same allegations that the Merger Agreement was adopted in violation of the fiduciary duties of the Company's directors. Certain of those lawsuits also alleged that the Company, Denali, Dell, Merger Sub, Silver Lake Partners, LLC, and/or MSD Partners, LLC aided and abetted the alleged breaches of fiduciary duty by the directors.

On November 5, 2015, pursuant to a motion made by the Company and its directors, the nine lawsuits then pending in state court in Massachusetts were consolidated with and into the first-filed of those actions, IBEW Local No. 129 Benefit Fund v. Joseph M. Tucci, et al. That action, brought in the Business Litigation Session of the Suffolk County Superior Court, named as defendants the Company and each member of its Board of Directors (as constituted as of October 12, 2015), Denali, Dell and Merger Sub.

The Company and its directors moved to dismiss the amended complaint in the IBEW matter pursuant to provisions of the Massachusetts Business Corporation Act, M.G.L. c. 156D, § 7.40 et seq., and Rules 12(b)(6) and 23.1 of the Massachusetts Rules of Civil Procedure, on the basis that the complaint asserts a derivative action on behalf of the Company and should be dismissed for failure to make the requisite pre-suit demand on the Company. On December 7, 2015 the Court granted this motion and on December 24, 2015 the court entered judgment dismissing each of the consolidated actions. On January 21, 2016, three of the plaintiffs served notice that they will appeal this judgment. On April 29, 2016, the appeal was docketed in the Massachusetts Appeals Court as case number 2016-P-0595. On May 2, 2016, the appellants filed an application for direct appellate review in the Massachusetts Supreme Judicial Court as Direct Appellate Review No. DAR-24347. That application was granted on June 23, 2016, and the appeal is now pending in the Massachusetts Supreme Judicial Court as case number SJC-12137.

On January 11, 2016, following the state court judgment and a motion by the Company and its directors to stay or dismiss the two lawsuits then pending in the United States District Court for the District of Massachusetts, the plaintiffs in those cases amended their complaints to eliminate the initial claims based on Massachusetts state law and substitute allegations that the preliminary proxy statement/prospectus dated December 14, 2015 omits and/or misrepresents material information and that such omissions and misrepresentations constitute violations of Section 14(a) of, and Rule 14a-9 under, the Securities Exchange Act of 1934. Two additional lawsuits were later filed in the same court advancing substantially the same proxy-disclosure-based allegations. On June 17, 2016, the parties filed a stipulation and proposed order requesting that the court dismiss all four actions with prejudice as to the named plaintiffs and retain jurisdiction to determine plaintiffs' counsel's application for an award of attorneys' fees and reimbursement of expenses.

Of the two lawsuits filed purportedly on behalf of VMware shareholders, one was filed in Middlesex County Superior Court in Massachusetts, and the other in Delaware Chancery Court. Both generally allege that the Company, in its capacity as the majority shareholder of VMware, and individual defendants who are directors of the Company, VMware, or both, breached their fiduciary duties to minority shareholders of VMware in connection with the Merger. Both further allege that various combinations of defendants aided and abetted these alleged breaches of fiduciary duties. The Company, VMware, Denali, Dell, Merger Sub, and other defendants have served or filed motions to dismiss the operative complaints in both actions.

The outcome of these lawsuits is uncertain, and additional lawsuits may be brought or additional claims advanced concerning the Merger. An adverse judgment for monetary damages could have an adverse effect on the Company's operations. A preliminary injunction could delay or jeopardize the completion of the Merger, and an adverse judgment granting permanent injunctive relief could indefinitely enjoin completion of the Merger.

14. Segment Information

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

Our management measures are designed to assess performance of these reporting segments excluding certain items. As a result, the corporate reconciling items are used to capture the items excluded from the segment operating performance measures, including stock-based compensation expense, intangible asset amortization expense, restructuring charges and acquisition and other related charges. Additionally, in certain instances, infrequently occurring items are also excluded or included from the measures used by management in assessing segment performance. Research and development expenses, selling, general and administrative expenses and restructuring and acquisition-related charges associated with the EMC Information Infrastructure business are not allocated to the segments within the EMC Information Infrastructure business, as they are managed centrally at the EMC Information Infrastructure business level. EMC Information Infrastructure and Pivotal have not been allocated non-operating income (expense), net and income tax provision as these costs are managed centrally at the EMC corporate level. Accordingly, for the three segments within the EMC Information Infrastructure business, gross profit is the segment operating performance measure, while for Pivotal, operating income is the operating performance measure. The VMware Virtual Infrastructure within EMC amounts represent the revenues and expenses of VMware as reflected within EMC's consolidated financial statements.

Our segment information for the three and six months ended June 30, 2016 and 2015 is as follows (tables in millions, except percentages):

	EMC Information Infrastructure					
	Information Storage	Enterprise Content Division	RSA Information Security	EMC Information Infrastructure	Pivotal	EMC Information Infrastructure plus Pivotal
Three Months Ended June 30, 2016						
Revenues:						
Product revenues	$2,362	$ 42	$ 91	$ 2,495	$32	$ 2,527
Services revenues	1,507	106	135	1,748	64	1,812
Total consolidated revenues	3,869	148	226	4,243	96	4,339
Gross profit	$2,087	$ 106	$ 147	$ 2,340	$46	$ 2,386
Gross profit percentage	53.9 %	71.4 %	64.8 %	55.1 %	48.4 %	55.0 %
Research and development				378	35	413
Selling, general and administrative				1,132	57	1,189
Restructuring and acquisition-related charges				—	—	—
Total operating expenses				1,510	92	1,602
Operating income (expense)				$ 830	$(46)	$ 784

	EMC Information Infrastructure plus Pivotal	VMware Virtual Infrastructure	Corp Reconciling Items	Consolidated
Three Months Ended June 30, 2016				
Revenues:				
Product revenues	$ 2,527	$ 634	$ —	$ 3,161
Services revenues	1,812	1,044	—	2,856
Total consolidated revenues	4,339	1,678	—	6,017
Gross profit	$ 2,386	$ 1,456	$ (106)	$ 3,736
Gross profit percentage	55.0 %	86.8 %	— %	62.1 %
Research and development	413	283	125	821
Selling, general and administrative	1,189	670	175	2,034
Restructuring and acquisition-related charges	—	—	(1)	(1)
Total operating expenses	1,602	953	299	2,854
Operating income (expense)	784	503	(405)	882
Non-operating income (expense), net	(7)	16	(39)	(30)
Income tax provision (benefit)	221	109	(108)	222
Net income	556	410	(336)	630

Net income attributable to the non-controlling interests	2	(80)	29	(49)
Net income attributable to EMC Corporation	$ 558	$ 330	$ (307)	$ 581

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	EMC Information Infrastructure					
	Information Storage	Enterprise Content Division	RSA Information Security	EMC Information Infrastructure	Pivotal	EMC Information Infrastructure plus Pivotal
Three Months Ended June 30, 2015						
Revenues:						
Product revenues	$2,509	$ 40	$ 97	$ 2,646	$20	$ 2,666
Services revenues	1,519	115	141	1,775	44	1,819
Total consolidated revenues	4,028	155	238	4,421	64	4,485
Gross profit	$2,092	$ 105	$ 158	$ 2,355	$26	$ 2,381
Gross profit percentage	51.9 %	67.8 %	66.6 %	53.3 %	40.0 %	53.1 %
Research and development				398	25	423
Selling, general and administrative				1,201	53	1,254
Restructuring and acquisition-related charges				—	—	—
Total operating expenses				1,599	78	1,677
Operating income (expense)				$ 756	$(52)	$ 704

	EMC Information Infrastructure plus Pivotal	VMware Virtual Infrastructure	Corp Reconciling Items	Consolidated
Three Months Ended June 30, 2015				
Revenues:				
Product revenues	$ 2,666	$ 635	$ (76)	$ 3,225
Services revenues	1,819	953	—	2,772
Total consolidated revenues	4,485	1,588	(76)	5,997
Gross profit	$ 2,381	$ 1,381	$ (175)	$ 3,587
Gross profit percentage	53.1 %	87.0 %	— %	59.8 %
Research and development	423	267	92	782
Selling, general and administrative	1,254	640	208	2,102
Restructuring and acquisition-related charges	—	—	23	23
Total operating expenses	1,677	907	323	2,907
Operating income (expense)	704	474	(498)	680
Non-operating income (expense), net	18	11	(20)	9
Income tax provision (benefit)	183	107	(120)	170
Net income	539	378	(398)	519
Net income attributable to the non-controlling interests	—	(72)	40	(32)
Net income attributable to EMC Corporation	$ 539	$ 306	$ (358)	$ 487

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

	EMC Information Infrastructure					
	Information Storage	Enterprise Content Division	RSA Information Security	EMC Information Infrastructure	Pivotal	EMC Information Infrastructure plus Pivotal
Six Months Ended June 30, 2016						
Revenues:						
Product revenues	$4,322	$ 71	$ 186	$ 4,579	$59	$ 4,638
Services revenues	2,994	210	269	3,473	120	3,593
Total consolidated revenues	7,316	281	455	8,052	179	8,231
Gross profit	$3,797	$ 197	$ 298	$ 4,292	$81	$ 4,373
Gross profit percentage	51.9 %	69.8 %	65.6 %	53.3 %	45.0 %	53.1 %
Research and development				756	69	825
Selling, general and administrative				2,216	115	2,331
Restructuring and acquisition-related charges				—	—	—
Total operating expenses				2,972	184	3,156
Operating income (expense)				$ 1,320	$(103)	$ 1,217

	EMC Information Infrastructure plus Pivotal	VMware Virtual Infrastructure	Corp Reconciling Items	Consolidated
Six Months Ended June 30, 2016				
Revenues:				
Product revenues	$ 4,638	$ 1,205	$ —	$ 5,843
Services revenues	3,593	2,056	—	5,649
Total consolidated revenues	8,231	3,261	—	11,492
Gross profit	$ 4,373	$ 2,828	$ (205)	$ 6,996
Gross profit percentage	53.1 %	86.7 %	— %	60.9 %
Research and development	825	566	244	1,635
Selling, general and administrative	2,331	1,313	377	4,021
Restructuring and acquisition-related charges	—	—	48	48
Total operating expenses	3,156	1,879	669	5,704
Operating income (expense)	1,217	949	(874)	1,292
Non-operating income (expense), net	(22)	25	(57)	(54)
Income tax provision (benefit)	296	237	(222)	311
Net income	899	737	(709)	927
Net income attributable to the non-controlling interests	4	(148)	66	(78)
Net income attributable to EMC Corporation	$ 903	$ 589	$ (643)	$ 849

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	EMC Information Infrastructure					
	Information Storage	Enterprise Content Division	RSA Information Security	EMC Information Infrastructure	Pivotal	EMC Information Infrastructure plus Pivotal
Six Months Ended June 30, 2015						
Revenues:						
Product revenues	$4,688	$ 67	$ 197	$ 4,952	$36	$ 4,988
Services revenues	3,003	226	289	3,518	82	3,600
Total consolidated revenues	7,691	293	486	8,470	118	8,588
Gross profit	$3,943	$ 195	$ 323	$ 4,461	$47	$ 4,508
Gross profit percentage	51.3 %	66.5 %	66.6 %	52.7 %	40.1 %	52.5 %
Research and development				822	52	874
Selling, general and administrative				2,371	101	2,472
Restructuring and acquisition-related charges				—	—	—
Total operating expenses				3,193	153	3,346
Operating income (expense)				$ 1,268	$(106)	$ 1,162

	EMC Information Infrastructure plus Pivotal	VMware Virtual Infrastructure	Corp Reconciling Items	Consolidated
Six Months Ended June 30, 2015				
Revenues:				
Product revenues	$ 4,988	$ 1,218	$ (76)	$ 6,130
Services revenues	3,600	1,880	—	5,480
Total consolidated revenues	8,588	3,098	(76)	11,610
Gross profit	$ 4,508	$ 2,692	$ (274)	$ 6,926
Gross profit percentage	52.5 %	86.9 %	— %	59.7 %
Research and development	874	514	182	1,570
Selling, general and administrative	2,472	1,245	422	4,139
Restructuring and acquisition-related charges	—	—	158	158
Total operating expenses	3,346	1,759	762	5,867
Operating income (expense)	1,162	933	(1,036)	1,059
Non-operating income (expense), net	4	20	(20)	4
Income tax provision (benefit)	309	196	(253)	252
Net income	857	757	(803)	811
Net income attributable to the non-controlling interests	—	(146)	74	(72)
Net income attributable to EMC Corporation	$ 857	$ 611	$ (729)	$ 739

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Our revenues are attributed to the geographic areas according to the location of the customers. Revenues by geographic area are included in the following table (table in millions):

	For the Three Months Ended		For the Six Months Ended	
	June 30, 2016	June 30, 2015	June 30, 2016	June 30, 2015
United States	$3,289	$3,270	$6,186	$6,284
Europe, Middle East and Africa	1,673	1,623	3,210	3,181
Asia Pacific and Japan	762	795	1,502	1,524
Latin America, Mexico and Canada	293	309	594	621
Total	$6,017	$5,997	$11,492	$11,610

No country other than the United States accounted for 10% or more of revenues during the three and six months ended June 30, 2016 or 2015.

Long-lived assets, excluding financial instruments, deferred tax assets, goodwill and intangible assets, in the United States were $4,387 million at June 30, 2016 and $4,584 million at December 31, 2015. Internationally, long-lived assets, excluding financial instruments, deferred tax assets, goodwill and intangible assets, were $1,118 million at June 30, 2016 and $1,053 million at December 31, 2015. No country other than the United States accounted for 10% or more of total long-lived assets, excluding financial instruments and deferred tax assets, at June 30, 2016 or December 31, 2015.

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Item 2. 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 Quarterly Report on Form 10-Q. The following discussion contains forward-looking statements and should also be read in conjunction with the risk factors set forth in Item 1A of Part II. 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.

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 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 is focused on our EMC Information Infrastructure segment. The goal of this cost reduction and business transformation program is to reduce our current annual cost base by $850 million. 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 consisted of a reduction in force which was substantially completed by the end of the first quarter of 2016 and will be 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. On July 19, 2016, EMC shareholders approved the Merger Agreement at a Special Meeting of Shareholders.

For additional information related to the Merger Agreement, please refer to the Proxy Statement on Schedule 14A which was declared effective by the Securities and Exchange Commission (“SEC”) on June 6, 2016, which includes the full text of the Merger Agreement included as Annex A.

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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. 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 the first and second quarters of 2016, we continued to invest in expanding our total addressable market through increased internal R&D and through business acquisitions, with a focus on flash, Big Data storage, software-defined storage and converged infrastructure to facilitate the enablement of hybrid cloud infrastructures. 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, cloud services, Flash, storage sharing, 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.

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 game changing 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 provide 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 develops and markets its product and service offerings within three main product groups and allows organizations to leverage synergies and manage IT resources across complex multi-cloud, multi-device environments. These three product groups include: SDDC or Software-Defined Data Center, Hybrid Cloud 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 VMware’s 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 and services solutions across its SDDC portfolio. 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 AirWatch business model includes an on-premise solution that it offers through the sale of perpetual licenses and an off-premise solution that it offers as software-as-a-service. AirWatch products and services continued to contribute to the growth of its end-user computing product group during the three and six months ended June 30, 2016.

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - (Continued)

RESULTS OF OPERATIONS
Revenues
The following tables present total revenue by our segments (in millions):

	For the Three Months Ended			
	June 30, 2016	June 30, 2015	$ Change	% Change
Information Storage	$ 3,869	$ 4,028	$(159)	(4)%
Enterprise Content Division	148	155	(7)	(4)%
RSA Information Security	226	238	(12)	(5)%
Pivotal	96	64	32	49 %
VMware Virtual Infrastructure	1,678	1,588	90	6 %
Corporate reconciling items	—	(76)	76	(100)%
Total consolidated revenues	$ 6,017	$ 5,997	$20	— %

	For the Six Months Ended			
	June 30, 2016	June 30, 2015	$ Change	% Change
Information Storage	$ 7,316	$ 7,691	$(375)	(5)%
Enterprise Content Division	281	293	(12)	(4)%
RSA Information Security	455	486	(31)	(7)%
Pivotal	179	118	61	52 %
VMware Virtual Infrastructure	3,261	3,098	163	5 %
Corporate reconciling items	—	(76)	76	(100)%
Total consolidated revenues	$ 11,492	$ 11,610	$(118)	(1)%

Consolidated product revenues decreased 2% and 5% to $3,161 million and $5,843 million for the three and six months ended June 30, 2016, respectively. The decrease was primarily driven by the decrease in product revenue in the Information Storage segment. Our Information Storage business continues to be negatively impacted by the rapidly changing IT macro environment where our customers are changing their buying patterns and needs. Additionally, during the first quarter of 2016, our business results were again negatively impacted by currency fluctuations.

The Information Storage segment’s product revenues decreased 6% and 8% to $2,362 million and $4,322 million for the three and six months ended June 30, 2016, respectively. This decrease was primarily driven by declines in our traditional high-end and mid-tier storage 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. Additionally, product revenues during the first quarter of 2016 were negatively impacted by foreign currency fluctuations. Product revenues during both the three and six months ended June 30, 2016 were negatively impacted by higher than expected unshipped orders at June 30, 2016 as customers remained cautious about their transactional spend and placed their orders very late in the quarter. The decrease in our traditional product revenues for the three and six months ended June 30, 2016 was partially offset by growth in product revenues from our newer storage technologies, which include our all-flash XIO and VMAX, Isilon scale-out file, Data Domain purpose built backup appliance, Converged Infrastructure, and Software-Defined Storage products.

The Pivotal segment’s product revenues increased 60% and 66% to $32 million and $59 million for the three and six months ended June 30, 2016, respectively, primarily due to a significant increase in subscription orders in the current and prior year for Pivotal CF and BDS which earn revenue over time rather than upfront. 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 remained flat and decreased 1% to $634 million and $1,205 million for the three and six months ended June 30, 2016, respectively. While VMware experienced increased sales in its emerging products, including NSX and VSAN, as well as its vCAN offering, its license revenue growth rate was negatively impacted by certain factors, including lower license sales of its core compute products and increased growth derived from its hybrid cloud and SaaS offerings. Perpetual license revenues that are part of a multi-year arrangement are generally recognized upon delivery of the underlying license using the residual method, whereas revenues derived from our hybrid cloud and SaaS offerings are recognized over a period of time.

The RSA Information Security segment’s product revenues decreased 6% to $91 million and $186 million for the three and six months ended June 30, 2016, respectively, primarily resulting from declines in non-strategic products. 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 increased 6% to $42 million and $71 million for the three and six months ended June 30, 2016, respectively, due to growth in license sales. 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 three and six months ended June 30, 2015 and included in corporate reconciling items as noted above.

Consolidated services revenues increased 3% to $2,856 million and $5,649 million for the three and six months ended June 30, 2016, respectively. The consolidated services revenues increase was primarily driven by Pivotal and VMware Virtual Infrastructure segments’ services revenues resulting from increased revenue associated with maintenance services.

The Information Storage segment’s services revenues decreased by 1% to $1,507 million and were flat at $2,994 million for the three and six months ended June 30, 2016, respectively. 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 was offset by decreased demand for professional services associated with lower product sales.

The Pivotal segment’s services revenues increased 44% and 46% to $64 million and $120 million for the three and six months ended June 30, 2016, respectively. Services revenues increased primarily due to increases in professional services revenues resulting from continued strong demand for our Pivotal Labs services.

The VMware Virtual Infrastructure segment’s services revenues increased 10% and 9% to $1,044 million and $2,056 million for the three and six months ended June 30, 2016, respectively. The increase in services revenues was primarily attributable to growth in VMware’s software maintenance revenues which benefited from renewals of software maintenance contracts sold in previous periods and additional maintenance contracts sold in conjunction with new software license sales.

The RSA Information Security segment’s services revenues decreased 4% and 7% to $135 million and $269 million for the three and six months ended June 30, 2016, respectively. Services revenues decreased primarily due to a decrease in professional services.

The Enterprise Content Division segment’s services revenues decreased 8% and 7% to $106 million and $210 million for the three and six months ended June 30, 2016, respectively. Services revenues decreased primarily due to a decrease in software-as-a-service and professional services.

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

	For the Three Months Ended		
	June 30, 2016	June 30, 2015	% Change
United States	$3,289	$ 3,270	1 %
Europe, Middle East and Africa	1,673	1,623	3 %
Asia Pacific and Japan	762	795	(4)%
Latin America, Mexico and Canada	293	309	(5)%
Total revenues	$6,017	$ 5,997	— %

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - (Continued)

	For the Six Months Ended		
	June 30, 2016	June 30, 2015	% Change
United States	$6,186	$6,284	(2)%
Europe, Middle East and Africa	3,210	3,181	1 %
Asia Pacific and Japan	1,502	1,524	(1)%
Latin America, Mexico and Canada	594	621	(4)%
Total revenues	$11,492	$11,610	(1)%

Revenues increased in the three months ended June 30, 2016 compared to the same period in 2015 in the United States, and decreased in the six months ended June 30, 2016 compared to the same period in 2015. Revenues increased in the three and six months ended June 30, 2016 compared to the same periods in 2015 in Europe, Middle East and Africa. Revenues decreased in the three and six months ended June 30, 2016 compared to the same periods in 2015 in Asia Pacific and Japan and in Latin America, Mexico and Canada.

Changes in exchange rates did not significantly impact consolidated revenues for the three months ended June 30, 2016, and negatively impacted consolidated revenue growth by 1% for the six months ended June 30, 2016. Exchange rates in Europe and Latin America had the most significant impact on EMC’s consolidated growth rate. The negative impact of the changes in rates was the most significant for the euro and British pound.

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - (Continued)

Costs and Expenses

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

	For the Three Months Ended			
	June 30, 2016	June 30, 2015	$ Change	% Change
Cost of revenue:				
Information Storage	$ 1,782	$ 1,936	$(154)	(8)%
Enterprise Content Division	42	50	(8)	(15)%
RSA Information Security	79	80	(1)	— %
Pivotal	50	38	12	28 %
VMware Virtual Infrastructure	222	207	15	7 %
Corporate reconciling items	106	99	7	6 %
Total cost of revenue	2,281	2,410	(129)	(5)%
Gross margins:				
Information Storage	2,087	2,092	(5)	— %
Enterprise Content Division	106	105	1	1 %
RSA Information Security	147	158	(11)	(7)%
Pivotal	46	26	20	80 %
VMware Virtual Infrastructure	1,456	1,381	75	5 %
Corporate reconciling items	(106)	(175)	69	(40)%
Total gross margin	3,736	3,587	149	4 %
Operating expenses:				
Research and development[1]	821	782	39	5 %
Selling, general and administrative[2]	2,034	2,102	(68)	(3)%
Restructuring and acquisition-related charges	(1)	23	(24)	(106)%
Total operating expenses	2,854	2,907	(53)	(2)%
Operating income	882	680	202	30 %
Investment income, interest expense and other expenses, net	(30)	9	(39)	(412)%
Income before provision for income taxes	852	689	163	24 %
Income tax provision	222	170	52	31 %
Net income	630	519	111	21 %
Less: Net income attributable to the non-controlling interests	(49)	(32)	(17)	50 %
Net income attributable to EMC Corporation	$ 581	$ 487	$94	19 %

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - (Continued)

	For the Six Months Ended June 30, 2016	June 30, 2015	$ Change	% Change
Cost of revenue:				
Information Storage	$ 3,519	$ 3,748	$ (229)	(6)%
Enterprise Content Division	84	98	(14)	(13)%
RSA Information Security	157	163	(6)	(4)%
Pivotal	98	71	27	40 %
VMware Virtual Infrastructure	433	406	27	6 %
Corporate reconciling items	205	198	7	3 %
Total cost of revenue	4,496	4,684	(188)	(4)%
Gross margins:				
Information Storage	3,797	3,943	(146)	(4)%
Enterprise Content Division	197	195	2	1 %
RSA Information Security	298	323	(25)	(8)%
Pivotal	81	47	34	71 %
VMware Virtual Infrastructure	2,828	2,692	136	5 %
Corporate reconciling items	(205)	(274)	69	(25)%
Total gross margin	6,996	6,926	70	1 %
Operating expenses:				
Research and development[(3)]	1,635	1,570	65	4 %
Selling, general and administrative[(4)]	4,021	4,139	(118)	(3)%
Restructuring and acquisition-related charges	48	158	(110)	(70)%
Total operating expenses	5,704	5,867	(163)	(3)%
Operating income	1,292	1,059	233	22 %
Investment income, interest expense and other expenses, net	(54)	4	(58)	(1,460)%
Income before provision for income taxes	1,238	1,063	175	17 %
Income tax provision	311	252	59	23 %
Net income	927	811	116	14 %
Less: Net income attributable to the non-controlling interests	(78)	(72)	(6)	9 %
Net income attributable to EMC Corporation	$ 849	$ 739	$ 110	15 %

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(1) Amount includes corporate reconciling items of $125 million and $92 million for the three months ended June 30, 2016 and 2015, respectively.

(2) Amount includes corporate reconciling items of $175 million and $208 million for the three months ended June 30, 2016 and 2015, respectively.

(3) Amount includes corporate reconciling items of $244 million and $182 million for the six months ended June 30, 2016 and 2015, respectively.

(4) Amount includes corporate reconciling items of $377 million and $422 million for the six months ended June 30, 2016 and 2015, respectively.

Gross Margins

Overall our gross margin percentages were 62.1% and 59.8% for the three months ended June 30, 2016 and 2015, respectively. During the three months ended June 30, 2016 compared to 2015, the Information Storage segment increased overall gross margins by 149 basis points, the Enterprise Content Division segment increased overall gross margins by 8 points, the VMware Virtual Infrastructure segment increased overall gross margins by 35 basis points and the Pivotal segment increased overall gross margin by 3 basis points. In addition, the decrease in corporate reconciling items, consisting of stock-based compensation, intangible asset amortization and the GSA settlement increased the consolidated gross margin percentage by 40 basis points. These increases were offset by the RSA Information Security segment, which decreased overall gross margins by 8 basis points.

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Overall our gross margin percentages were 60.9% and 59.7% for the six months ended June 30, 2016 and 2015, respectively. During the six months ended June 30, 2016 compared to 2015, the Information Storage segment increased overall gross margins by 69 basis points, the Enterprise Content Division increased overall gross margins by 7 basis points, and the VMware Virtual Infrastructure segment increased overall gross margins by 34 basis points. In addition, the decrease in corporate reconciling items, consisting of stock-based compensation, intangible asset amortization and the GSA settlement increased the consolidated gross margin percentage by 21 basis points. These decreases were offset by the RSA Information Security segment, which decreased overall gross margins by 5 basis points, and the Pivotal segment, which decreased overall gross margins by 3 basis points.

The gross margin percentages for the Information Storage segment were 53.9% and 51.9% for the three months ended June 30, 2016 and 2015, respectively, and 51.9% and 51.3% for the six months ended June 30, 2016 and 2015, respectively. The increase in gross margin percentage for the three and six months ended June 30, 2016 compared to the same periods in 2015 was due to increases in both product and service margins as well as an increase in the mix of maintenance services which have higher margins than professional services.

The gross margin percentages for the Pivotal segment were 48.4% and 40.0% for the three months ended June 30, 2016 and 2015, respectively, and 45.0% and 40.1% for the six months ended June 30, 2016 and 2015, respectively. The increase in gross margin percentage for the three and six months ended June 30, 2016 compared to the same periods in 2015 was due to increases in both product and services margins and a shift in the mix of product revenue to products which have higher margins.

The gross margin percentages for the VMware Virtual Infrastructure segment were 86.8% and 87.0% for the three months ended June 30, 2016 and 2015, respectively, and 86.7% and 86.9% for the six months ended June 30, 2016 and 2015, respectively. The slight decrease in gross margin percentage for the three and six months ended June 30, 2016 compared to the same periods in 2015 was due to a higher mix of services revenues which have lower margins. These decreases were partially offset by an increase in product margins resulting from lower royalty costs.

The gross margin percentages for the RSA Information Security segment were 64.8% and 66.6% for the three months ended June 30, 2016 and 2015, respectively, and 65.6% and 66.6% for the six months ended June 30, 2016 and 2015, respectively. Gross margins decreased for the three and six months ended June 30, 2016 compared to the same periods in 2015 due to a decrease in product margins year over year.

The gross margin percentages for the Enterprise Content Division segment were 71.4% and 67.8% for the three months ended June 30, 2016 and 2015, respectively, and 69.8% and 66.5% for the six months ended June 30, 2016 and 2015, respectively. The increase in gross margin percentage for the three and six months ended June 30, 2016 compared to the same periods in 2015 was primarily driven by increases in both product and 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 facilities costs, and depreciation expense, intangible asset amortization and capitalized software development costs.

The following table summarizes our consolidated R&D expenses for the three and six months ended June 30, 2016 and 2015 (dollars in millions):

	Three Months Ended	Six Months Ended

	June 30, 2016	June 30, 2015	$ Change	% Change	June 30, 2016	June 30, 2015	$ Change	% Change
Research and development	$821	$782	$ 39	5 %	$1,635	$1,570	$ 65	4 %
Percentage of revenue	14 %	13 %			14 %	14 %		

The increase in R&D expenses for the three months ended June 30, 2016 when compared to the same period in 2015 was attributable to the Pivotal business, which increased overall R&D expenses by $10 million, and the VMware Virtual Infrastructure business, which increased overall R&D expenses by $16 million. In addition, corporate reconciling items increased consolidated R&D expenses by $33 million. These increases were partially offset by the EMC Information Infrastructure business, which decreased overall R&D expenses by $20 million.

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - (Continued)

The increase in R&D expenses for the six months ended June 30, 2016 when compared to the same period in 2015 was attributable to the Pivotal business, which increased overall R&D expenses by $17 million, and the VMware Virtual Infrastructure business, which increased overall R&D expenses by $52 million. In addition, corporate reconciling items increased consolidated R&D expenses by $62 million. These increases were partially offset by the EMC Information Infrastructure business, which decreased overall R&D expenses by $66 million.

The following table summarizes R&D expenses within EMC's Information Infrastructure business for the three and six months ended June 30, 2016 and 2015 (dollars in millions):

	Three Months Ended				Six Months Ended			
	June 30, 2016	June 30, 2015	$ Change	% Change	June 30, 2016	June 30, 2015	$ Change	% Change
Research and development	$378	$398	$(20)	(5)%	$756	$822	$(66)	(8)%
Percentage of revenue	9 %	9 %			9 %	10 %		

R&D expenses within EMC's Information Infrastructure business decreased for the three and six months ended June 30, 2016 when compared to the same periods in 2015 primarily due to decreases in personnel-related costs as well as increases in capitalized software development costs due to the timing of projects reaching technological feasibility, which decreased overall R&D expenses. Personnel-related costs decreased by $2 million and $18 million for the three and six months ended June 30, 2016, respectively, primarily due to our cost reduction and business transformation program initiated in 2015. Capitalized software development costs increased by $18 million and $47 million for the three and six months ended June 30, 2016, respectively.

The following table summarizes R&D expenses within the Pivotal business for the three and six months ended June 30, 2016 and 2015 (dollars in millions):

	Three Months Ended				Six Months Ended			
	June 30, 2016	June 30, 2015	$ Change	% Change	June 30, 2016	June 30, 2015	$ Change	% Change
Research and development	$35	$25	$10	38 %	$69	$52	$17	32 %
Percentage of revenue	36 %	39 %			38 %	44 %		

R&D expenses within the Pivotal business increased for the three and six months ended June 30, 2016 when compared to the same periods in 2015 primarily due to an increase in personnel-related costs, which are expenses driven by incremental headcount from strategic hiring and business acquisitions.

The following table summarizes R&D expenses within the VMware Virtual Infrastructure business for the three and six months ended June 30, 2016 and 2015 (dollars in millions):

	Three Months Ended				Six Months Ended			
	June 30, 2016	June 30, 2015	$ Change	% Change	June 30, 2016	June 30, 2015	$ Change	% Change
Research and development	$283	$267	$16	6 %	$566	$514	$52	10 %
Percentage of revenue	17 %	17 %			17 %	17 %		

R&D expenses within the VMware Virtual Infrastructure business increased for the three and six months ended June 30, 2016 when compared to the same periods in 2015 primarily due to growth in personnel-related expenses of $21 million and $44 million, respectively, driven by incremental growth in headcount. Additionally, depreciation and infrastructure related R&D expenses within the VMware Virtual Infrastructure business decreased $2 million for the three months ended June 30, 2016 and increased $5 million for the six months ended June 30, 2016.

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - (Continued)

The following table summarizes corporate reconciling items within R&D expenses for the three and six months ended June 30, 2016 and 2015 (dollars in millions):

	Three Months Ended				Six Months Ended			
	June 30, 2016	June 30, 2015	$ Change	% Change	June 30, 2016	June 30, 2015	$ Change	% Change
Corporate reconciling items	$125	$ 92	$ 33	36 %	$244	$ 182	$ 62	34 %

Corporate reconciling items within R&D, which consist of stock-based compensation expense and intangible asset amortization, increased for the three and six months ended June 30, 2016 when compared to the same periods in 2015 primarily due to stock-based compensation expense, which increased by $33 million and $62 million, respectively.

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 related 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 for the three and six months ended June 30, 2016 and 2015 (dollars in millions):

	Three Months Ended				Six Months Ended			
	June 30, 2016	June 30, 2015	$ Change	% Change	June 30, 2016	June 30, 2015	$ Change	% Change
Selling, general and administrative	$2,034	$2,102	$ (68)	(3)%	$4,021	$4,139	$ (118)	(3)%
Percentage of revenue	34 %	35 %			35 %	36 %		

The decrease in SG&A expenses for the three months ended June 30, 2016 when compared to the same period in 2015 was attributable to the EMC Information Infrastructure business, which decreased overall SG&A expenses by $69 million and corporate reconciling items which decreased consolidated SG&A exp