

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

FORM 10-Q

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

For the quarterly period ended September 30, 2017

or

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

For the transition period from _____ to _____

Commission File Number 1-9247

CA, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

13-2857434

(I.R.S. Employer
Identification Number)

**520 Madison Avenue,
New York, New York**

(Address of principal executive offices)

10022

(Zip Code)

1-800-225-5224

(Registrant's telephone number, including area code)

Not applicable

(Former name, former address and former fiscal year, if changed since last report)

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

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

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

(Check one:)

Large accelerated filer Accelerated filer

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

Emerging growth company

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date:

Title of Class	Shares Outstanding
Common Stock	as of October 19, 2017
par value \$0.10 per share	418,543,394

CA, INC. AND SUBSIDIARIES

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PART I. FINANCIAL INFORMATION

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders

CA, Inc.:

We have reviewed the condensed consolidated balance sheet of CA, Inc. and subsidiaries as of September 30, 2017, and the related condensed consolidated statements of operations and comprehensive income for the three-month and six-month periods ended September 30, 2017 and 2016, and the related condensed consolidated statements of cash flows for the six-month periods ended September 30, 2017 and 2016. These condensed consolidated financial statements are the responsibility of the Company's management.

We conducted our reviews in accordance with the standards of the Public Company Accounting Oversight Board (United States). A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the Public Company Accounting Oversight Board (United States), the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

Based on our reviews, we are not aware of any material modifications that should be made to the condensed consolidated financial statements referred to above for them to be in conformity with U.S. generally accepted accounting principles.

We have previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet of CA, Inc. and subsidiaries as of March 31, 2017, and the related consolidated statements of operations, comprehensive income, stockholders' equity and cash flows for the year then ended (not presented herein); and in our report dated May 12, 2017, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying condensed consolidated balance sheet as of March 31, 2017 is fairly stated, in all material respects, in relation to the consolidated balance sheet from which it has been derived.

/s/ KPMG LLP

New York, New York

October 26, 2017

Item 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

CA, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(in millions, except share amounts)

	September 30, 2017	March 31, 2017
	<i>(unaudited)</i>	
Assets		
Current assets:		
Cash and cash equivalents	\$ 2,822	\$ 2,771
Trade accounts receivable, net of allowance for doubtful accounts of \$11 and \$11, respectively	457	764
Other current assets	178	198
Total current assets	\$ 3,457	\$ 3,733
Property and equipment, net of accumulated depreciation of \$846 and \$841, respectively	230	237
Goodwill	6,883	6,857
Capitalized software and other intangible assets, net	1,247	1,307
Deferred income taxes	336	327
Other noncurrent assets, net	160	149
Total assets	\$ 12,313	\$ 12,610
Liabilities and stockholders' equity		
Current liabilities:		
Current portion of long-term debt	\$ 268	\$ 18
Accounts payable	80	91
Accrued salaries, wages and commissions	182	256
Accrued expenses and other current liabilities	324	326
Deferred revenue (billed or collected)	1,909	2,222
Taxes payable, other than income taxes payable	36	63
Federal, state and foreign income taxes payable	—	30
Total current liabilities	\$ 2,799	\$ 3,006
Long-term debt, net of current portion	2,517	2,773
Federal, state and foreign income taxes payable	130	131
Deferred income taxes	132	119
Deferred revenue (billed or collected)	708	794
Other noncurrent liabilities	92	98
Total liabilities	\$ 6,378	\$ 6,921
Stockholders' equity:		
Preferred stock, no par value, 10,000,000 shares authorized; No shares issued and outstanding	\$ —	\$ —
Common stock, \$0.10 par value, 1,100,000,000 shares authorized; 589,695,081 and 589,695,081 shares issued; 413,716,991 and 413,409,346 shares outstanding, respectively	59	59
Additional paid-in capital	3,687	3,702
Retained earnings	7,070	6,923
Accumulated other comprehensive loss	(351)	(483)
Treasury stock, at cost, 175,978,090 and 176,285,735 shares, respectively	(4,530)	(4,512)
Total stockholders' equity	\$ 5,935	\$ 5,689
Total liabilities and stockholders' equity	\$ 12,313	\$ 12,610

See accompanying Notes to the Condensed Consolidated Financial Statements

CA, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited)
(in millions, except per share amounts)

	For the Three Months Ended September 30,		For the Six Months Ended September 30,	
	2017	2016	2017	2016
Revenue:				
Subscription and maintenance	\$ 826	\$ 824	\$ 1,643	\$ 1,650
Professional services	75	75	150	152
Software fees and other	133	119	266	215
Total revenue	\$ 1,034	\$ 1,018	\$ 2,059	\$ 2,017
Expenses:				
Costs of licensing and maintenance	\$ 73	\$ 66	\$ 144	\$ 134
Cost of professional services	74	73	147	148
Amortization of capitalized software costs	67	59	137	125
Selling and marketing	244	235	490	477
General and administrative	97	84	204	172
Product development and enhancements	161	136	319	284
Depreciation and amortization of other intangible assets	27	18	53	38
Other expenses, net	9	27	20	27
Total expenses before interest and income taxes	\$ 752	\$ 698	\$ 1,514	\$ 1,405
Income before interest and income taxes	\$ 282	\$ 320	\$ 545	\$ 612
Interest expense, net	24	14	49	29
Income before income taxes	\$ 258	\$ 306	\$ 496	\$ 583
Income tax expense	74	94	134	173
Net income	\$ 184	\$ 212	\$ 362	\$ 410
Basic income per common share				
	\$ 0.44	\$ 0.50	\$ 0.86	\$ 0.98
Basic weighted average shares used in computation				
	415	414	415	414
Diluted income per common share				
	\$ 0.44	\$ 0.50	\$ 0.86	\$ 0.98
Diluted weighted average shares used in computation				
	416	415	416	415

See accompanying Notes to the Condensed Consolidated Financial Statements

CA, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(unaudited)
(in millions)

	For the Three Months Ended September 30,		For the Six Months Ended September 30,	
	2017	2016	2017	2016
Net income	\$ 184	\$ 212	\$ 362	\$ 410
Other comprehensive income (loss):				
Foreign currency translation adjustments	48	10	132	(19)
Total other comprehensive income (loss)	\$ 48	\$ 10	\$ 132	\$ (19)
Comprehensive income	\$ 232	\$ 222	\$ 494	\$ 391

See accompanying Notes to the Condensed Consolidated Financial Statements

CA, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)
(in millions)

	For the Six Months Ended September 30,	
	2017	2016
Operating activities:		
Net income	\$ 362	\$ 410
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	190	163
Deferred income taxes	(23)	(11)
Provision for bad debts	2	2
Share-based compensation expense	61	54
Other non-cash items	2	3
Foreign currency transaction losses (gains)	9	(1)
Changes in other operating assets and liabilities, net of effect of acquisitions:		
Decrease in trade accounts receivable	317	176
Decrease in deferred revenue	(460)	(562)
Decrease in taxes payable, net	(58)	(82)
Increase in accounts payable, accrued expenses and other	11	19
Decrease in accrued salaries, wages and commissions	(81)	(47)
Changes in other operating assets and liabilities, net	3	17
Net cash provided by operating activities	\$ 335	\$ 141
Investing activities:		
Acquisitions of businesses, net of cash acquired, and purchased software	\$ (15)	\$ (1)
Purchases of property and equipment	(22)	(16)
Other investing activities	(1)	—
Net cash used in investing activities	\$ (38)	\$ (17)
Financing activities:		
Dividends paid	\$ (215)	\$ (214)
Purchases of common stock	(90)	(100)
Notional pooling borrowings	1,173	467
Notional pooling repayments	(1,204)	(456)
Debt repayments	(9)	(4)
Debt issuance costs	(3)	—
Exercise of common stock options	5	22
Payments related to tax withholding for share-based compensation	(35)	(34)
Other financing activities	(3)	—
Net cash used in financing activities	\$ (381)	\$ (319)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	136	(32)
Increase (decrease) in cash, cash equivalents and restricted cash	\$ 52	\$ (227)
Cash, cash equivalents and restricted cash at beginning of period	2,772	2,813
Cash, cash equivalents and restricted cash at end of period	\$ 2,824	\$ 2,586

See accompanying Notes to the Condensed Consolidated Financial Statements

CA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

NOTE A – ACCOUNTING POLICIES

Basis of Presentation: The accompanying unaudited condensed consolidated financial statements (Condensed Consolidated Financial Statements) of CA, Inc. and its subsidiaries (Company) have been prepared in accordance with U.S. generally accepted accounting principles (GAAP), as defined in Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 270, for interim financial information and in accordance with the instructions to Form 10-Q and Article 10 of Securities and Exchange Commission Regulation S-X. Accordingly, they do not include all of the information and footnotes required by GAAP for complete financial statements and therefore should be read in conjunction with the Company's consolidated financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the fiscal year ended March 31, 2017 (2017 Form 10-K). In the opinion of management, all adjustments considered necessary for a fair presentation have been included. All such adjustments are of a normal, recurring nature.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Although these estimates are based on management's knowledge of current events and actions it may undertake in the future, these estimates may ultimately differ from actual results.

Operating results for the three and six months ended September 30, 2017 are not necessarily indicative of the results that may be expected for the fiscal year ending March 31, 2018.

Cash, Cash Equivalents and Restricted Cash: The Company's cash and cash equivalents are held in numerous locations throughout the world, with approximately 66% being held by the Company's foreign subsidiaries outside the United States at September 30, 2017.

At September 30, 2017 and March 31, 2017, the total amount of restricted cash included in "Other noncurrent assets, net" in the Company's Condensed Consolidated Balance Sheets was approximately \$2 million and \$1 million, respectively. Restricted cash was included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period amounts shown in the Company's Condensed Consolidated Statements of Cash Flows for the six months ended September 30, 2017 and 2016.

New Accounting Pronouncements:

New Accounting Pronouncements Recently Adopted

In March 2016, the FASB issued Accounting Standards Update No. 2016-09 (ASU 2016-09), *Improvements to Employee Share-Based Payment Accounting* (Topic 718), which is intended to simplify several aspects of the accounting for share-based payment award transactions, including the income tax consequences and classification on the statements of cash flows. ASU 2016-09 was adopted by the Company when effective in the first quarter of fiscal year 2018. The adoption of ASU 2016-09 resulted in the presentation of cash flows for employee taxes paid by withholding shares of restricted stock as a financing activity within the Condensed Consolidated Statements of Cash Flows, which were previously presented as an operating activity. A retrospective method of adoption was required for this change, which resulted in the reclassification of cash outflows of approximately \$34 million from operating activities to financing activities within the Condensed Consolidated Statements of Cash Flows for the six months ended September 30, 2016. Although not material, ASU 2016-09 also requires that excess tax benefits on share-based compensation expense be recognized in the Condensed Consolidated Statements of Operations as a component of the provision for income taxes, rather than additional paid-in capital, on a prospective basis. As permitted by ASU 2016-09, although not material, the Company elected to retrospectively reclassify cash flows related to excess tax benefits on share-based compensation expense as an operating activity within the Condensed Consolidated Statements of Cash Flows, which were previously presented as a financing activity. In addition, as permitted by ASU 2016-09, the Company elected to continue to estimate forfeitures expected to occur to determine the amount of share-based compensation expense to be recognized in each period.

In August 2016, the FASB issued Accounting Standards Update No. 2016-15 (ASU 2016-15), *Classification of Certain Cash Receipts and Cash Payments* (Topic 230), which is intended to reduce diversity in practice on how certain cash receipts and cash payments are classified and presented in the statements of cash flows. In November 2016, the FASB issued Accounting Standards Update No. 2016-18 (ASU 2016-18), *Restricted Cash* (Topic 230), which is intended to reduce diversity in practice on how changes in restricted cash are classified and presented in the statements of cash flows. ASU 2016-18 requires amounts generally described as restricted cash to be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statements of cash flows. The Company elected to early adopt both ASU 2016-15 and ASU 2016-18 in the first quarter of fiscal year 2018 using the retrospective transition method of adoption. The adoption of these standards did not have a material effect on the Company's consolidated financial statements and related disclosures.

CA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

New Accounting Pronouncements Not Yet Adopted

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers*, with amendments in 2015, 2016 and 2017, which creates new ASC Topic 606 (Topic 606) that will replace most existing revenue recognition guidance in GAAP when it becomes effective. Topic 606 requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The new standard will be effective for the Company's first quarter of fiscal year 2019 and early application for fiscal year 2018 is permitted. Topic 606 may be applied retrospectively to each prior period presented (full retrospective method) or with the cumulative effect recognized as of the date of initial application (modified retrospective method).

The Company has established a cross-functional implementation team consisting of representatives across the organization and a third-party service provider to develop a project plan, including the evaluation of customer contracts across the organization, the development of policies, processes and tools to report financial results, and the implementation and evaluation of the Company's internal controls over financial reporting that will be necessary under the new standard. The Company currently plans to adopt Topic 606 in the first quarter of fiscal year 2019 using the modified retrospective method.

While the Company is continuing to determine the full effect of the new standard, it currently anticipates that this standard will have a material effect on its consolidated financial statements and related disclosures, and currently believes the most significant effect relates to the timing of the recognition of its software license revenue. Specifically, under the new standard, the Company currently expects to recognize license revenue for its Mainframe Solutions and Enterprise Solutions products at the point-in-time the licensed software is transferred to the customer, rather than ratably over the term of the customer contract as required by existing GAAP for most of the Company's software arrangements. As a result, a significant portion of the Company's revenue backlog (*i.e.*, deferred revenue and future billings on committed contracts) relating to the license component of customer contracts at March 31, 2018 under existing GAAP will not be recognized as revenue in future periods but instead will be included as part of the cumulative effect adjustment within retained earnings upon adoption of Topic 606. Such cumulative effect adjustment will primarily result from (i) the significant reduction in deferred revenue relating to the license component of customer contracts as mentioned above, (ii) the establishment of a significant contract asset related to the Company's contractual right to consideration for completed performance obligations not yet billed or collected (*i.e.*, license revenue recognized in advance of billings), and (iii) the increase in deferred tax liabilities related to the increase in contract assets and the increase in income taxes payable for the portion of deferred revenue included in the cumulative effect adjustment that has not been previously included as taxable income on a tax return, which will result in an acceleration of the timing of income tax payments. This acceleration of the timing of income tax payments will be significant in relation to the Company's current annual income tax payments within cash flows from operations. The Company is currently evaluating the amounts for the items listed above, as well as the timing of income tax payments upon adoption of Topic 606. However, the Company does not currently expect Topic 606 to have a significant effect on its customer billings and cash collections from customer billings.

The Company currently believes that the point-in-time recognition requirement of the new standard will increase the variability of its revenue and overall net income period-to-period. The Company does not currently expect Topic 606 will have a significant effect on the timing of revenue recognition for its maintenance, Software-as-a-Service and professional services contracts. Under Topic 606, more judgment and estimates will be required within the revenue recognition process than are required under existing GAAP, including estimates of the standalone selling price for each performance obligation identified within the Company's contracts.

Topic 606 will also require the Company to capitalize a portion of its sales commissions and other incremental costs to acquire contracts upon adoption, which are currently expensed as incurred. The Company currently anticipates it will amortize these capitalized costs over an expected period of benefit ranging from approximately four to seven years. The Company is currently evaluating the effect of this requirement on its consolidated financial statements and related disclosures.

In February 2016, the FASB issued Accounting Standards Update No. 2016-02 (ASU 2016-02), *Leases* (Topic 842), which requires a lessee to recognize assets and liabilities on its consolidated balance sheet for leases with accounting lease terms of more than 12 months. ASU 2016-02 will replace most existing lease accounting guidance in GAAP when it becomes effective. The new standard states that a lessee will recognize a lease liability for the obligation to make lease payments and a right-of-use asset for the right to use the underlying asset for the lease term. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the consolidated statements of operations. ASU 2016-02 will be effective for the Company's first quarter of fiscal year 2020 and requires the modified retrospective method of adoption. Early adoption is permitted. Although the Company is currently evaluating the timing of adoption and the effect that ASU 2016-02 will have on its consolidated financial statements and related disclosures, the Company currently expects that most of its operating lease commitments will be subject to the new standard and recognized as operating lease liabilities and right-of-use assets upon adoption.

CA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

In October 2016, the FASB issued Accounting Standards Update No. 2016-16 (ASU 2016-16), *Intra-Equity Transfers of Assets Other Than Inventory* (Topic 740), which is intended to eliminate diversity in practice and provide a more accurate depiction of the tax consequences on intercompany asset transfers (excluding inventory). ASU 2016-16 requires entities to immediately recognize the tax consequences on intercompany asset transfers (excluding inventory) at the transaction date, rather than deferring the tax consequences under current GAAP. ASU 2016-16 will be effective for the Company's first quarter of fiscal year 2019 and requires a modified retrospective method of adoption. Early adoption is permitted, but only in the first quarter of an entity's fiscal year. The Company does not currently expect the adoption of ASU 2016-16 to have a material effect on its consolidated financial statements and related disclosures.

In January 2017, the FASB issued Accounting Standards Update No. 2017-04 (ASU 2017-04), *Simplifying the Test for Goodwill Impairment* (Topic 350), which is intended to simplify the subsequent measurement of goodwill. ASU 2017-04 eliminates Step 2 of the goodwill impairment test requiring the assessment of fair value of individual assets and liabilities of a reporting unit to measure goodwill impairments. Upon adoption of this new standard, goodwill impairments will be the amount by which a reporting unit's carrying value exceeds its fair value. ASU 2017-04 will be effective for the Company's first quarter of fiscal year 2021 and requires a prospective method of adoption. Early adoption is permitted. The Company is currently evaluating the timing of adoption and the effect that ASU 2017-04 will have on its consolidated financial statements and related disclosures.

In August 2017, the FASB issued Accounting Standards Update No. 2017-12 (ASU 2017-12), *Targeted Improvements to Accounting for Hedging Activities* (Topic 815), which is intended to improve the financial reporting of hedging relationships to better portray the economic results of risk management activities in financial statements. ASU 2017-12 makes certain targeted improvements to simplify the application of the hedge accounting guidance in current GAAP. ASU 2017-12 will be effective for the Company's first quarter of fiscal year 2020 and requires a prospective method of adoption for the amended presentation and disclosure guidance. Early adoption is permitted. The Company is currently evaluating the timing of adoption and the effect that ASU 2017-12 will have on its consolidated financial statements and related disclosures.

NOTE B – ACQUISITIONS

In the fourth quarter of fiscal year 2017, the Company acquired Automic Holding GmbH (Automic) and Veracode, Inc. (Veracode). The results of operations of Automic and Veracode are reported predominantly in the Company's Enterprise Solutions segment. The preliminary purchase price allocation for Automic and Veracode is provided within the table below.

<i>(dollars in millions)</i>	Automic	Veracode	Estimated Useful Life
Finite-lived intangible assets ⁽¹⁾	\$ 174	\$ 99	2-12 years
Purchased software	273	240	1-8 years
Goodwill	312	411	Indefinite
Deferred tax liabilities, net	(115)	(108)	—
Other assets net of other liabilities assumed ⁽²⁾	31	(24)	—
Purchase price	\$ 675	\$ 618	

(1) Includes customer relationships and trade names.

(2) Includes approximately \$34 million and \$16 million of cash acquired from Automic and Veracode, respectively.

The excess purchase price over the estimated value of the net tangible and identifiable intangible assets was recorded to goodwill. The preliminary allocation of the purchase price to goodwill was predominantly due to synergies the Company expects to achieve through integration of the acquired technology with the Company's existing product portfolio and the intangible assets that are not separable, such as assembled workforce and going concern. The goodwill relating to the Company's acquisitions of Automic and Veracode is not expected to be deductible for tax purposes and is allocated to the Enterprise Solutions segment. For both Automic and Veracode, the allocation of purchase price to acquired identifiable assets, including intangible assets, is preliminary because the Company has not yet completed its analysis of their historical tax records. Thus, the measurements of fair value set forth above for both Automic and Veracode are subject to change. The Company expects to finalize the valuations as soon as practical, but not later than one year from the acquisition dates.

The Condensed Consolidated Statement of Operations for the three and six months ended September 30, 2017 included total revenue of approximately \$55 million and \$114 million, respectively, and net loss of approximately \$18 million and \$37 million, respectively, from Automic and Veracode.

CA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

The unaudited pro forma combined financial information in the table below summarizes the results of operations for the Company, Automic and Veracode as though the companies were combined as of the beginning of fiscal year 2017. The pro forma financial information presented below is for informational purposes only and is not indicative of the results of operations that would have been achieved if the acquisitions had taken place at the beginning of fiscal year 2017, nor does it attempt to represent the results of future operations of the combined entities under the ownership and operation of the Company. The pro forma results of operations also do not include any cost savings or other synergies that may result from these acquisitions or any estimated costs that have been or will be incurred by the Company to integrate the acquired assets.

The pro forma results below were based on estimates and assumptions, which the Company believes are reasonable. The pro forma financial information for all periods presented also includes the business combination accounting effects resulting from these acquisitions, including the amortization charges from acquired intangible assets and other purchase accounting adjustments, employee retention costs and the related tax effects as though the Company, Automic and Veracode were combined as of the beginning of fiscal year 2017.

<i>(in millions, except per share amounts)</i>	Three Months Ended September 30, 2016	Six Months Ended September 30, 2016
	<i>unaudited</i>	
Total revenue	\$ 1,069	\$ 2,117
Net income	\$ 184	\$ 346
Basic income per common share	\$ 0.44	\$ 0.82
Diluted income per common share	\$ 0.44	\$ 0.82

The pro forma effects of the Company's other fiscal year 2017 acquisitions on the Company's revenues and results of operations during the three and six months ended September 30, 2016 were immaterial.

The Company had approximately \$11 million and \$12 million of accrued acquisition-related costs at September 30, 2017 and March 31, 2017, respectively, related to purchase price amounts withheld subject to indemnification protections.

NOTE C – GOODWILL, CAPITALIZED SOFTWARE AND OTHER INTANGIBLE ASSETS

The gross carrying amounts and accumulated amortization for capitalized software and other intangible assets at September 30, 2017 were as follows:

	At September 30, 2017				
	Gross Amortizable Assets	Less: Fully Amortized Assets	Remaining Amortizable Assets	Accumulated Amortization on Remaining Amortizable Assets	Net Assets
	<i>(in millions)</i>				
Purchased software products	\$ 6,560	\$ 4,909	\$ 1,651	\$ 778	\$ 873
Internally developed software products	1,467	1,287	180	154	26
Other intangible assets	1,219	824	395	47	348
Total capitalized software and other intangible assets	\$ 9,246	\$ 7,020	\$ 2,226	\$ 979	\$ 1,247

CA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

The gross carrying amounts and accumulated amortization for capitalized software and other intangible assets at March 31, 2017 were as follows:

At March 31, 2017					
	Gross Amortizable Assets	Less: Fully Amortized Assets	Remaining Amortizable Assets	Accumulated Amortization on Remaining Amortizable Assets	Net Assets
<i>(in millions)</i>					
Purchased software products	\$ 6,496	\$ 4,914	\$ 1,582	\$ 667	\$ 915
Internally developed software products	1,467	1,029	438	391	47
Other intangible assets	1,193	812	381	36	345
Total capitalized software and other intangible assets	\$ 9,156	\$ 6,755	\$ 2,401	\$ 1,094	\$ 1,307

Based on the capitalized software and other intangible assets recorded through September 30, 2017, the projected annual amortization expense for fiscal year 2018 and the next four fiscal years is expected to be as follows:

Year Ended March 31,					
	2018	2019	2020	2021	2022
<i>(in millions)</i>					
Purchased software products	\$ 236	\$ 185	\$ 161	\$ 117	\$ 109
Internally developed software products	37	9	1	—	—
Other intangible assets	41	40	36	36	35
Total	\$ 314	\$ 234	\$ 198	\$ 153	\$ 144

The Company evaluates the useful lives and recoverability of capitalized software and other intangible assets when events or changes in circumstances indicate that an impairment may exist. These evaluations require complex assumptions about key factors such as future customer demand, technology trends and the impact of those factors on the technology the Company acquires and develops for its products. Impairments or revisions to useful lives could result from the use of alternative assumptions that reflect reasonably possible outcomes related to future customer demand or technology trends for assets within the Enterprise Solutions segment.

Goodwill activity by segment for the six months ended September 30, 2017 was as follows:

<i>(in millions)</i>	Mainframe Solutions	Enterprise Solutions	Services	Total
Balance at March 31, 2017	\$ 4,178	\$ 2,598	\$ 81	\$ 6,857
Acquisitions ⁽¹⁾	—	(10)	—	(10)
Foreign currency translation adjustment	—	36	—	36
Balance at September 30, 2017	\$ 4,178	\$ 2,624	\$ 81	\$ 6,883

(1) Acquisitions amount relates to purchase price allocation adjustments that occurred during the six months ended September 30, 2017.

CA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

NOTE D – DEFERRED REVENUE

The current and noncurrent components of “Deferred revenue (billed or collected)” at September 30, 2017 and March 31, 2017 were as follows:

	September 30, 2017	March 31, 2017
<i>(in millions)</i>		
Current:		
Subscription and maintenance	\$ 1,635	\$ 1,948
Professional services	141	135
Software fees and other	133	139
Total deferred revenue (billed or collected) – current	\$ 1,909	\$ 2,222
Noncurrent:		
Subscription and maintenance	\$ 683	\$ 769
Professional services	19	19
Software fees and other	6	6
Total deferred revenue (billed or collected) – noncurrent	\$ 708	\$ 794
Total deferred revenue (billed or collected)	\$ 2,617	\$ 3,016

NOTE E – DERIVATIVES

The Company is exposed to financial market risks arising from changes in interest rates and foreign exchange rates. Changes in interest rates could affect the Company’s monetary assets and liabilities, and foreign exchange rate changes could affect the Company’s foreign currency denominated monetary assets and liabilities and forecasted transactions. The Company enters into derivative contracts with the intent of mitigating a portion of these risks.

Foreign Currency Contracts: The Company enters into foreign currency option and forward contracts to manage balance sheet and forecasted transaction foreign currency risks. The Company has not designated its foreign exchange derivatives as hedges for accounting purposes. The Company’s foreign currency derivative trading strategy is to economically hedge a majority of its material exposures due to forecasted and actual intercompany cash flows, such as royalties and development costs. The Company also economically hedges its material receivable, payable and cash balances held in non-functional currencies. The Company’s foreign currency contracts are generally short-term in duration. Principal currencies hedged include the euro, the British pound sterling, the Australian dollar, the Brazilian real, the Japanese yen, the Canadian dollar, the Israeli shekel, the Indian rupee and the Czech koruna. Changes in fair value from these contracts are recorded as “Other expenses, net” in the Company’s Condensed Consolidated Statements of Operations.

At September 30, 2017, foreign currency contracts outstanding consisted of purchase and sale contracts with a total gross notional value of approximately \$890 million and durations of less than six months. The net fair value of these contracts at September 30, 2017 was a net liability of approximately \$6 million, of which approximately \$7 million is included in “Other current assets” and approximately \$13 million is included in “Accrued expenses and other current liabilities” in the Company’s Condensed Consolidated Balance Sheet.

At March 31, 2017, foreign currency contracts outstanding consisted of purchase and sale contracts with a total gross notional value of approximately \$336 million and durations of less than three months. The net fair value of these contracts at March 31, 2017 was a net asset of approximately \$1 million, of which approximately \$2 million is included in “Other current assets” and approximately \$1 million is included in “Accrued expenses and other current liabilities” in the Company’s Condensed Consolidated Balance Sheet.

A summary of the effect of the foreign exchange derivatives on the Company’s Condensed Consolidated Statements of Operations was as follows:

<i>(in millions)</i>	Amount of Net Loss Recognized in the Condensed Consolidated Statements of Operations			
	Three Months Ended September 30,		Six Months Ended September 30,	
	2017	2016	2017	2016
Other expenses, net – foreign currency contracts	\$ 4	\$ 3	\$ 8	\$ 6

CA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

The Company is subject to collateral security arrangements with most of its major counterparties. The Company posted no collateral at September 30, 2017 or March 31, 2017. Under these agreements, if the Company’s credit ratings had been downgraded one rating level, the Company would still not have been required to post collateral.

NOTE F – FAIR VALUE MEASUREMENTS

The following table presents the Company’s assets and liabilities that were measured at fair value on a recurring basis at September 30, 2017 and March 31, 2017:

<i>(in millions)</i>	At September 30, 2017			At March 31, 2017		
	Fair Value Measurement Using Input Types		Estimated Fair Value	Fair Value Measurement Using Input Types		Estimated Fair Value
	Level 1	Level 2	Total	Level 1	Level 2	Total
Assets:						
Money market funds ⁽¹⁾	\$ 971	\$ —	\$ 971	\$ 1,077	\$ —	\$ 1,077
Foreign exchange derivatives ⁽²⁾	—	7	7	—	2	2
Total assets	\$ 971	\$ 7	\$ 978	\$ 1,077	\$ 2	\$ 1,079
Liabilities:						
Foreign exchange derivatives ⁽²⁾	\$ —	\$ 13	\$ 13	\$ —	\$ 1	\$ 1
Total liabilities	\$ —	\$ 13	\$ 13	\$ —	\$ 1	\$ 1

(1) The Company’s investments in money market funds are classified as “Cash and cash equivalents” in its Condensed Consolidated Balance Sheets.

(2) Refer to Note E, “Derivatives” for additional information.

At September 30, 2017 and March 31, 2017, the Company did not have any assets or liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3).

The carrying values of financial instruments classified as current assets and current liabilities, such as cash and cash equivalents, short-term investments, accounts payable, accrued expenses and short-term borrowings, approximate fair value due to the short-term maturity of the instruments.

The following table presents the carrying amounts and estimated fair values of the Company’s other financial instruments that were not measured at fair value on a recurring basis at September 30, 2017 and March 31, 2017:

<i>(in millions)</i>	At September 30, 2017		At March 31, 2017	
	Carrying Value	Estimated Fair Value	Carrying Value	Estimated Fair Value
Liabilities:				
Total debt ⁽¹⁾	\$ 2,785	\$ 2,889	\$ 2,791	\$ 2,903
Facility exit reserves ⁽²⁾	\$ 9	\$ 10	\$ 11	\$ 12

(1) Estimated fair value of total debt is based on quoted prices for similar liabilities for which significant inputs are observable except for certain long-term lease obligations, for which fair value approximates carrying value (Level 2).

(2) Estimated fair value for the facility exit reserves is determined using the Company’s incremental borrowing rate at September 30, 2017 and March 31, 2017. At September 30, 2017 and March 31, 2017, the facility exit reserves included carrying values of approximately \$2 million and \$3 million, respectively, in “Accrued expenses and other current liabilities” and approximately \$7 million and \$8 million, respectively, in “Other noncurrent liabilities” in the Company’s Condensed Consolidated Balance Sheets (Level 3).

NOTE G – COMMITMENTS AND CONTINGENCIES

The Company has been or, from time to time, may be named as a defendant in various lawsuits and claims arising in the normal course of business. The Company may also become involved in contract issues and disputes with customers, including government customers.

Based on the Company’s experience, management believes that the damages amounts claimed in a case are not a meaningful indicator of the potential liability. Claims, suits, investigations and proceedings are inherently uncertain and it is not possible to predict the ultimate outcome of cases. The Company believes that it has meritorious defenses in connection with its current lawsuits and any material claims and disputes, and intends to vigorously contest each of them.

CA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

In the opinion of the Company's management based upon information currently available to the Company, while the outcome of its lawsuits, claims and disputes is uncertain, the likely results of these lawsuits, claims and disputes are not expected, either individually or in the aggregate, to have a material adverse effect on the Company's financial position, results of operations or cash flows, although the effect could be material to the Company's results of operations or cash flows for any interim reporting period. For some matters, the Company is unable to estimate a range of reasonably possible loss due to the stage of the matter and/or other particular circumstances of the matter. For others, a range of reasonably possible loss can be estimated. For those matters for which such a range can be estimated, the Company estimates that, in the aggregate, the range of reasonably possible loss does not exceed \$20 million. This is in addition to amounts, if any, that have been accrued for those matters.

The Company is obligated to indemnify its officers and directors under certain circumstances to the fullest extent permitted by Delaware law. As a part of that obligation, the Company may, from time to time, advance certain attorneys' fees and expenses incurred by officers and directors in various lawsuits and investigations, as permitted under Delaware law.

NOTE H – STOCKHOLDERS' EQUITY

Stock Repurchases: On November 13, 2015, the Board of Directors (Board) approved a stock repurchase program that authorized the Company to acquire up to \$750 million of its common stock. During the six months ended September 30, 2017, the Company repurchased approximately 2.8 million shares of its common stock for approximately \$90 million. At September 30, 2017, the Company remained authorized to purchase approximately \$560 million of its common stock under its current stock repurchase program.

Accumulated Other Comprehensive Loss: Foreign currency translation losses included in "Accumulated other comprehensive loss" in the Company's Condensed Consolidated Balance Sheets at September 30, 2017 and March 31, 2017 were approximately \$351 million and \$483 million, respectively.

Cash Dividends: The Board declared the following dividends during the six months ended September 30, 2017 and 2016:

Six Months Ended September 30, 2017:

(in millions, except per share amounts)

Declaration Date	Dividend Per Share	Record Date	Total Amount	Payment Date
May 9, 2017	\$0.255	May 25, 2017	\$107	June 13, 2017
August 9, 2017	\$0.255	August 24, 2017	\$108	September 12, 2017

Six Months Ended September 30, 2016:

(in millions, except per share amounts)

Declaration Date	Dividend Per Share	Record Date	Total Amount	Payment Date
May 4, 2016	\$0.255	May 26, 2016	\$107	June 14, 2016
August 3, 2016	\$0.255	August 25, 2016	\$107	September 13, 2016

CA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

NOTE I – INCOME PER COMMON SHARE

Basic net income per common share excludes dilution and is calculated by dividing net income allocable to common shares by the weighted average number of common shares outstanding for the period. Diluted net income per common share is calculated by dividing net income allocable to common shares by the weighted average number of common shares, as adjusted for the potential dilutive effect of non-participating share-based awards.

The following table presents basic and diluted income per common share information for the three and six months ended September 30, 2017 and 2016:

	Three Months Ended September 30,		Six Months Ended September 30,	
	2017	2016	2017	2016
<i>(in millions, except per share amounts)</i>				
Basic income per common share:				
Net income	\$ 184	\$ 212	\$ 362	\$ 410
Less: Net income allocable to participating securities	(3)	(3)	(5)	(5)
Net income allocable to common shares	\$ 181	\$ 209	\$ 357	\$ 405
Weighted average common shares outstanding	415	414	415	414
Basic income per common share	\$ 0.44	\$ 0.50	\$ 0.86	\$ 0.98
Diluted income per common share:				
Net income	\$ 184	\$ 212	\$ 362	\$ 410
Less: Net income allocable to participating securities	(3)	(3)	(5)	(5)
Net income allocable to common shares	\$ 181	\$ 209	\$ 357	\$ 405
Weighted average shares outstanding and common share equivalents:				
Weighted average common shares outstanding	415	414	415	414
Weighted average effect of share-based payment awards	1	1	1	1
Denominator in calculation of diluted income per share	416	415	416	415
Diluted income per common share	\$ 0.44	\$ 0.50	\$ 0.86	\$ 0.98

For the three months ended September 30, 2017 and 2016, respectively, approximately 2 million shares and 1 million shares of Company common stock underlying restricted stock awards (RSAs) and options to purchase common stock were excluded from the calculation because their effect on income per share was anti-dilutive during the respective periods. Weighted average RSAs of approximately 5 million shares and 5 million shares for the three months ended September 30, 2017 and 2016, respectively, were considered participating securities in the calculation of net income allocable to common stockholders.

For the six months ended September 30, 2017 and 2016, respectively, approximately 2 million shares and 1 million shares of Company common stock underlying RSAs and options to purchase common stock were excluded from the calculation because their effect on income per share was anti-dilutive during the respective periods. Weighted average RSAs of approximately 5 million shares and 5 million shares for the six months ended September 30, 2017 and 2016, respectively, were considered participating securities in the calculation of net income allocable to common stockholders.

CA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

NOTE J – ACCOUNTING FOR SHARE-BASED COMPENSATION

The Company recognized share-based compensation in the following line items in the Condensed Consolidated Statements of Operations for the periods indicated:

	Three Months Ended September 30,		Six Months Ended September 30,	
	2017	2016	2017	2016
	<i>(in millions)</i>			
Costs of licensing and maintenance	\$ 2	\$ 1	\$ 4	\$ 3
Cost of professional services	—	1	1	2
Selling and marketing	10	9	20	19
General and administrative	11	8	23	19
Product development and enhancements	6	6	13	11
Share-based compensation expense before tax	\$ 29	\$ 25	\$ 61	\$ 54
Income tax benefit	(9)	(8)	(20)	(18)
Net share-based compensation expense	\$ 20	\$ 17	\$ 41	\$ 36

There were no capitalized share-based compensation costs for the three and six months ended September 30, 2017 and 2016.

The following table summarizes the unrecognized share-based compensation costs at September 30, 2017:

	Unrecognized Share- Based Compensation Costs	Weighted Average Period Expected to be Recognized
	<i>(in millions)</i>	<i>(in years)</i>
Stock option awards	\$ 6	2.1
Restricted stock units (RSUs)	25	2.1
Restricted stock awards (RSAs)	92	2.1
Performance share units	45	2.6
Total unrecognized share-based compensation costs	\$ 168	2.2

For the six months ended September 30, 2017 and 2016, the Company issued stock options for approximately 1.0 million shares and 1.1 million shares, respectively. The weighted average fair values and assumptions used for the options granted were as follows:

	Six Months Ended September 30,	
	2017	2016
Weighted average fair value	\$ 4.72	\$ 4.41
Dividend yield	3.17%	3.57%
Expected volatility factor ⁽¹⁾	21%	22%
Risk-free interest rate ⁽²⁾	2.1%	1.5%
Expected life (in years) ⁽³⁾	6.0	6.0

- (1) Expected volatility is measured using historical daily price changes of the Company's common stock over the respective expected term of the options and the implied volatility derived from the market prices of the Company's traded options.
- (2) The risk-free rate for periods within the contractual term of the stock options is based on the U.S. Treasury yield curve in effect at the time of grant.
- (3) The expected life is the number of years the Company estimates that options will be outstanding prior to exercise. The Company's computation of expected life was determined based on the simplified method (the average of the vesting period and option term).

CA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

The table below summarizes all of the RSAs and RSUs granted, including grants made pursuant to the Company's long-term incentive plans, during the three and six months ended September 30, 2017 and 2016:

	Three Months Ended September 30,		Six Months Ended September 30,	
	2017	2016	2017	2016
	<i>(shares in millions)</i>			
RSAs:				
Shares	— ⁽³⁾	— ⁽³⁾	2.9	2.9
Weighted average grant date fair value ⁽¹⁾	\$ 32.98	\$ 34.31	\$ 31.70	\$ 31.55
RSUs:				
Shares	—	— ⁽³⁾	1.1	1.0
Weighted average grant date fair value ⁽²⁾	\$ —	\$ 31.82	\$ 30.35	\$ 30.16

(1) The fair value is based on the quoted market value of the Company's common stock on the grant date.

(2) The fair value is based on the quoted market value of the Company's common stock on the grant date reduced by the present value of dividends expected to be paid on the Company's common stock prior to vesting of the RSUs, which is calculated using a risk-free interest rate.

(3) Less than 0.1 million.

Employee Stock Purchase Plan: For the six-month offer period ended June 30, 2017, the Company issued approximately 0.1 million shares under the Employee Stock Purchase Plan (ESPP) at \$32.75 per share. As of September 30, 2017, approximately 28.9 million shares were available for future issuances under the ESPP.

NOTE K – INCOME TAXES

Income tax expense for the three and six months ended September 30, 2017 was approximately \$74 million and \$134 million, respectively, compared with income tax expense for the three and six months ended September 30, 2016 of approximately \$94 million and \$173 million, respectively. For the six months ended September 30, 2017, the Company recorded a net discrete tax benefit of approximately \$8 million resulting primarily from reductions in uncertain tax positions related to effectively settled tax audits.

The Company's estimated annual effective tax rate, which excludes the impact of discrete items, for the six months ended September 30, 2017 and 2016 was 28.6% and 29.0%, respectively. Changes in tax laws, the outcome of tax audits and any other changes in potential tax liabilities may result in additional tax expense or benefit in fiscal year 2018, which are not considered in the Company's estimated annual effective tax rate. While the Company does not currently view any such items as individually material to the results of the Company's consolidated financial position or results of operations, the impact of certain items may yield additional tax expense or benefit in the remaining quarters of fiscal year 2018. The Company is currently anticipating a fiscal year 2018 effective tax rate between 28% and 29%.

NOTE L – SUPPLEMENTAL STATEMENT OF CASH FLOWS INFORMATION

For the six months ended September 30, 2017 and 2016, interest payments were approximately \$60 million and \$43 million, respectively, and income taxes paid, net were approximately \$156 million and \$202 million, respectively.

Non-cash financing activities for the six months ended September 30, 2017 and 2016 consisted of treasury common shares issued in connection with the following: share-based incentive awards issued under the Company's equity compensation plans of approximately \$46 million (net of approximately \$35 million of income taxes withheld) and \$43 million (net of approximately \$33 million of income taxes withheld), respectively; discretionary stock contributions to the CA, Inc. Savings Harvest Plan of approximately \$23 million and \$24 million, respectively; and the Company's ESPP of approximately \$2 million and \$2 million, respectively.

CA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

The Company uses a notional pooling arrangement with an international bank to help manage global liquidity. Under this pooling arrangement, the Company and its participating subsidiaries may maintain either cash deposit or borrowing positions through local currency accounts with the bank, so long as the aggregate position of the global pool is a notionally calculated net cash deposit. Because it maintains a security interest in the cash deposits and has the right to offset the cash deposits against the borrowings, the bank provides the Company and its participating subsidiaries favorable interest terms on both. The activity under this notional pooling arrangement for the six months ended September 30, 2017 and 2016 was as follows:

	Six Months Ended September 30,	
	2017	2016
	<i>(in millions)</i>	
Total borrowings outstanding at beginning of period ⁽¹⁾	\$ 137	\$ 139
Borrowings	1,173	467
Repayments	(1,204)	(456)
Foreign exchange effect	31	(11)
Total borrowings outstanding at end of period ⁽¹⁾	\$ 137	\$ 139

(1) Included in "Accrued expenses and other current liabilities" in the Company's Condensed Consolidated Balance Sheets.

NOTE M – SEGMENT INFORMATION

The Company's Mainframe Solutions and Enterprise Solutions segments are comprised of its software business organized by the nature of the Company's software offerings and the platforms on which the products operate. The Services segment is comprised of product implementation, consulting, customer education and customer training services, including those directly related to the Mainframe Solutions and Enterprise Solutions software that the Company sells to its customers.

Segment expenses do not include amortization of purchased software, amortization of other intangible assets, amortization of internally developed software products, share-based compensation expense, certain foreign exchange derivative hedging gains and losses, severance and facility actions approved by the Board, and other miscellaneous costs. A measure of segment assets is not currently provided to the Company's Chief Executive Officer and has therefore not been disclosed.

The Company's segment information for the three and six months ended September 30, 2017 and 2016 was as follows:

<u>Three Months Ended September 30, 2017</u>				
<i>(dollars in millions)</i>	Mainframe Solutions	Enterprise Solutions	Services	Total
Revenue	\$ 539	\$ 420	\$ 75	\$ 1,034
Expenses	188	380	74	642
Segment profit	\$ 351	\$ 40	\$ 1	\$ 392
Segment operating margin	65%	10%	1%	38%
Depreciation	\$ 10	\$ 7	\$ —	\$ 17

Reconciliation of segment profit to income before income taxes for the three months ended September 30, 2017:

<i>(in millions)</i>	
Segment profit	\$ 392
Less:	
Purchased software amortization	58
Other intangibles amortization	10
Internally developed software products amortization	9
Share-based compensation expense	29
Other expenses, net ⁽¹⁾	4
Interest expense, net	24
Income before income taxes	\$ 258

(1) Other expenses, net consists of costs associated with certain foreign exchange derivative hedging gains and losses, and other miscellaneous costs.

CA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Six Months Ended September 30, 2017

(dollars in millions)

	Mainframe Solutions	Enterprise Solutions	Services	Total
Revenue	\$ 1,075	\$ 834	\$ 150	\$ 2,059
Expenses	375	761	148	1,284
Segment profit	\$ 700	\$ 73	\$ 2	\$ 775
Segment operating margin	65%	9%	1%	38%
Depreciation	\$ 19	\$ 14	\$ —	\$ 33

Reconciliation of segment profit to income before income taxes for the six months ended September 30, 2017:

(in millions)

Segment profit	\$ 775
Less:	
Purchased software amortization	116
Other intangibles amortization	20
Internally developed software products amortization	21
Share-based compensation expense	61
Other expenses, net ⁽¹⁾	12
Interest expense, net	49
Income before income taxes	\$ 496

(1) Other expenses, net consists of costs associated with certain foreign exchange derivative hedging gains and losses, and other miscellaneous costs.

Three Months Ended September 30, 2016

(dollars in millions)

	Mainframe Solutions	Enterprise Solutions	Services	Total
Revenue	\$ 550	\$ 393	\$ 75	\$ 1,018
Expenses	211	324	73	608
Segment profit	\$ 339	\$ 69	\$ 2	\$ 410
Segment operating margin	62%	18%	3%	40%
Depreciation	\$ 8	\$ 6	\$ —	\$ 14

Reconciliation of segment profit to income before income taxes for the three months ended September 30, 2016:

(in millions)

Segment profit	\$ 410
Less:	
Purchased software amortization	38
Other intangibles amortization	4
Internally developed software products amortization	21
Share-based compensation expense	25
Other expenses, net ⁽¹⁾	2
Interest expense, net	14
Income before income taxes	\$ 306

(1) Other expenses, net consists of costs associated with certain foreign exchange derivative hedging gains and losses, and other miscellaneous costs.

CA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Six Months Ended September 30, 2016

(dollars in millions)

	Mainframe Solutions	Enterprise Solutions	Services	Total
Revenue	\$ 1,101	\$ 764	\$ 152	\$ 2,017
Expenses	419	648	148	1,215
Segment profit	\$ 682	\$ 116	\$ 4	\$ 802
Segment operating margin	62%	15%	3%	40%
Depreciation	\$ 17	\$ 12	\$ —	\$ 29

Reconciliation of segment profit to income before income taxes for the six months ended September 30, 2016:

(in millions)

Segment profit	\$ 802
Less:	
Purchased software amortization	81
Other intangibles amortization	9
Internally developed software products amortization	44
Share-based compensation expense	54
Other expenses, net ⁽¹⁾	2
Interest expense, net	29
Income before income taxes	\$ 583

(1) Other expenses, net consists of costs associated with certain foreign exchange derivative hedging gains and losses, and other miscellaneous costs.

The table below summarizes the Company's revenue from the United States and from international (*i.e.*, non-U.S.) locations:

	Three Months Ended September 30,		Six Months Ended September 30,	
	2017	2016	2017	2016
	<i>(in millions)</i>			
United States	\$ 658	\$ 657	\$ 1,315	\$ 1,294
EMEA ⁽¹⁾	235	219	464	444
Other	141	142	280	279
Total revenue	\$ 1,034	\$ 1,018	\$ 2,059	\$ 2,017

(1) Consists of Europe, the Middle East and Africa.

Item 2: MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Cautionary Statement Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q (Form 10-Q) contains certain forward-looking information relating to CA, Inc. (which we refer to as the "Company," "Registrant," "CA Technologies," "CA," "we," "our" or "us"), that is based on the beliefs of, and assumptions made by, our management as well as information currently available to management. When used in this Form 10-Q, the words "believes," "plans," "anticipates," "expects," "estimates," "targets" and similar expressions relating to the future are intended to identify forward-looking information. Forward-looking information includes, for example, not only the statements relating to the future made in this Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A), but also statements relating to the future that appear in other parts of this Form 10-Q. This forward-looking information reflects our current views with respect to future events and is subject to certain risks, uncertainties and assumptions.

The declaration and payment of future dividends by the Company is subject to the determination of the Company's Board of Directors (the Board), in its sole discretion, after considering various factors, including the Company's financial condition, historical and forecasted operating results, and available cash flow, as well as any applicable laws and contractual covenants and any other relevant factors. The Company's practice regarding payment of dividends may be modified at any time and from time to time.

Repurchases under the Company's stock repurchase program may be made from time to time, subject to market conditions and other factors, in the open market, through solicited or unsolicited privately negotiated transactions or otherwise. The program does not obligate the Company to acquire any particular amount of common stock, and it may be modified or suspended at any time at the Company's discretion.

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A number of important factors could cause actual results or events to differ materially from those indicated by such forward-looking statements, including: the ability to achieve success in the Company's business strategy by, among other things, ensuring that any new offerings address the needs of a rapidly changing market while not adversely affecting the demand for the Company's traditional products or the Company's profitability to an extent greater than anticipated, enabling the Company's sales force to accelerate growth of sales to new customers and expand sales with existing customers, including sales outside of the Company's renewal cycle and to a broadening set of purchasers outside of traditional information technology operations (with such growth and expansion at levels sufficient to offset any decline in revenue and/or sales in the Company's Mainframe Solutions segment and in certain mature product lines in the Company's Enterprise Solutions segment), effectively managing the strategic shift in the Company's business model to develop more easily installed software, provide additional Software-as-a-Service (SaaS) offerings and refocus the Company's professional services and education engagements on those engagements that are connected to new product sales, without affecting the Company's financial performance to an extent greater than anticipated, and effectively managing the Company's pricing and other go-to-market strategies, as well as improving the Company's brand, technology and innovation awareness in the marketplace; the failure to innovate or adapt to technological changes and introduce new software products and services in a timely manner; competition in product and service offerings and pricing; the ability of the Company's products to remain compatible with ever-changing operating environments, platforms or third party products; global economic factors or political events beyond the Company's control and other business and legal risks associated with global operations; the failure to expand partner programs and sales of the Company's solutions by the Company's partners; the ability to retain and attract qualified professionals; general economic conditions and credit constraints, or unfavorable economic conditions in a particular region, business or industry sector; the ability to successfully integrate acquired companies and products into the Company's existing business; risks associated with sales to government customers; breaches of the Company's data center, network and software products, and the IT environments of the Company's business partners and customers; the ability to adequately manage, evolve and protect the Company's information systems, infrastructure and processes; the failure to renew license agreement transactions on a satisfactory basis; fluctuations in foreign exchange rates; changes in generally accepted accounting principles, which includes adoption of revenue recognition requirements under Accounting Standards Codification Topic 606; discovery of errors or omissions in the Company's software products or documentation and potential product liability claims; the failure to protect the Company's intellectual property rights and source code; access to software licensed from third parties; risks associated with the use of software from open source code sources; third-party claims of intellectual property infringement and/or royalty payments; fluctuations in the number, terms and duration of the Company's license agreements, as well as the timing of orders from customers and partners; potential tax liabilities; changes in market conditions or the Company's credit ratings; events or circumstances that would require the Company to record an impairment charge relating to the Company's goodwill or capitalized software and other intangible assets balances; successful and secure outsourcing of various functions to third parties; and other factors described more fully in this Form 10-Q and the Company's other filings with the Securities and Exchange Commission. Should one or more of these risks or uncertainties occur, or should the Company's assumptions prove incorrect, actual results may vary materially from the forward-looking information described in this Form 10-Q as believed, planned, anticipated, expected, estimated, targeted or similarly identified. The Company does not intend to update these forward-looking statements, except as otherwise required by law. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. This MD&A is provided as a supplement to, and should be read in conjunction with, the Company's financial statements and the accompanying notes to the financial statements. References in this Form 10-Q to fiscal 2018 and fiscal 2017 are to the Company's fiscal years ending on March 31, 2018 and 2017, respectively.

OVERVIEW

CA Technologies is a global leader in software solutions enabling customers to plan, develop, manage and secure applications and enterprise environments across distributed, cloud, mobile and mainframe platforms. Most of the Global Fortune 500, as well as many government agencies around the world, rely on CA to help manage their increasingly dynamic and complex environments.

We have a broad portfolio of software solutions that we use to execute our business strategy and organize our offerings in Enterprise Solutions, Mainframe Solutions and Services operating segments.

Our *Enterprise Solutions* segment includes products that are designed for distributed and cloud computing environments and run on industry standard servers. Within Enterprise Solutions, our areas of focus include:

- *Agile Management* enables customers to plan, deliver and manage information technology (IT) and business services for their customers. Our solutions and Agile services enable customers to improve delivery time on projects, reduce costs and optimize resources.

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- *DevOps* is adjacent to Agile Management and is comprised of a range of solutions that allow customers to efficiently deliver and manage applications and IT infrastructure. With our portfolio of solutions, customers can reduce the delivery time of new applications, increase the frequency of new releases and dramatically improve quality. Our solutions enable complete end-to-end automation, which minimizes downtime and accelerates the application delivery process.
- *Security* includes a comprehensive set of solutions that address the global imperative to minimize the risk of data breaches and alleviate the pressures faced by Chief Information Security Officers (CISOs) as a result of increasing information security regulations. Our solutions facilitate digital transformation by providing secure customer experiences, enabling a collaborative enterprise, empowering a digital workforce and securing the ‘Internet of Things.’ CA’s Security suite simplifies the complexity of managing the trusted digital relationships among people, devices, and applications both on-premise and in the cloud. Our solutions help to eliminate vulnerabilities during the development and deployment chain, which helps to lower cost and improve time-to-market.

Our *Mainframe Solutions* are designed for the IBM z Systems™ platform, which runs many of our largest customers’ mission-critical business applications. Our Mainframe Solutions help customers improve economics by increasing throughput and lowering cost per transaction, increase business agility through DevOps tooling and processes, increase reliability and availability of operations through machine intelligence and automation solutions, and protect enterprise data with security and compliance. Within Mainframe Solutions, our areas of focus include:

- *DevOps* solutions help customers increase the innovation velocity for mainframe applications and teams. We support agile development processes and modern languages, as well as tools for development, testing and deployment that support collaboration across the software development lifecycle and across mobile to mainframe teams.
- *Operations Intelligence and Automation* solutions help customers adopt machine learning and bring more intelligence and automation to their mainframe operations. With machine learning, operations teams can proactively prevent problems, fix issues faster and get more done with fewer resources. We provide a unified view of the IBM z Systems performance across the infrastructure stack, including applications, middleware, networks, systems, storage and data.
- *Security & Compliance* solutions help customers address stringent data security and compliance requirements, such as EU General Data Protection Regulation (GDPR), by finding sensitive data, classifying data for compliance purposes, alerting risks in real-time, and inspecting threats to protect mission-essential data—running 100 percent on the mainframe.

Our *Services* help customers reach their IT and business goals primarily by enabling the rapid implementation and adoption of our mainframe and enterprise solutions. Our professional services team consists of experienced professionals who provide a variety of services, such as consulting, implementation, application management services, education and support services, to both commercial and government customers.

Our goal is to be the world’s leading independent software provider for IT management and security solutions that help organizations and enterprises plan, develop, manage, and secure modern software environments, across mainframe, distributed, cloud and mobile platforms. To accomplish this, key elements of our strategy include:

- *Drive organic innovation.* Our product development strategy is built around key growth areas, where we are focused on innovating and delivering differentiated products and solutions across both distributed and mainframe platforms.
- *Incubate technology for next generation products.* We are researching and dedicating resources to the development of emerging technologies that are logical extensions of our core areas of focus. We are working on opportunities in areas such as containers, data analytics, big data and open source, some of which may enhance or extend our current product portfolio and others of which may evolve into new product categories.
- *Pursue new business models and expanded routes to market.* While our traditional on-premise software delivery remains relevant to many enterprise customers, we see cloud-based and try-and-buy models as attractive to both our existing and potential customers. These models simplify decision-making and accelerate the value customers can derive from new solution investments.
- *Expand relationships with our global customer base and address opportunities with new and underserved customers.* We are focused on maintaining and expanding the strong relationships with our established customer base, and will proactively target growth with other potential customers that we do not currently serve.
- *Execute strategic and disciplined technology acquisitions.* We intend to supplement our organic innovation efforts with key technology acquisitions that are within or adjacent to our core areas of focus. We also focus on organically developing nascent technologies from companies we have acquired to endow them with the necessary interoperability, resilience and security to operate at scale in the large, heterogeneous IT environments utilized by our customers.

EXECUTIVE SUMMARY

A summary of key results for the second quarter of fiscal 2018 compared with the second quarter of fiscal 2017 is as follows:

Revenue

- Total revenue increased primarily due to an increase in software fees and other revenue. During the second quarter of fiscal 2018, total revenue included \$55 million from our Automic Holding GmbH (Automic) and Veracode, Inc. (Veracode) acquisitions, which were acquired in the fourth quarter of fiscal 2017. Excluding the revenue generated from our Automic and Veracode acquisitions, total revenue decreased primarily due to a decline in revenue from our Enterprise Solutions products recognized on an upfront basis as well as a decline in Mainframe Solutions revenue. There was a favorable foreign exchange effect of \$8 million for the second quarter of fiscal 2018.

Bookings

- Total bookings decreased primarily due to a decline in renewal bookings. Excluding our Automic and Veracode acquisitions, total bookings decreased by a percentage in the low teens.
- Renewal bookings decreased by a percentage in the mid-single digits primarily due to the decline in Mainframe Solutions renewal bookings, which was attributable to the timing of our renewal portfolio. This decline in Mainframe Solutions renewal bookings was partially offset by renewal bookings associated with our Automic and Veracode acquisitions. Excluding our Automic and Veracode acquisitions, renewal bookings decreased by a percentage in the mid-teens.
- Total new product sales increased by a percentage in the mid-single digits due to our Automic and Veracode acquisitions. Excluding our Automic and Veracode acquisitions, total new product sales decreased by approximately 10%.
- Mainframe Solutions new product sales increased by a percentage in the low-20s.
- Enterprise Solutions new product sales decreased by a percentage in the low single digits. Excluding our Automic and Veracode acquisitions, Enterprise Solutions new product sales decreased by approximately 20% primarily due to a lower level of new product sales not attached to renewal bookings. Enterprise Solutions new product sales performance was negatively affected by certain products that are more mature and not growing, but which generate positive segment operating margin and cash flows from operations.
- We expect fiscal 2018 renewal bookings to decrease by a percentage in the high teens compared with fiscal 2017 primarily due to the large system integrator transaction that occurred in the first quarter of fiscal 2017 with an incremental contract value in excess of \$475 million.

Expenses

- Operating expenses increased primarily due to \$73 million of costs from our Automic and Veracode acquisitions, which were mainly personnel-related, partially offset by decreases in non-acquisition-related costs, which included legal settlements, and personnel-related, commission and promotion costs.

Income taxes

- We anticipate a fiscal 2018 effective tax rate between 28% and 29%.

Diluted income per common share

- Diluted income per common share decreased to \$0.44 from \$0.50 primarily due to an increase in operating costs associated with our Automic and Veracode acquisitions as well as an increase in interest expense associated with our Senior Notes issued during the fourth quarter of fiscal 2017.

Segment results

- Mainframe Solutions revenue decreased primarily due to insufficient revenue from prior period new sales to offset the decline in revenue contribution from renewals. Mainframe Solutions operating margin increased primarily due to lower expenses as a result of the Mainframe Solutions portion of the litigation settlement costs incurred in the second quarter of fiscal 2017.
- Enterprise Solutions revenue increased due to revenue generated from our Automic and Veracode acquisitions. Enterprise Solutions operating margin decreased primarily due to costs associated with our Automic and Veracode acquisitions, which were mainly personnel-related.
- Services revenue was consistent primarily due to professional services revenue generated from our Automic and Veracode acquisitions, offset by a decline in non-acquisition-related professional services engagements. Operating margin for Services was generally consistent compared with the year-ago period.

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Net cash provided by (used in) operating activities

- Net cash provided by operating activities for the second quarter of fiscal 2018 was \$37 million, representing an increase of \$90 million compared with net cash used in operating activities of \$53 million for the second quarter of fiscal 2017. This increase was primarily due to an increase in cash collections from billings of \$68 million, of which \$21 million was from higher single installment collections, and lower cash tax payments of \$31 million compared with the year-ago period.

PERFORMANCE INDICATORS

Management uses several quantitative performance indicators to assess our financial results and condition. Following is a summary of the principal quantitative performance indicators that management uses to review performance:

	Second Quarter of Fiscal		Change	Percentage Change
	2018	2017		
	<i>(dollars in millions)</i>			
Total revenue	\$ 1,034	\$ 1,018	\$ 16	2 %
Net income	\$ 184	\$ 212	\$ (28)	(13)%
Net cash provided by (used in) operating activities ⁽¹⁾	\$ 37	\$ (53)	\$ 90	170 %
Total bookings	\$ 720	\$ 729	\$ (9)	(1)%
Subscription and maintenance bookings	\$ 492	\$ 531	\$ (39)	(7)%
Weighted average subscription and maintenance license agreement duration in years	2.79	2.99	(0.20)	(7)%

- (1) Net cash used in operating activities for the second quarter of fiscal 2017 was adjusted to reflect the adoption of Accounting Standards Update No. 2016-09 (ASU 2016-09), *Improvements to Employee Share-Based Payment Accounting* (Topic 718). Refer to Note A, "Accounting Policies" in the Notes to the Condensed Consolidated Financial Statements for further details.

	First Half of Fiscal		Change	Percentage Change
	2018	2017		
	<i>(dollars in millions)</i>			
Total revenue	\$ 2,059	\$ 2,017	\$ 42	2 %
Net income	\$ 362	\$ 410	\$ (48)	(12)%
Net cash provided by operating activities ⁽¹⁾	\$ 335	\$ 141	\$ 194	138 %
Total bookings	\$ 1,423	\$ 2,082	\$ (659)	(32)%
Subscription and maintenance bookings	\$ 967	\$ 1,704	\$ (737)	(43)%
Weighted average subscription and maintenance license agreement duration in years	2.84	4.18	(1.34)	(32)%

- (1) Net cash provided by operating activities for the first half quarter of fiscal 2017 was adjusted to reflect the adoption of Accounting Standards Update No. 2016-09 (ASU 2016-09), *Improvements to Employee Share-Based Payment Accounting* (Topic 718). Refer to Note A, "Accounting Policies" in the Notes to the Condensed Consolidated Financial Statements for further details.

	September 30, 2017	March 31, 2017	Change From Fiscal Year End	September 30, 2016	Change From Prior Year Quarter
	<i>(in millions)</i>				
Cash and cash equivalents	\$ 2,822	\$ 2,771	\$ 51	\$ 2,585	\$ 237
Total debt	\$ 2,785	\$ 2,791	\$ (6)	\$ 1,950	\$ 835
Total expected future cash collections from committed contracts ⁽¹⁾	\$ 4,853	\$ 5,304	\$ (451)	\$ 4,933	\$ (80)
Total revenue backlog ⁽¹⁾	\$ 7,013	\$ 7,556	\$ (543)	\$ 6,858	\$ 155
Total current revenue backlog ⁽¹⁾	\$ 3,163	\$ 3,240	\$ (77)	\$ 2,945	\$ 218

- (1) Refer to the discussion in the "Liquidity and Capital Resources" section of this MD&A for additional information on expected future cash collections from committed contracts and revenue backlog.

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Analyses of our performance indicators shown above and our segment performance can be found in the “Results of Operations” and “Liquidity and Capital Resources” sections of this MD&A.

Total Revenue: Total revenue is the amount of revenue recognized during the reporting period from the sale of license, maintenance, SaaS and professional services agreements. Amounts recognized as subscription and maintenance revenue are recognized ratably over the term of the agreement. Professional services revenue is generally recognized as the services are performed or recognized on a ratable basis over the term of the related software arrangement. Software fees and other revenue generally represents license fee revenue recognized at the inception of a license agreement (upfront basis) and also includes our SaaS revenue, which is recognized as services are provided.

Price changes do not have a material effect on revenue in the period they become effective as a result of our ratable subscription model.

Subscription and Maintenance Revenue: Subscription and maintenance revenue is the amount of revenue recognized ratably during the reporting period from: (i) subscription license agreements that were in effect during the period, generally including maintenance that is bundled with and not separately identifiable from software usage fees or product sales, (ii) maintenance agreements associated with providing customer technical support and access to software fixes and upgrades that are separately identifiable from software usage fees or product sales, and (iii) license agreements bundled with additional products, maintenance or professional services for which vendor specific objective evidence (VSOE) has not been established. These amounts include the sale of products directly by us, as well as by distributors and volume partners, value-added resellers and exclusive representatives to end-users, where the contracts incorporate the right for end-users to receive unspecified future software products, and other contracts entered into in close proximity or contemplation of such agreements. The vast majority of our subscription and maintenance revenue in any particular reporting period comes from contracts signed in prior periods, generally ranging in duration from three to five years.

Total Bookings: Total bookings, or sales, includes the incremental value of all subscription, maintenance and professional services contracts and software fees and other contracts entered into during the reporting period and is generally reflective of the amount of products and services during the period that our customers have agreed to purchase from us. License fees for bookings attributed to sales of software products for which revenue is recognized on an upfront basis is reflected in “Software fees and other” in our Condensed Consolidated Statements of Operations, while the maintenance portion is reflected in “Subscription and maintenance” in our Condensed Consolidated Statements of Operations. Our SaaS bookings are recognized as revenue in “Software fees and other,” generally ratably over the term of the SaaS arrangement, rather than upfront.

Our management looks within total bookings at renewal bookings, which we define as bookings attributable to the renewable value of a prior contract (*i.e.*, the maintenance value and, in the case of non-perpetual licenses, the license value), and at total new product sales, which we define as sales of mainframe and enterprise solutions products and mainframe solutions capacity that are new or in addition to sales of products or mainframe solutions capacity previously contracted for by a customer. Renewal bookings, as we report them, do not include new product or capacity sales or professional services arrangements and are reflected as subscription and maintenance bookings in the period (for which revenue is recognized ratably over the term of the contract). Renewals can close before their scheduled renewal date for a number of reasons, including customer preference, customer needs for additional products or capacity, or at our request. The level of contracts closed prior to scheduled expiration dates and the reasons for such closings can vary from quarter to quarter. Generally, quarters with smaller renewal inventories result in a lower level of bookings, since renewals remain an important opportunity for new product sales.

Mainframe Solutions new product sales and capacity growth can be inconsistent on both a quarterly and annual basis. We believe the period-over-period change in Mainframe Solutions new product sales and capacity combined is an appropriate measure of performance and, therefore, we provide only total Mainframe Solutions new sales information, which includes mainframe solutions capacity. The amount of new product sales for a period, as currently tracked by us, requires estimation by management and has been historically reported by providing only growth rate comparisons. Within a given period, the amount of new product sales may not be material to the change in our total bookings or revenue compared with prior periods. New product sales can be reflected as subscription and maintenance bookings in the period (for which revenue would be recognized ratably over the term of the contract) or in software fees and other bookings (which are recognized as software fees and other revenue in the current period).

Subscription and Maintenance Bookings: Subscription and maintenance bookings is the aggregate incremental amount we expect to collect from our customers over the terms of the underlying subscription and maintenance agreements entered into during a reporting period. These amounts include the sale of products either directly by us or through distributors and volume partners, value-added resellers and exclusive representatives to end-users and may include the right for the customer to receive unspecified future software products and/or additional products, services or other fees for which we have not established VSOE for all undelivered elements. These amounts are recognized ratably as subscription and maintenance revenue over the applicable term of the agreements. Subscription and maintenance bookings excludes the value associated with perpetual licenses for which revenue is recognized on an upfront basis, SaaS offerings and professional services arrangements.

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Within bookings, we also consider the yield on our renewals. We define “renewal yield” as the percentage of the renewable value of a prior contract (*i.e.*, the maintenance value and, in the case of non-perpetual licenses, the license value) realized in current period bookings. The renewable value of a prior contract is an estimate affected by various factors including contractual renewal terms, price increases and other conditions. Price increases are not considered as part of the renewable value of the prior period contract. We estimate the aggregate renewal yield for a quarter based on a review of material transactions representing a majority of the dollar value of renewals during the current period. There may be no correlation between year-over-year changes in bookings and year-over-year changes in renewal yield, since renewal yield is based on the renewable value of contracts of various durations, most of which are longer than one year.

The license and maintenance agreements that contribute to subscription and maintenance bookings represent binding payment commitments by customers over periods that range generally from three to five years, although in certain cases customer commitments can be for longer or shorter periods. These current period bookings are often renewals of prior contracts that also had various durations, usually from three to five years. The amount of new subscription and maintenance bookings recorded in a period is affected by the volume, duration and value of contracts renewed during that period. Subscription and maintenance bookings typically increase in each consecutive quarter during a fiscal year, with the first quarter having the least bookings and the fourth quarter having the most bookings. However, subscription and maintenance bookings may not always follow the pattern of increasing in consecutive quarters during a fiscal year, and the quarter-to-quarter differences in subscription and maintenance bookings may vary. Given the varying durations and dollar amounts of the contracts being renewed, year-over-year comparisons of bookings are not always indicative of the overall bookings trend.

Additionally, period-to-period changes in subscription and maintenance bookings do not necessarily correlate to changes in cash receipts. The contribution to current period revenue from subscription and maintenance bookings from any single license or maintenance agreement is relatively small, since revenue is recognized ratably over the applicable term for these agreements.

Weighted Average Subscription and Maintenance License Agreement Duration in Years: The weighted average subscription and maintenance license agreement duration in years reflects the duration of all subscription and maintenance agreements executed during a period, weighted by the total contract value of each individual agreement. Weighted average subscription and maintenance license agreement duration in years can fluctuate from period-to-period depending on the mix of license agreements entered into during a period. Weighted average duration information is disclosed in order to provide additional understanding of the volume of our bookings.

Annualized Subscription and Maintenance Bookings: Annualized subscription and maintenance bookings is an indicator that normalizes the bookings recorded in the current period to account for contract length. It is calculated by dividing the total value of all new subscription and maintenance license agreements entered into during a period by the weighted average subscription and license agreement duration in years for all such subscription and maintenance license agreements recorded during the same period.

Total Revenue Backlog: Total revenue backlog represents the aggregate amount we expect to recognize as revenue in the future as either subscription and maintenance revenue, professional services revenue or software fees and other revenue associated with contractually committed amounts billed or to be billed as of the balance sheet date. Total revenue backlog is composed of amounts recognized as liabilities in our Condensed Consolidated Balance Sheets as deferred revenue (billed or collected) as well as unearned amounts yet to be billed under subscription and maintenance and software fees and other agreements. Classification of amounts as current or noncurrent depends on when such amounts are expected to be earned and, therefore, recognized as revenue. Amounts that are expected to be earned and, therefore, recognized as revenue in 12 months or less are classified as current, while amounts expected to be earned in greater than 12 months are classified as noncurrent. The portion of the total revenue backlog that relates to subscription and maintenance agreements is recognized as revenue evenly on a monthly basis over the duration of the underlying agreements and is reported as subscription and maintenance revenue in our Condensed Consolidated Statements of Operations. Generally, we believe that an increase or decrease in the current portion of revenue backlog on a year-over-year basis is a favorable or unfavorable indicator of future subscription and maintenance revenue performance, respectively, due to the high percentage of our revenue that is recognized from license agreements that are already committed and being recognized ratably. The value of backlog can fluctuate based upon the timing of contract expirations.

“Deferred revenue (billed or collected)” is composed of: (i) amounts received from customers in advance of revenue recognition and (ii) amounts billed but not collected for which revenue has not yet been earned.

RESULTS OF OPERATIONS

The following tables present revenue and expense line items reported in our Condensed Consolidated Statements of Operations for the second quarter and first half of fiscal 2018 and fiscal 2017, and the period-over-period dollar and percentage changes for those line items. These comparisons of past results are not necessarily indicative of future results.

Second Quarter Comparison Fiscal 2018 Versus Fiscal 2017

			Dollar Change		Percentage Change		Percentage of Total Revenue	
	2018	2017	2018 / 2017		2018 / 2017		2018	2017
<i>(dollars in millions)</i>								
Revenue:								
Subscription and maintenance	\$ 826	\$ 824	\$ 2	— %	80%	81%		
Professional services	75	75	—	—	7	7		
Software fees and other	133	119	14	12	13	12		
Total revenue	\$ 1,034	\$ 1,018	\$ 16	2 %	100%	100%		
Expenses:								
Costs of licensing and maintenance	\$ 73	\$ 66	\$ 7	11 %	7%	6%		
Cost of professional services	74	73	1	1	7	7		
Amortization of capitalized software costs	67	59	8	14	6	6		
Selling and marketing	244	235	9	4	24	23		
General and administrative	97	84	13	15	9	8		
Product development and enhancements	161	136	25	18	16	13		
Depreciation and amortization of other intangible assets	27	18	9	50	3	2		
Other expenses, net	9	27	(18)	(67)	1	3		
Total expenses before interest and income taxes	\$ 752	\$ 698	\$ 54	8 %	73%	69%		
Income before interest and income taxes	\$ 282	\$ 320	\$ (38)	(12)%	27%	31%		
Interest expense, net	24	14	10	71	2	1		
Income before income taxes	\$ 258	\$ 306	\$ (48)	(16)%	25%	30%		
Income tax expense	74	94	(20)	(21)	7	9		
Net income	\$ 184	\$ 212	\$ (28)	(13)%	18%	21%		

Note: Amounts may not add to their respective totals due to rounding.

First Half Comparison Fiscal 2018 Versus Fiscal 2017

			Dollar Change	Percentage Change	Percentage of Total Revenue	
	2018	2017	2018 / 2017	2018 / 2017	2018	2017
<i>(dollars in millions)</i>						
Revenue:						
Subscription and maintenance	\$ 1,643	\$ 1,650	\$ (7)	—%	80%	82%
Professional services	150	152	(2)	(1)	7	7
Software fees and other	266	215	51	24	13	11
Total revenue	\$ 2,059	\$ 2,017	\$ 42	2%	100%	100%
Expenses:						
Costs of licensing and maintenance	\$ 144	\$ 134	\$ 10	7%	7%	7%
Cost of professional services	147	148	(1)	(1)	7	7
Amortization of capitalized software costs	137	125	12	10	7	6
Selling and marketing	490	477	13	3	24	24
General and administrative	204	172	32	19	10	9
Product development and enhancements	319	284	35	12	15	14
Depreciation and amortization of other intangible assets	53	38	15	39	3	2
Other expenses, net	20	27	(7)	(26)	1	1
Total expenses before interest and income taxes	\$ 1,514	\$ 1,405	\$ 109	8%	74%	70%
Income before interest and income taxes	\$ 545	\$ 612	\$ (67)	(11)%	26%	30%
Interest expense, net	49	29	20	69	2	1
Income before income taxes	\$ 496	\$ 583	\$ (87)	(15)%	24%	29%
Income tax expense	134	173	(39)	(23)	7	9
Net income	\$ 362	\$ 410	\$ (48)	(12)%	18%	20%

Note: Amounts may not add to their respective totals due to rounding.

Revenue
Total Revenue

Total revenue in the second quarter of fiscal 2018 increased compared with the second quarter of fiscal 2017 primarily due to an increase in software fees and other revenue. During the second quarter of fiscal 2018, total revenue included \$55 million from our Automic and Veracode acquisitions, primarily included in software fees and other revenue. Excluding the revenue generated from our Automic and Veracode acquisitions, total revenue decreased primarily due to a decline in revenue from our Enterprise Solutions products recognized on an upfront basis as well as a decline in Mainframe Solutions revenue. There was a favorable foreign exchange effect of \$8 million for the second quarter of fiscal 2018.

Total revenue in the first half of fiscal 2018 increased compared with the first half of fiscal 2017 primarily due to an increase in software fees and other revenue, partially offset by a decrease in subscription and maintenance revenue. During the first half of fiscal 2018, total revenue included \$114 million from our Automic and Veracode acquisitions, primarily included in software fees and other revenue. Excluding the revenue generated from our Automic and Veracode acquisitions, total revenue decreased primarily due to a decline in revenue from our Enterprise Solutions products recognized on an upfront basis as well as a decline in Mainframe Solutions revenue. There was an unfavorable foreign exchange effect of \$2 million for the first half of fiscal 2018.

In general, we treat acquired technologies as organic in the quarter of their one year anniversary date. Automic was acquired during the fourth quarter of fiscal 2017 and, as such, will be treated as organic in the fourth quarter of fiscal 2018. Since Veracode was acquired on the last day of fiscal 2017, it will be treated as organic in the first quarter of fiscal 2019.

[Table of Contents](#)*Subscription and Maintenance*

Subscription and maintenance revenue for the second quarter of fiscal 2018 increased slightly compared with the second quarter of fiscal 2017 primarily due to \$17 million of subscription and maintenance revenue generated from our Automic acquisition in the second quarter of fiscal 2018, partially offset by a decline in Mainframe Solutions revenue (refer to “Performance of Segments” below). There was a favorable foreign exchange effect of \$6 million for the second quarter of fiscal 2018.

Subscription and maintenance revenue for the first half of fiscal 2018 decreased compared with the first half of fiscal 2017 primarily due to a decline in Mainframe Solutions revenue (refer to “Performance of Segments” below), partially offset by \$33 million of subscription and maintenance revenue generated from our Automic acquisition in the first half of fiscal 2018. There was an unfavorable foreign exchange effect of \$2 million for the first half of fiscal 2018.

Professional Services

Professional services revenue primarily includes revenue derived from product implementation, consulting, customer education and customer training services. Professional services revenue for the second quarter of fiscal 2018 was consistent compared with the second quarter of fiscal 2017 primarily due to \$8 million of professional services revenue generated from our Automic and Veracode acquisitions in the second quarter of fiscal 2018, offset by a decline in non-acquisition-related professional services engagements.

Professional services revenue for the first half of fiscal 2018 decreased compared with the first half of fiscal 2017 primarily due to a decline in non-acquisition-related professional services engagements. This decline was partially offset by professional services revenue generated from our Automic and Veracode acquisitions of \$15 million in the first half of fiscal 2018. The decline in professional services engagements was a result of several factors including our products being easier to install and manage, and an increase in customers’ use of partners for services engagements. For the long term, we expect new versions of our on-premise software to be easier to implement and a higher percentage of our business to shift to a SaaS-based model, which could potentially reduce the demand for our professional services engagements.

Software Fees and Other

Software fees and other revenue consists of revenue that is recognized on an upfront basis and also includes our SaaS revenue. Upfront revenue includes revenue associated with enterprise solutions products sold on an upfront basis directly by our sales force and through transactions with distributors and volume partners, value-added resellers and exclusive representatives. Our SaaS revenue is recognized as the services are provided, generally ratably over the term of the SaaS arrangement, rather than upfront.

Software fees and other revenue for the second quarter and first half of fiscal 2018 increased compared with the second quarter and first half of fiscal 2017, respectively, primarily due to software fees and other revenue generated from our Automic and Veracode acquisitions of \$30 million and \$66 million for the second quarter and first half of fiscal 2018, respectively. Excluding the software fees and other revenue generated from our Automic and Veracode acquisitions, software fees and other revenue decreased primarily due to a decline in revenue from our Enterprise Solutions products recognized on an upfront basis.

Total Revenue by Geography

The following tables present the amount of revenue earned from sales to unaffiliated customers in the United States and international regions and corresponding percentage changes for the second quarter and first half of fiscal 2018 compared with the second quarter and first half of fiscal 2017.

Second Quarter Comparison Fiscal 2018 Versus Fiscal 2017

	2018	Percentage of Total Revenue	2017	Percentage of Total Revenue	Dollar Change	Percentage Change
<i>(dollars in millions)</i>						
United States	\$ 658	64%	\$ 657	65%	\$ 1	—%
International	376	36	361	35	15	4
Total Revenue	\$ 1,034	100%	\$ 1,018	100%	\$ 16	2%

First Half Comparison Fiscal 2018 Versus Fiscal 2017

	2018	Percentage of Total Revenue	2017	Percentage of Total Revenue	Dollar Change	Percentage Change
<i>(dollars in millions)</i>						
United States	\$ 1,315	64%	\$ 1,294	64%	\$ 21	2%
International	744	36	723	36	21	3
Total Revenue	\$ 2,059	100%	\$ 2,017	100%	\$ 42	2%

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Revenue in the United States for the second quarter of fiscal 2018 was generally consistent compared with the second quarter of fiscal 2017 due to our Automic and Veracode acquisitions. International revenue for the second quarter of fiscal 2018 increased compared with the second quarter of fiscal 2017. Excluding the favorable foreign exchange effect of \$8 million for the second quarter of fiscal 2018, international revenue increased due to our Automic acquisition. As described above, excluding the revenue generated from our Automic and Veracode acquisitions, revenue in the United States and international revenue would have decreased.

Revenue in the United States for the first half of fiscal 2018 increased compared with the first half of fiscal 2017 due to our Automic and Veracode acquisitions. International revenue for the first half of fiscal 2018 increased compared with the first half of fiscal 2017. Excluding the unfavorable foreign exchange effect of \$2 million for the first half of fiscal 2018, international revenue increased due to our Automic acquisition. As described above, excluding the revenue generated from our Automic and Veracode acquisitions, revenue in the United States and international revenue would have decreased.

Expenses

Operating Expenses

Operating expenses for the second quarter and first half of fiscal 2018 increased compared with the second quarter and first half of fiscal 2017 primarily due to costs from our Automic and Veracode acquisitions of \$73 million and \$151 million, which were mainly personnel-related, in the second quarter and first half of fiscal 2018, respectively, partially offset by decreases in non-acquisition-related costs, which included legal settlements, and personnel-related, commission and promotion costs.

Costs of Licensing and Maintenance

Costs of licensing and maintenance include technical support, royalties, SaaS, and other manufacturing and distribution costs. Costs of licensing and maintenance for the second quarter and first half of fiscal 2018 increased compared with the second quarter and first half of fiscal 2017, respectively, primarily due to personnel-related costs from our Automic and Veracode acquisitions.

Cost of Professional Services

Cost of professional services consists primarily of our personnel-related costs associated with providing professional services and training to customers. Cost of professional services for the second quarter and first half of fiscal 2018 was generally consistent compared with the second quarter and first half of fiscal 2017, respectively, as a result of lower costs due to a decrease in the number of non-acquisition-related professional services engagements, offset by personnel-related costs from our Automic and Veracode acquisitions.

Operating margin for professional services for the second quarter and first half of fiscal 2018 was generally consistent compared with the second quarter and first half of fiscal 2017, respectively. Operating margin for professional services does not include certain additional direct costs that are included within the Services segment (refer to "Performance of Segments" below). Expenses for the Services segment consist of cost of professional services and other direct costs included within selling and marketing and general and administrative expenses.

Amortization of Capitalized Software Costs

Amortization of capitalized software costs consists of the amortization of both purchased software and internally generated capitalized software development costs. Internally generated capitalized software development costs relate to new products and significant enhancements to existing software products that have reached the technological feasibility stage.

Amortization of capitalized software costs for the second quarter and first half of fiscal 2018 increased compared with the second quarter and first half of fiscal 2017, respectively, primarily due to an increase in amortization expense associated with purchased software products acquired from Automic and Veracode, partially offset by a decrease in amortization of our internally developed software products. With our adoption of the Agile development methodology in fiscal 2014, capitalization has commenced much later in the development life cycle, which has resulted in us not capitalizing a significant amount of internally developed software costs and a decline in amortization expense of internally developed software products.

Selling and Marketing

Selling and marketing expenses include the costs relating to our sales force, partners, corporate and business marketing and customer training programs. Selling and marketing expenses for the second quarter and first half of fiscal 2018 increased compared with the second quarter and first half of fiscal 2017 primarily due to costs from our Automic and Veracode acquisitions of \$28 million and \$57 million, which were mainly personnel-related, in the second quarter and first half of fiscal 2018, respectively. These increases were mostly offset by decreases in non-acquisition-related costs of \$20 million and \$44 million, respectively, which primarily included personnel-related, commission and promotion costs.

[Table of Contents](#)*General and Administrative*

General and administrative expenses include the costs of corporate functions, including our executive leadership and administration groups, finance, legal, human resources, corporate communications and other costs such as provisions for doubtful accounts. General and administrative expenses for the second quarter and first half of fiscal 2018 increased compared with the second quarter and first half of fiscal 2017 primarily due to costs from our Automic and Veracode acquisitions of \$9 million and \$26 million, which were mainly personnel-related, in the second quarter and first half of fiscal 2018, respectively.

Product Development and Enhancements

For the second quarter of fiscal 2018 and fiscal 2017, product development and enhancements expense represented 16% and 13%, respectively, of total revenue. For the second quarter of fiscal 2018, product development and enhancements expense increased compared with the second quarter of fiscal 2017 primarily due to \$20 million of costs from our Automic and Veracode acquisitions, which were mainly personnel-related.

For the first half of fiscal 2018 and fiscal 2017, product development and enhancements expense represented 15% and 14% respectively, of total revenue. For the first half of fiscal 2018, product development and enhancements expense increased compared with the first half of fiscal 2017 primarily due to \$36 million of costs from our Automic and Veracode acquisitions, which were mainly personnel-related.

Depreciation and Amortization of Other Intangible Assets,

For the second quarter and first half of fiscal 2018, depreciation and amortization of other intangible assets increased compared with the second quarter and first half of fiscal 2017, respectively, primarily due to an increase in amortization expense associated with other intangible assets acquired from Automic and Veracode.

Other Expenses, Net

The summary of other expenses, net was as follows:

	Second Quarter Fiscal 2018	Second Quarter Fiscal 2017
<i>(dollars in millions)</i>		
Legal settlements	\$ —	\$ 27
Losses from foreign exchange derivative contracts	4	3
Losses from foreign exchange rate fluctuations	5	—
Other miscellaneous items	—	(3)
Total	\$ 9	\$ 27

	First Half Fiscal 2018	First Half Fiscal 2017
<i>(dollars in millions)</i>		
Legal settlements	\$ 2	\$ 27
Losses from foreign exchange derivative contracts	8	6
Losses (gains) from foreign exchange rate fluctuations	10	(3)
Other miscellaneous items	—	(3)
Total	\$ 20	\$ 27

During the second quarter and first half of fiscal 2017, other expenses, net included a \$27 million legal settlement expense, which related to a settlement agreement that was then being negotiated with the U.S. government pertaining to our General Services Administration (GSA) schedule contract. The settlement agreement was finalized and the settlement amount was paid in full in the fourth quarter of fiscal 2017.

Interest Expense, Net

Interest expense, net for the second quarter and first half of fiscal 2018 increased compared with the second quarter and first half of fiscal 2017, respectively, as a result of interest associated with our 3.600% Senior Notes due August 2022 and our 4.700% Senior Notes due March 2027 both issued during the fourth quarter of fiscal 2017.

Income Taxes

Income tax expense for the second quarter and first half of fiscal 2018 was \$74 million and \$134 million, respectively, compared with income tax expense for the second quarter and first half of fiscal 2017 of \$94 million and \$173 million, respectively. For the first half of fiscal 2018, we recorded a net discrete tax benefit of \$8 million resulting primarily from reductions in uncertain tax positions related to effectively settled tax audits.

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Our estimated annual effective tax rate, which excludes the impact of discrete items, for the first half of fiscal 2018 and fiscal 2017 was 28.6% and 29.0%, respectively. Changes in tax laws, the outcome of tax audits and any other changes in potential tax liabilities may result in additional tax expense or benefit in fiscal 2018, which are not considered in our estimated annual effective tax rate. While we do not currently view any such items as individually material to the results of our consolidated financial position or results of operations, the impact of certain items may yield additional tax expense or benefit in the remaining quarters of fiscal 2018. We are anticipating a fiscal 2018 effective tax rate between 28% and 29%.

Performance of Segments

Our Mainframe Solutions and Enterprise Solutions segments are comprised of our software business organized by the nature of our software offerings and the platforms on which the products operate. Our Services segment is comprised of product implementation, consulting, customer education and customer training services, including those directly related to the Mainframe Solutions and Enterprise Solutions software that we sell to our customers.

Segment expenses do not include amortization of purchased software, amortization of other intangible assets, amortization of internally developed software products, share-based compensation expense, certain foreign exchange derivative hedging gains and losses, severance and facility actions approved by the Board, and other miscellaneous costs.

Segment financial information for the second quarter and first half of fiscal 2018 and fiscal 2017 was as follows:

Mainframe Solutions	Second Quarter Fiscal 2018	Second Quarter Fiscal 2017
	<i>(dollars in millions)</i>	
Revenue	\$ 539	\$ 550
Expenses	188	211
Segment profit	\$ 351	\$ 339
Segment operating margin	65%	62%

Mainframe Solutions	First Half Fiscal 2018	First Half Fiscal 2017
	<i>(dollars in millions)</i>	
Revenue	\$ 1,075	\$ 1,101
Expenses	375	419
Segment profit	\$ 700	\$ 682
Segment operating margin	65%	62%

Mainframe Solutions revenue for the second quarter of fiscal 2018 decreased compared with the second quarter of fiscal 2017 primarily due to insufficient revenue from prior period new sales to offset the decline in revenue contribution from renewals. Mainframe Solutions operating margin for the second quarter of fiscal 2018 increased compared with the second quarter of fiscal 2017 primarily due to a reduction in other expenses, net relating to the Mainframe Solutions portion of the litigation settlement costs incurred in the second quarter of fiscal 2017.

Mainframe Solutions revenue for the first half of fiscal 2018 decreased compared with the first half of fiscal 2017 primarily due to insufficient revenue from prior period new sales to offset the decline in revenue contribution from renewals. Mainframe Solutions operating margin for the first half of fiscal 2018 increased compared with the first half of fiscal 2017 primarily due to a reduction in other expenses, net relating to the Mainframe Solutions portion of the litigation settlement costs incurred in the second quarter of fiscal 2017 as well as a reduction in personnel-related expenses.

Enterprise Solutions	Second Quarter Fiscal 2018	Second Quarter Fiscal 2017
	<i>(dollars in millions)</i>	
Revenue	\$ 420	\$ 393
Expenses	380	324
Segment profit	\$ 40	\$ 69
Segment operating margin	10%	18%

Enterprise Solutions	First Half Fiscal 2018	First Half Fiscal 2017
	<i>(dollars in millions)</i>	
Revenue	\$ 834	\$ 764
Expenses	761	648
Segment profit	\$ 73	\$ 116
Segment operating margin	9%	15%

Enterprise Solutions revenue for the second quarter and first half of fiscal 2018 increased compared with the second quarter and first half of fiscal 2017, respectively, due to revenue generated from our Automic and Veracode acquisitions of \$47 million and \$99 million in the second quarter and first half of fiscal 2018, respectively. The revenue generated from our Automic and Veracode acquisitions was partially offset by a decline in revenue from our Enterprise Solutions products recognized on an upfront basis. Enterprise Solutions operating margin for the second quarter and first half of fiscal 2018 decreased compared with the second quarter and first half of fiscal 2017, respectively, primarily due to costs associated with our Automic and Veracode acquisitions, which were mainly personnel-related.

Services	Second Quarter Fiscal 2018	Second Quarter Fiscal 2017
	<i>(dollars in millions)</i>	
Revenue	\$ 75	\$ 75
Expenses	74	73
Segment profit	\$ 1	\$ 2
Segment operating margin	1%	3%

Services	First Half Fiscal 2018	First Half Fiscal 2017
	<i>(dollars in millions)</i>	
Revenue	\$ 150	\$ 152
Expenses	148	148
Segment profit	\$ 2	\$ 4
Segment operating margin	1%	3%

Services revenue for the second quarter of fiscal 2018 was consistent compared with the second quarter of fiscal 2017 primarily due to professional services revenue generated from our Automic and Veracode acquisitions of \$8 million in the second quarter of fiscal 2018, offset by a decline in non-acquisition-related professional services engagements. Operating margin for Services for the second quarter of fiscal 2018 was generally consistent compared with the second quarter of fiscal 2017.

Services revenue for the first half of fiscal 2018 decreased compared with the first half of fiscal 2017 primarily due to a decline in non-acquisition-related professional services engagements. This decline was partially offset by professional services revenue generated from our Automic and Veracode acquisitions of \$15 million in the first half of fiscal 2018. The decline in professional services engagements was a result of several factors including our products being easier to install and manage, and an increase in customers' use of partners for services engagements. For the long term, we expect new versions of our on-premise software to be easier to implement and a higher percentage of our business to shift to a SaaS-based model, which could potentially reduce the demand for our professional services engagements. Operating margin for Services for the first half of fiscal 2018 was generally consistent compared with the first half of fiscal 2017.

Refer to Note M, "Segment Information," in the Notes to the Condensed Consolidated Financial Statements for additional information.

Bookings

Second Quarter Comparison Fiscal 2018 Versus Fiscal 2017

Total Bookings: For the second quarter of fiscal 2018 and fiscal 2017, total bookings were \$720 million and \$729 million, respectively. This decrease was primarily due to a decline in renewal bookings. Excluding our Automic and Veracode acquisitions, total bookings decreased by a percentage in the low teens.

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Subscription and Maintenance Bookings: For the second quarter of fiscal 2018 and fiscal 2017, subscription and maintenance bookings were \$492 million and \$531 million, respectively. The decrease in subscription and maintenance bookings was primarily attributable to a decline in Mainframe Solutions renewal bookings in the second quarter of fiscal 2018 compared with the second quarter of fiscal 2017. Excluding our Automic acquisition, subscription and maintenance bookings decreased by approximately 10%.

Renewal Bookings: For the second quarter of fiscal 2018, renewal bookings decreased by a percentage in the mid-single digits compared with the second quarter of fiscal 2017 primarily due to the decline in Mainframe Solutions renewal bookings, which was attributable to the timing of our renewal portfolio. This decline in Mainframe Solutions renewal bookings was partially offset by renewal bookings associated with our Automic and Veracode acquisitions. Excluding our Automic and Veracode acquisitions, renewal bookings decreased by a percentage in the mid-teens.

- **Renewal Yield:** For the second quarter of fiscal 2018, our percentage renewal yield was over 90%.
- **License Agreements over \$10 million:** During the second quarter of fiscal 2018, we executed a total of 9 license agreements with incremental contract values in excess of \$10 million each, for an aggregate contract value of \$175 million. During the second quarter of fiscal 2017, we executed a total of 11 license agreements with incremental contract values in excess of \$10 million each, for an aggregate contract value of \$209 million.
- **Annualized Subscription and Maintenance Bookings and Weighted Average Subscription and Maintenance License Agreement Duration in Years:** Annualized subscription and maintenance bookings decreased from \$178 million in the second quarter of fiscal 2017 to \$176 million in the second quarter of fiscal 2018. The weighted average subscription and maintenance license agreement duration in years decreased from 2.99 in the second quarter of fiscal 2017 to 2.79 in the second quarter of fiscal 2018. Although each contract is subject to terms negotiated by the respective parties, we do not expect the weighted average subscription and maintenance agreement duration in years to change materially from historical levels.

Total New Product Sales: Within total bookings, total new product sales increased by a percentage in the mid-single digits for the second quarter of fiscal 2018 compared with the second quarter of fiscal 2017 due to our Automic and Veracode acquisitions. Excluding our Automic and Veracode acquisitions, total new product sales decreased by approximately 10%.

- **Within Total New Product Sales:**
 - **Mainframe Solutions New Product Sales:** For the second quarter of fiscal 2018, Mainframe Solutions new product sales increased by a percentage in the low-20s compared with the second quarter of fiscal 2017. Overall, we expect our Mainframe Solutions revenue to decline by a percentage in the low single digits over the medium term, which we believe is in line with the mainframe market.
 - **Enterprise Solutions New Product Sales:** For the second quarter of fiscal 2018, Enterprise Solutions new product sales decreased by a percentage in the low single digits compared with the second quarter of fiscal 2017. Excluding our Automic and Veracode acquisitions, Enterprise Solutions new product sales decreased by approximately 20% primarily due to a lower level of new product sales not attached to renewal bookings. Enterprise Solutions new product sales performance was negatively affected by certain products that are more mature and not growing, but which generate positive segment operating margin and cash flows from operations.

Total Bookings by Geography: Total bookings in the second quarter of fiscal 2018 decreased in all regions, except for the Europe, Middle East and Africa region, compared with the second quarter of fiscal 2017 primarily driven by lower renewal bookings. The increase in the Europe, Middle East and Africa region was primarily due to our Automic acquisition.

New Product Sales by Geography: Total new product sales in the second quarter of fiscal 2018 increased in the United States and the Europe, Middle East and Africa region compared with the second quarter of fiscal 2017. The increase in the United States was primarily due to our Automic and Veracode acquisitions. The increase in the Europe, Middle East and Africa region was primarily due to our Automic acquisition as well as an increase in Mainframe Solutions new product sales. Total new product sales in the second quarter of fiscal 2018 decreased in the Latin America region compared with the second quarter of fiscal 2017 primarily due to continued macro-economic challenges in the region.

First Half Comparison Fiscal 2018 Versus Fiscal 2017

Total Bookings: For the first half of fiscal 2018 and fiscal 2017, total bookings were \$1,423 million and \$2,082 million, respectively. The decrease in total bookings was attributable to a decline in renewal bookings in the first half of fiscal 2018 compared with the first half of fiscal 2017, which included a large system integrator transaction that occurred in the first quarter of fiscal 2017 with an incremental contract value in excess of \$475 million.

Subscription and Maintenance Bookings: For the first half of fiscal 2018 and fiscal 2017, subscription and maintenance bookings were \$967 million and \$1,704 million, respectively. The decrease in subscription and maintenance bookings was attributable to a decline in renewal bookings in the first half of fiscal 2018 compared with the first half of fiscal 2017, which included the aforementioned large system integrator transaction that occurred in the first quarter of fiscal 2017.

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Renewal Bookings: For the first half of fiscal 2018, renewal bookings decreased by a percentage in the low-40s compared with the first half of fiscal 2017 primarily due to the aforementioned large system integrator transaction that occurred in the first quarter of fiscal 2017. To a lesser extent, the decrease in renewal bookings in the first half of fiscal 2018 compared with the first half of fiscal 2017 was due to the timing of our renewal portfolio.

- *License Agreements over \$10 million:* During the first half of fiscal 2018, we executed a total of 18 license agreements with incremental contract values in excess of \$10 million each, for an aggregate contract value of \$351 million. During the first half of fiscal 2017, we executed a total of 25 license agreements with incremental contract values in excess of \$10 million each, for an aggregate contract value of \$1,119 million. As described above, the decrease in the first half of fiscal 2018 compared with the first half of fiscal 2017 was primarily attributable to a decline in renewal bookings, which included the aforementioned large system integrator transaction.
- *Annualized Subscription and Maintenance Bookings and Weighted Average Subscription and Maintenance License Agreement Duration in Years:* Annualized subscription and maintenance bookings decreased from \$408 million in the first half of fiscal 2017 to \$340 million in the first half of fiscal 2018. The weighted average subscription and maintenance license agreement duration in years decreased from 4.18 in the first half of fiscal 2017 to 2.84 in the first half of fiscal 2018. These decreases were primarily due to the aforementioned large system integrator transaction.
- *Full Year Fiscal 2018 Outlook:* We expect fiscal 2018 renewal bookings to decrease by a percentage in the high teens compared with fiscal 2017 primarily due to the aforementioned large system integrator transaction that occurred in the first quarter of fiscal 2017.

Total New Product Sales: Within total bookings, total new product sales decreased by a percentage in the low teens for the first half of fiscal 2018 compared with the first half of fiscal 2017 primarily due to the aforementioned large system integrator transaction that occurred in the first quarter of fiscal 2017.

- *Within Total New Product Sales:*
 - *Mainframe Solutions New Product Sales:* For the first half of fiscal 2018, Mainframe Solutions new product sales decreased by approximately 30% compared with the first half of fiscal 2017 primarily due to a lower level of renewals, which included the aforementioned large system integrator transaction that occurred in the first quarter of fiscal 2017. The lower level of renewals is primarily attributable to the timing of our renewal portfolio since renewals typically provide an increased opportunity to generate new product sales.
 - *Enterprise Solutions New Product Sales:* For the first half of fiscal 2018, Enterprise Solutions new product sales decreased by a percentage in the low single digits compared with the first half of fiscal 2017. Excluding the aforementioned large system integrator transaction, Enterprise Solutions new product sales increased by a percentage in the low teens primarily due to our Automic and Veracode acquisitions. Excluding the aforementioned large system integrator transaction and Enterprise Solutions new product sales from our Automic and Veracode acquisitions, Enterprise Solutions new product sales decreased by a percentage in the low teens primarily due to a lower level of renewal bookings, which was attributable to the timing of our renewal portfolio. Typically, renewals provide an increased opportunity to generate new product sales. Enterprise Solutions new product sales performance was negatively affected by certain products that are more mature and not growing, but which generate positive segment operating margin and cash flows from operations.

Total Bookings by Geography: Total bookings in the first half of fiscal 2018 decreased in all regions compared with the first half of fiscal 2017 primarily due to a decrease in renewals. The decrease in the United States was primarily due to the aforementioned large system integrator transaction that occurred in the first quarter of fiscal 2017.

New Product Sales by Geography: Total new product sales in the first half of fiscal 2018 decreased in the United States and the Latin America region compared with the first half of fiscal 2017 primarily due to the aforementioned large system integrator transaction that occurred in the first quarter of fiscal 2017. Total new product sales in the first half of fiscal 2018 increased in the Europe, Middle East and Africa region compared with the first half of fiscal 2017 primarily due to our Automic acquisition.

LIQUIDITY AND CAPITAL RESOURCES

Our cash and cash equivalent balances are held in numerous locations throughout the world, with 66% held in our subsidiaries outside the United States at September 30, 2017. Cash and cash equivalents totaled \$2,822 million at September 30, 2017, representing an increase of \$51 million from the March 31, 2017 balance of \$2,771 million. During the first half of fiscal 2018, there was a \$136 million favorable translation effect from foreign exchange rates on cash held outside the United States in currencies other than the U.S. dollar.

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Although 66% of our cash and cash equivalents is held by foreign subsidiaries, we currently neither intend nor expect a need to repatriate these funds to the United States in the foreseeable future. We expect domestic cash, cash equivalents, cash flows from operations and borrowings to be sufficient to fund our domestic operating activities and our investing and financing activities, including, among other things, the payment of regular quarterly dividends, compliance with our debt repayment schedules, repurchases of our common stock and the funding for capital expenditures, for at least the next 12 months and for the foreseeable future thereafter. In addition, we expect foreign cash, cash equivalents and cash flows from foreign operations to be sufficient to fund our foreign operating activities and investing activities, including, among other things, the funding of capital expenditures, acquisitions and research and development, for at least the next 12 months and for the foreseeable future thereafter.

Sources and Uses of Cash

Under our subscription and maintenance agreements, customers generally make installment payments over the term of the agreement, often with at least one payment due at contract execution, for the right to use our software products and receive product support, software fixes and new products when available. The timing and actual amounts of cash received from committed customer installment payments under any specific agreement can be affected by several factors, including the time value of money and the customer's credit rating. Often, the amount received is the result of direct negotiations with the customer when establishing pricing and payment terms. In certain instances, the customer negotiates a price for a single upfront installment payment and seeks its own internal or external financing sources. In other instances, we may assist the customer by arranging financing on the customer's behalf through a third-party financial institution.

Amounts billed or collected as a result of a single installment for the entire contract value, or a substantial portion of the contract value, rather than being invoiced and collected over the life of the license agreement, are reflected in the liability section of our Condensed Consolidated Balance Sheets as "Deferred revenue (billed or collected)." Amounts received from either a customer or a third-party financial institution that are attributable to later years of a license agreement have a positive impact on billings and cash provided by operating activities in the current period. Accordingly, to the extent these collections are attributable to the later years of a license agreement, billings and cash provided by operating activities during the license's later years will be lower than if the payments were received over the license term. We are unable to predict with certainty the amount of cash to be collected from single installments for the entire contract value, or a substantial portion of the contract value, under new or renewed license agreements to be executed in future periods.

For the second quarter of fiscal 2018, gross receipts related to single installments for the entire contract value, or a substantial portion of the contract value, were \$80 million compared with \$59 million for the second quarter of fiscal 2017. For the first half of fiscal 2018, gross receipts related to single installments for the entire contract value, or a substantial portion of the contract value, were \$274 million compared with \$82 million for the first half of fiscal 2017.

In any quarter, we may receive payments in advance of the contractually committed date on which the payments were otherwise due. In limited circumstances, we may offer discounts to customers to ensure payment in the current period of invoices that have been billed, but might not otherwise be paid until a subsequent period because of payment terms. Historically, any such discounts have not been material.

Amounts due from customers from our subscription licenses are offset by deferred revenue related to these license agreements, leaving no or minimal net carrying value on our Condensed Consolidated Balance Sheets for those amounts. The fair value of these amounts may exceed or be less than this carrying value, but cannot be practically assessed, since there is no existing market for a pool of customer receivables with contractual commitments similar to those owned by us. The actual fair value may not be known until these amounts are sold, securitized or collected. Although these customer license agreements commit the customer to payment under a fixed schedule, to the extent amounts are not yet due and payable by the customer, the agreements are considered executory in nature due to our ongoing commitment to provide maintenance and unspecified future software products as part of the agreement terms.

We can estimate the total amounts to be billed from committed contracts, referred to as our "billings backlog," and the total amount to be recognized as revenue from committed contracts, referred to as our "revenue backlog." The aggregate amounts of our billings backlog and trade receivables already reflected in our Condensed Consolidated Balance Sheets represent the amounts we expect to collect in the future from committed contracts.

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<i>(in millions)</i>	September 30, 2017	March 31, 2017	September 30, 2016
Billings backlog:			
Amounts to be billed – current	\$ 1,893	\$ 1,941	\$ 1,821
Amounts to be billed – noncurrent	2,503	2,599	2,667
Total billings backlog	\$ 4,396	\$ 4,540	\$ 4,488
Revenue backlog:			
Revenue to be recognized within the next 12 months – current	\$ 3,163	\$ 3,240	\$ 2,945
Revenue to be recognized beyond the next 12 months – noncurrent	3,850	4,316	3,913
Total revenue backlog	\$ 7,013	\$ 7,556	\$ 6,858
Deferred revenue (billed or collected)	\$ 2,617	\$ 3,016	\$ 2,370
Total billings backlog	4,396	4,540	4,488
Total revenue backlog	\$ 7,013	\$ 7,556	\$ 6,858

Note: Revenue backlog includes deferred subscription and maintenance, professional services and software fees and other revenue.

We can also estimate the total cash to be collected in the future from committed contracts, referred to as our “Expected future cash collections,” by adding the total billings backlog to the trade accounts receivable, which represent amounts already billed but not collected, from our Condensed Consolidated Balance Sheets.

<i>(in millions)</i>	September 30, 2017	March 31, 2017	September 30, 2016
Expected future cash collections:			
Total billings backlog	\$ 4,396	\$ 4,540	\$ 4,488
Trade accounts receivable, net	457	764	445
Total expected future cash collections	\$ 4,853	\$ 5,304	\$ 4,933

The 3% decrease in billings backlog at September 30, 2017 compared with March 31, 2017 was primarily due to a lower level of bookings and higher single installment collections during the first half of fiscal 2018. Excluding the favorable effect of foreign exchange, billings backlog decreased 5% at September 30, 2017 compared with March 31, 2017. The 2% decrease in billings backlog at September 30, 2017 compared with September 30, 2016 was primarily due to a lower level of bookings and higher single installment collections during the second quarter of fiscal 2018. Excluding the favorable effect of foreign exchange, billings backlog decreased 3% at September 30, 2017 compared with September 30, 2016.

The decrease in expected future cash collections at September 30, 2017 compared with March 31, 2017 was primarily driven by the decrease in billings backlog as described above, as well as a decrease in trade accounts receivable, net due to a decrease in billings. The decrease in expected future cash collections at September 30, 2017 compared with September 30, 2016 was primarily driven by the decrease in billings backlog as described above.

The 7% decrease in total revenue backlog at September 30, 2017 compared with March 31, 2017 was primarily due to a lower level of bookings during the first half of fiscal 2018. Excluding the favorable effect of foreign exchange, total revenue backlog decreased 9% at September 30, 2017 compared with March 31, 2017. The 2% increase in total revenue backlog at September 30, 2017 compared with September 30, 2016 was primarily due to our Automic and Veracode acquisitions. Excluding the favorable effect of foreign exchange, total revenue backlog increased 1% at September 30, 2017 compared with September 30, 2016.

Current revenue backlog, which is our revenue to be recognized within the next 12 months, decreased 2% at September 30, 2017 compared with March 31, 2017. Excluding the favorable effect of foreign exchange, current revenue backlog decreased 4% at September 30, 2017 compared with March 31, 2017 primarily due to a decrease in total bookings in the first half of fiscal 2018. Current revenue backlog increased 7% at September 30, 2017 compared with September 30, 2016. Excluding the favorable effect of foreign exchange, current revenue backlog increased 6% at September 30, 2017 compared with September 30, 2016 primarily due to our Automic and Veracode acquisitions.

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Generally, we believe that a change in current revenue backlog on a year-over-year basis is an indicator of future subscription and maintenance revenue performance due to the high percentage of our revenue that is recognized from license agreements that are already committed and being recognized ratably. We also believe that if we do not demonstrate multiple quarters of total new product and capacity sales growth while maintaining a renewal yield in the low 90% range, our current revenue backlog would be unlikely to increase.

Net Cash Provided by (Used in) Operating Activities

	Second Quarter of Fiscal		Change
	2018	2017	2018 / 2017
	<i>(in millions)</i>		
Cash collections from billings ⁽¹⁾	\$ 803	\$ 735	\$ 68
Vendor disbursements and payroll ⁽¹⁾	(631)	(631)	—
Income tax payments, net	(109)	(140)	31
Other disbursements, net ⁽²⁾	(26)	(17)	(9)
Net cash provided by (used in) operating activities ⁽³⁾	\$ 37	\$ (53)	\$ 90

(1) Amounts include value added taxes and sales taxes.

(2) Amounts include payments associated with interest, prior period restructuring plans and miscellaneous receipts and disbursements.

(3) Net cash used in operating activities for the second quarter of fiscal 2017 was adjusted to reflect the adoption of ASU 2016-09. Refer to Note A, "Accounting Policies" in the Notes to the Condensed Consolidated Financial Statements for further details.

	First Half of Fiscal		Change
	2018	2017	2018 / 2017
	<i>(in millions)</i>		
Cash collections from billings ⁽¹⁾	\$ 2,014	\$ 1,737	\$ 277
Vendor disbursements and payroll ⁽¹⁾	(1,478)	(1,359)	(119)
Income tax payments, net	(156)	(202)	46
Other disbursements, net ⁽²⁾	(45)	(35)	(10)
Net cash provided by operating activities ⁽³⁾	\$ 335	\$ 141	\$ 194

(1) Amounts include value added taxes and sales taxes.

(2) Amounts include payments associated with interest, prior period restructuring plans and miscellaneous receipts and disbursements.

(3) Net cash provided by operating activities for the first half of fiscal 2017 was adjusted to reflect the adoption of ASU 2016-09. Refer to Note A, "Accounting Policies" in the Notes to the Condensed Consolidated Financial Statements for further details.

Second Quarter Comparison Fiscal 2018 Versus Fiscal 2017*Operating Activities*

Net cash provided by operating activities for the second quarter of fiscal 2018 was \$37 million, representing an increase of \$90 million compared with net cash used in operating activities of \$53 million for the second quarter of fiscal 2017. This increase was primarily due to an increase in cash collections from billings of \$68 million, of which \$21 million was from higher single installment collections, and lower cash tax payments of \$31 million compared with the year-ago period.

Investing Activities

Net cash used in investing activities for the second quarter of fiscal 2018 was \$20 million compared with \$8 million for the second quarter of fiscal 2017. The increase in net cash used in investing activities was primarily due to an increase in cash paid for acquisitions and purchased software of \$9 million compared with the year-ago period.

Financing Activities

Net cash used in financing activities for the second quarter of fiscal 2018 was \$215 million compared with \$142 million for the second quarter of fiscal 2017. The increase in net cash used in financing activities was primarily due to an increase in common stock repurchases of \$40 million, an increase in net debt repayments from our notional pooling arrangement of \$20 million and a decrease in the exercise of common stock options of \$8 million compared with the year-ago period.

First Half Comparison Fiscal 2018 Versus Fiscal 2017*Operating Activities*

Net cash provided by operating activities for the first half of fiscal 2018 was \$335 million, representing an increase of \$194 million compared with the first half of fiscal 2017. The increase in net cash provided by operating activities was primarily due to an increase in cash collections from billings of \$277 million, mainly from higher single installment collections of \$192 million, and lower cash tax payments of \$46 million, partially offset by an increase in vendor disbursements and payroll of \$119 million compared with the year-ago period.

Investing Activities

Net cash used in investing activities for the first half of fiscal 2018 was \$38 million compared with \$17 million for the first half of fiscal 2017. The increase in net cash used in investing activities was primarily due to an increase in cash paid for acquisitions and purchased software of \$14 million and an increase in purchases of property and equipment of \$6 million compared with the year-ago period.

Financing Activities

Net cash used in financing activities for the first half of fiscal 2018 was \$381 million compared with \$319 million for the first half of fiscal 2017. The increase in net cash used in financing activities was primarily due to an increase in net debt repayments from our notional pooling arrangement of \$42 million and a decrease in the exercise of common stock options of \$17 million compared with the year-ago period.

Debt Obligations

At September 30, 2017 and March 31, 2017, our debt obligations consisted of the following:

	September 30, 2017	March 31, 2017
	<i>(in millions)</i>	
Revolving credit facility	\$ —	\$ —
2.875% Senior Notes due August 2018	250	250
5.375% Senior Notes due December 2019	750	750
3.600% Senior Notes due August 2020	400	400
3.600% Senior Notes due August 2022	500	500
4.500% Senior Notes due August 2023	250	250
4.700% Senior Notes due March 2027	350	350
Term Loan due April 2022	293	300
Other indebtedness, primarily capital leases	7	8
Unamortized debt issuance costs	(12)	(14)
Unamortized discount for Senior Notes	(3)	(3)
Total debt outstanding	\$ 2,785	\$ 2,791
Less the current portion	(268)	(18)
Total long-term debt portion	\$ 2,517	\$ 2,773

Revolving Credit Facility

In June 2017, we amended our revolving credit facility to extend the termination date from June 2019 to June 2022. Our revolving credit facility provides a maximum committed amount available of \$1 billion. The facility also provides us with an option to increase the available credit by an amount up to \$500 million. This option is subject to certain conditions and the agreement of the facility lenders. At September 30, 2017 and March 31, 2017, there were no outstanding borrowings under our revolving credit facility.

Other Indebtedness

We had \$114 million of unsecured and uncommitted multi-currency lines of credit at September 30, 2017 and March 31, 2017 available to meet short-term working capital needs for our subsidiaries, and use guarantees and letters of credit issued by financial institutions to guarantee performance on certain contracts and other items. At September 30, 2017 and March 31, 2017, \$59 million and \$51 million, respectively, of these lines of credit were pledged in support of bank guarantees and other local credit lines. At September 30, 2017 and March 31, 2017, none of these arrangements were drawn down by third parties.

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We use a notional pooling arrangement with an international bank to help manage global liquidity. Under this pooling arrangement, we and our participating subsidiaries may maintain either cash deposit or borrowing positions through local currency accounts with the bank, so long as the aggregate position of the global pool is a notionally calculated net cash deposit. Because it maintains a security interest in the cash deposits and has the right to offset the cash deposits against the borrowings, the bank provides us and our participating subsidiaries favorable interest terms on both. The activity under this notional pooling arrangement for the six months ended September 30, 2017 and 2016 was as follows:

	Six Months Ended September 30,	
	2017	2016
	<i>(in millions)</i>	
Total borrowings outstanding at beginning of period ⁽¹⁾	\$ 137	\$ 139
Borrowings	1,173	467
Repayments	(1,204)	(456)
Foreign exchange effect	31	(11)
Total borrowings outstanding at end of period ⁽¹⁾	<u>\$ 137</u>	<u>\$ 139</u>

(1) Included in "Accrued expenses and other current liabilities" in our Condensed Consolidated Balance Sheets.

For additional information concerning our debt obligations, refer to our consolidated financial statements and notes thereto included in our 2017 Form 10-K.

Effect of Exchange Rate Changes

There was a \$136 million favorable translation effect on our cash balances in the first half of fiscal 2018 predominantly due to the weakening of the U.S. dollar against the euro (11%), the British pound sterling (7%) and the Canadian dollar (7%).

There was a \$32 million unfavorable translation effect on our cash balances in the first half of fiscal 2017 predominantly due to the strengthening of the U.S. dollar against the British pound sterling (10%) and the euro (1%), partially offset by the weakening of the U.S. dollar against the Brazilian real (10%).

CRITICAL ACCOUNTING POLICIES AND BUSINESS PRACTICES

The preparation of financial statements in accordance with generally accepted accounting principles requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses. We base our estimates on historical experience and various other assumptions that we believe are reasonable under the circumstances. Our estimates form the basis for making judgments about amounts and timing of revenue and expenses, the carrying values of assets and the recorded amounts of liabilities that are not readily apparent from other sources. Actual results may differ from these estimates and the estimates may change if the underlying conditions or assumptions change. Information with respect to our critical accounting policies that we believe could have the most significant effect on our reported results or require subjective or complex judgments by management is contained in our 2017 Form 10-K under Management's Discussion and Analysis of Financial Condition and Results of Operations. At September 30, 2017, there was no material change to our critical accounting policies or the methodologies or assumptions we apply under them since March 31, 2017.

New Accounting Pronouncements

For information regarding new accounting pronouncements, and the impact of these pronouncements on our consolidated financial statements, if any, refer to Note A, "Accounting Policies," in the Notes to the Condensed Consolidated Financial Statements.

Item 3: QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

For quantitative and qualitative disclosures about market risk, see Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," of our 2017 Form 10-K. Our exposures to market risk have not changed materially subsequent to March 31, 2017.

Item 4: CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of the Company's management, including the Chief Executive Officer and the Chief Financial Officer, the Company has evaluated the effectiveness of its disclosure controls and procedures, as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (Exchange Act). Based on that evaluation, the Company's Chief Executive Officer and the Chief Financial Officer have concluded that the Company's disclosure controls and procedures were effective as of the end of the period covered by this quarterly report.

Changes in Internal Control over Financial Reporting

There were no changes in the Company's internal control over financial reporting, as that term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act, that occurred during the period covered by this quarterly report that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

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Item 6. EXHIBITS

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed or Furnished Herewith
		Form	Exhibit	Filing Date	
3.1	Restated Certificate of Incorporation.	8-K	3.3	3/9/06	
3.2	By-Laws of the Company, as amended.	10-K	3.2	5/8/15	
10.1*	CA, Inc. 2012 Compensation Plan for Non-Employee Directors (As Amended).	DEF 14A	Exhibit A	6/22/17	
12	Statement of Ratios of Earnings to Fixed Charges.				X
15	Accountants' Acknowledgment Letter.				X
31.1	Certification of the Principal Executive Officer pursuant to §302 of the Sarbanes-Oxley Act of 2002.				X
31.2	Certification of the Principal Financial Officer pursuant to §302 of the Sarbanes-Oxley Act of 2002.				X
32	Certification pursuant to §906 of the Sarbanes-Oxley Act of 2002.				X
101.INS	XBRL Instance Document.				X
101.SCH	XBRL Taxonomy Extension Schema Document.				X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.				X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.				X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.				X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.				X

* Management contract or compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

CA, INC.

By: /s/ Michael P. Gregoire

Michael P. Gregoire
Chief Executive Officer

By: /s/ Kieran J. McGrath

Kieran J. McGrath
Executive Vice President and Chief Financial Officer

Dated: October 26, 2017

CA, Inc.

STATEMENT OF RATIOS OF EARNINGS TO FIXED CHARGES

(in millions, except ratios)

	Fiscal Year					Six Months Ended
	2013	2014	2015	2016	2017	September 30, 2017
Earnings available for fixed charges:						
Earnings from continuing operations before income taxes, minority interest and discontinued operations	\$ 1,260	\$ 1,016	\$ 1,115	\$ 1,084	\$ 1,073	\$ 496
Add: Fixed charges	113	123	125	128	136	79
Total earnings available for fixed charges	\$ 1,373	\$ 1,139	\$ 1,240	\$ 1,212	\$ 1,209	\$ 575
Fixed charges:						
Interest expense ⁽¹⁾	\$ 64	\$ 75	\$ 77	\$ 81	\$ 90	\$ 63
Interest portion of rental expense	49	48	48	47	46	16
Total fixed charges	\$ 113	\$ 123	\$ 125	\$ 128	\$ 136	\$ 79
RATIOS OF EARNINGS TO FIXED CHARGES						
Deficiency of earnings to fixed charges	12.15	9.26	9.92	9.47	8.89	7.28
Deficiency of earnings to fixed charges	n/a	n/a	n/a	n/a	n/a	n/a

(1) Includes amortization of discount related to indebtedness

October 26, 2017
CA, Inc.
520 Madison Avenue
New York, New York 10022

Re: Registration Statement No. 333-218008 on Form S-3 and Registration Statement Nos. 333-220669, 333-183731, 333-177558, 333-176166, 333-146173, 333-120849, 333-108665, 333-100896, 333-88916, 333-32942, 333-31284, 333-83147, 333-80883, 333-79727, 333-62055, 333-19071, 333-04801, 333-127602, 333-127601, 333-126273, 33-64377, 33-53915, 33-53572, 33-34607, 33-18322, 33-20797, 2-92355, 2-87495 and 2-79751 on Form S-8.

With respect to the subject registration statements, we acknowledge our awareness of the use therein of our report dated October 26, 2017 related to our review of interim financial information.

Pursuant to Rule 436 under the Securities Act of 1933 (the Act), such report is not considered part of a registration statement prepared or certified by an independent registered public accounting firm, or a report prepared or certified by an independent registered public accounting firm within the meaning of Sections 7 and 11 of the Act.

/s/ KPMG LLP

New York, New York

**CEO CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Michael P. Gregoire, certify that:

1. I have reviewed the Quarterly Report on Form 10-Q of CA, Inc. for its most recent fiscal quarter;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 26, 2017

/s/ Michael P. Gregoire

Michael P. Gregoire
Chief Executive Officer
CA, Inc.

**CFO CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Kieran J. McGrath, certify that:

1. I have reviewed the Quarterly Report on Form 10-Q of CA, Inc. for its most recent fiscal quarter;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 26, 2017

/s/ Kieran J. McGrath

Kieran J. McGrath
Executive Vice President and Chief
Financial Officer
CA, Inc.

**CERTIFICATION PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002
(18 U.S.C. SECTION 1350)**

In connection with the Quarterly Report on Form 10-Q of CA, Inc., a Delaware corporation (the “Company”), for the fiscal quarter ended September 30, 2017 as filed with the Securities and Exchange Commission (the “Report”), each of Michael P. Gregoire, Chief Executive Officer of the Company, and Kieran J. McGrath, Executive Vice President and Chief Financial Officer of the Company, hereby certifies, pursuant to §906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. §1350), that to his knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Michael P. Gregoire

Michael P. Gregoire
Chief Executive Officer
October 26, 2017

/s/ Kieran J. McGrath

Kieran J. McGrath
Executive Vice President and Chief Financial Officer
October 26, 2017

The foregoing certification will not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liability of that Section. The foregoing certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent that the Company specifically incorporates it by reference.

