

Medidata Solutions, Inc.
Form 10-Q
August 05, 2016
Table of Contents

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 June 30, 2016

OR

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

For the transition period from _____ to _____

Commission File Number: 001-34387

Medidata Solutions, Inc.
(Exact name of registrant as specified in its charter)

Delaware	13-4066508
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

350 Hudson Street, 9th Floor	10014
New York, New York	
(Address of principal executive offices)	(Zip Code)
(212) 918-1800	
(Registrant's telephone number, including area code)	

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ 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 or a smaller reporting company. See the definitions of "large accelerated filer", "accelerated filer", and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer <input checked="" type="checkbox"/>	Accelerated filer <input type="checkbox"/>
Non-accelerated filer <input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company <input type="checkbox"/>

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

As of July 29, 2016, the registrant had 57,489,626 shares of common stock outstanding.

Table of Contents

MEDIDATA SOLUTIONS, INC.
 QUARTERLY REPORT ON FORM 10-Q
 FOR THE QUARTERLY PERIOD ENDED JUNE 30, 2016
 TABLE OF CONTENTS

	Page
PART I <u>FINANCIAL INFORMATION</u>	
Item 1. <u>Financial Statements (Unaudited)</u>	
<u>Condensed Consolidated Balance Sheets as of June 30, 2016 and December 31, 2015</u>	<u>3</u>
<u>Condensed Consolidated Statements of Operations for the Three and Six Months Ended June 30, 2016 and 2015</u>	<u>4</u>
<u>Condensed Consolidated Statements of Comprehensive Income for the Three and Six Months Ended June 30, 2016 and 2015</u>	<u>5</u>
<u>Condensed Consolidated Statements of Cash Flows for the Three and Six Months Ended June 30, 2016 and 2015</u>	<u>6</u>
<u>Notes to Condensed Consolidated Financial Statements</u>	<u>8</u>
Item 2. <u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>17</u>
Item 3. <u>Quantitative and Qualitative Disclosures about Market Risk</u>	<u>22</u>
Item 4. <u>Controls and Procedures</u>	<u>23</u>
PART II <u>OTHER INFORMATION</u>	<u>24</u>
Item 1. <u>Legal Proceedings</u>	<u>24</u>
Item 1A. <u>Risk Factors</u>	<u>24</u>
Item 2. <u>Unregistered Sales of Equity Securities and Use of Proceeds</u>	<u>24</u>
Item 3. <u>Defaults upon Senior Securities</u>	<u>24</u>
Item 4. <u>Mine Safety Disclosures</u>	<u>24</u>
Item 5. <u>Other Information</u>	<u>24</u>
Item 6. <u>Exhibits</u>	<u>24</u>
 <u>SIGNATURES</u>	 <u>25</u>
<u>EXHIBIT INDEX</u>	<u>26</u>

Table of Contents

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited)

- 2 -

Table of Contents

MEDIDATA SOLUTIONS, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS (Unaudited)

	June 30, 2016	December 31, 2015
	(Amounts in thousands, except per share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$64,346	\$ 49,562
Marketable securities	253,930	220,126
Accounts receivable, net of allowance for doubtful accounts of \$1,989 and \$1,992, respectively	90,433	90,590
Prepaid commission expense	2,665	1,670
Prepaid expenses and other current assets	17,546	21,165
Deferred income taxes	102	88
Total current assets	429,022	383,201
Restricted cash	5,758	5,755
Furniture, fixtures and equipment, net	54,683	51,043
Marketable securities – long-term	164,596	209,041
Goodwill	30,320	18,797
Intangible assets, net	5,887	1,172
Deferred income taxes – long-term	12,668	12,128
Other assets	9,080	3,043
Total assets	\$712,014	\$ 684,180
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$1,406	\$ 6,283
Accrued payroll and other compensation	17,688	23,744
Accrued expenses and other	18,951	15,469
Deferred revenue	76,466	75,582
Total current liabilities	114,511	121,078
Noncurrent liabilities:		
1.00% convertible senior notes, net	256,350	249,487
Deferred revenue, less current portion	2,820	2,993
Deferred tax liabilities	444	414
Other long-term liabilities	23,238	26,052
Total noncurrent liabilities	282,852	278,946
Total liabilities	397,363	400,024
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, par value \$0.01 per share; 5,000 shares authorized, none issued and outstanding	—	—
Common stock, par value \$0.01 per share; 200,000 shares authorized; 60,970 and 59,455 shares issued; 57,399 and 56,311 shares outstanding, respectively	610	594
Additional paid-in capital	395,817	364,973
Treasury stock, 3,571 and 3,144 shares, respectively	(112,430)	(100,806)
Accumulated other comprehensive loss	(2,930)	(3,404)
Retained earnings	33,584	22,799
Total stockholders' equity	314,651	284,156

Total liabilities and stockholders' equity	\$712,014	\$ 684,180
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The accompanying notes are an integral part of the condensed consolidated financial statements.

- 3 -

Table of Contents

MEDIDATA SOLUTIONS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
(Amounts in thousands, except per share data)				
Revenues				
Subscription	\$96,760	\$83,929	\$186,728	\$162,678
Professional services	17,850	14,155	32,120	27,846
Total revenues	114,610	98,084	218,848	190,524
Cost of revenues (1)(2)				
Subscription	15,600	12,354	29,929	23,827
Professional services	13,457	10,557	23,796	21,260
Total cost of revenues	29,057	22,911	53,725	45,087
Gross profit	85,553	75,173	165,123	145,437
Operating costs and expenses				
Research and development (1)	28,267	22,519	56,495	44,430
Sales and marketing (1)(2)	27,609	25,724	53,067	50,042
General and administrative (1)	18,531	21,943	37,777	42,512
Total operating costs and expenses	74,407	70,186	147,339	136,984
Operating income	11,146	4,987	17,784	8,453
Interest and other income (expense)				
Interest expense	(4,183)	(3,997)	(8,310)	(7,955)
Interest income	932	612	1,804	1,146
Other income (expense), net	3	(34)	(1)	(68)
Total interest and other expense, net	(3,248)	(3,419)	(6,507)	(6,877)
Income before income taxes	7,898	1,568	11,277	1,576
Provision for income taxes	2,961	55	492	(94)
Net income	\$4,937	\$1,513	\$10,785	\$1,670
Earnings per share				
Basic	\$0.09	\$0.03	\$0.20	\$0.03
Diluted	\$0.09	\$0.03	\$0.19	\$0.03
Weighted average common shares outstanding				
Basic	55,392	53,647	55,255	53,453
Diluted	56,604	56,191	56,594	56,050

(1) Stock-based compensation expense included in cost of revenues and operating costs and expenses is as follows:

Cost of revenues	\$1,239	\$1,311	\$2,449	\$2,559
Research and development	2,323	2,013	4,517	3,799
Sales and marketing	1,839	2,460	3,716	4,827
General and administrative	5,046	8,352	10,015	14,621
Total stock-based compensation	\$10,447	\$14,136	\$20,697	\$25,806

(2) Amortization of intangible assets included in cost of revenues and operating costs and expenses is as follows:

Cost of revenues	\$314	\$180	\$393	\$359
Sales and marketing	85	30	109	59
Total amortization of intangible assets	\$399	\$210	\$502	\$418

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

Table of Contents

MEDIDATA SOLUTIONS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
	(Amounts in thousands)			
Net income	\$4,937	\$1,513	\$10,785	\$1,670
Other comprehensive income (loss)				
Foreign currency translation adjustments	(565	) 925	(652	) 173
Unrealized gain (loss) on marketable securities	399	(390	) 1,707	203
Other comprehensive (loss) income	(166	) 535	1,055	376
Income tax effect of unrealized gain or loss on marketable securities	(581	) 206	(581	) (68
Other comprehensive (loss) income, net of tax	(747	) 741	474	308
Comprehensive income, net of tax	\$4,190	\$2,254	\$11,259	\$1,978

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

Table of Contents

MEDIDATA SOLUTIONS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)

	Six Months Ended June 30,	
	2016	2015
	(Amounts in thousands)	
Cash flows from operating activities	\$10,785	\$1,670
Net income		
Adjustments to reconcile net income to net cash provided by operating activities		
Amortization of intangible assets and depreciation	6,983	5,190
Stock-based compensation	20,697	25,806
Amortization of discounts or premiums on marketable securities	1,700	2,502
Deferred income taxes	(1,164)	(5,846)
Amortization of debt issuance costs	639	639
Amortization of debt discount	6,224	5,862
Excess tax benefit associated with equity awards	(5,048)	(3,712)
Provision for doubtful accounts	508	550
Loss on fixed asset disposal	4	—
Changes in operating assets and liabilities:		
Accounts receivable	(7,729)	(33,894)
Prepaid commission expense	(2,931)	(123)
Prepaid expenses and other current assets	3,040	(3,303)
Other assets	(3,583)	1,497
Accounts payable	(1,932)	(702)
Accrued payroll and other compensation	(4,302)	196
Accrued expenses and other	7,715	4,439
Deferred revenue	9,206	27,085
Other long-term liabilities	(2,814)	889
Net cash provided by operating activities	37,998	28,745
Cash flows from investing activities		
Purchases of furniture, fixtures and equipment	(13,425)	(5,925)
Purchases of available-for-sale securities	(144,136)	(140,856)
Proceeds from sale of available-for-sale securities	154,784	126,632
Acquisition of business, net of cash acquired	(17,142)	—
Net decrease (increase) in restricted cash	81	(464)
Net cash used in investing activities	(19,838)	(20,613)
Cash flows from financing activities		
Proceeds from exercise of stock options	1,691	5,199
Proceeds from employee stock purchase plan	3,385	2,960
Excess tax benefit associated with equity awards	5,048	3,712
Repayment of obligations under capital leases	—	(17)
Repayment of notes payable	(100)	—
Acquisition of treasury stock	(13,797)	(16,154)
Net cash used in financing activities	(3,773)	(4,300)
Effect of exchange rate changes on cash and cash equivalents	397	17
Net increase in cash and cash equivalents	14,784	3,849
Cash and cash equivalents – Beginning of period	49,562	39,517
Cash and cash equivalents – End of period	\$64,346	\$43,366

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

- 6 -

Table of Contents

MEDIDATA SOLUTIONS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS, CONTINUED (Unaudited)

Six Months
Ended June 30,
2016 2015

Supplemental disclosures of cash flow information:

Cash paid during the period for:

Interest	\$ 1,445	\$ 1,438
Income taxes	\$ 845	\$ 281

Noncash activities:

Furniture, fixtures, and equipment acquired but not yet paid for at period-end	\$ 1,097	\$ 3,682
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The accompanying notes are an integral part of the condensed consolidated financial statements.

Table of Contents

MEDIDATA SOLUTIONS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Medidata Solutions, Inc., together with its consolidated subsidiaries (collectively, the "Company"), is the leading global provider of cloud-based solutions for clinical research in life sciences, offering platform technology that transforms clinical development and increases the value of its customers' research investments. The Company was organized as a New York corporation in June 1999 and reincorporated as a Delaware corporation in May 2000. Except to the extent updated or described below, the Company's significant accounting policies as of June 30, 2016 are the same as those at December 31, 2015, which are included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2015 filed with the Securities and Exchange Commission ("SEC") on February 29, 2016.

Basis of Presentation — The accompanying interim condensed consolidated balance sheets as of June 30, 2016 and December 31, 2015, the condensed consolidated statements of operations for the three and six months ended June 30, 2016 and 2015, the condensed consolidated statements of comprehensive income for the three and six months ended June 30, 2016 and 2015, and the condensed consolidated statements of cash flows for the six months ended June 30, 2016 and 2015 are unaudited and have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") and applicable rules and regulations of the SEC for interim financial reporting. Accordingly, certain information and footnote disclosures have been condensed or omitted pursuant to SEC rules that would ordinarily be required by U.S. GAAP for complete financial statements. These unaudited interim condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and accompanying notes thereto for the fiscal year ended December 31, 2015 included in the Company's Annual Report on Form 10-K filed with the SEC on February 29, 2016.

The unaudited interim condensed consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements and, in the opinion of management, reflect all adjustments consisting of normal recurring accruals considered necessary to present fairly the Company's financial position as of June 30, 2016, results of its operations for the three and six months ended June 30, 2016 and 2015, comprehensive income for the three and six months ended June 30, 2016 and 2015, and cash flows for the six months ended June 30, 2016 and 2015. The results of operations for the three and six months ended June 30, 2016 are not necessarily indicative of the results that may be expected for the year ending December 31, 2016.

Income Taxes — The Company's interim period provision for income taxes is computed by using an estimate of the annual effective tax rate, adjusted for discrete items taken into account in the relevant period, if any. Each quarter, the annual effective income tax rate is recomputed and if there are material changes in the estimate, a cumulative adjustment is made.

Accounts Receivable — Accounts receivable are recorded at original invoice amount less an allowance that management believes will be adequate to absorb estimated losses on uncollectible accounts. This allowance is based on an evaluation of the collectability of accounts receivable and prior bad debt experience. Accounts receivable are written off when deemed uncollectible. Unbilled receivables consist of revenue recognized in excess of billings, substantially all of which is expected to be billed and collected within one year. As of June 30, 2016 and December 31, 2015, unbilled accounts receivable of \$11.3 million and \$10.3 million, respectively, were included in accounts receivable on the Company's consolidated balance sheets. In general, there is a direct relationship between the Company's accounts receivable balance and its transaction volume.

Recently Adopted Accounting Pronouncements — In August 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-15, Presentation of Financial Statements—Going Concern. This new guidance formally establishes management's responsibility to evaluate at each reporting period whether there is substantial doubt about the entity's ability to continue as a going concern for a period of one year after the date the financial statements are issued, and to provide related footnote disclosures. ASU No. 2014-15 is effective for annual reporting periods ending after December 15, 2016, and for interim and annual periods thereafter. The Company will adopt ASU No. 2014-15 for the annual reporting period ending December 31, 2016, and the adoption is not expected

to have a material impact on its consolidated financial statements.

In April 2015, the FASB issued ASU No. 2015-03, Simplifying the Presentation of Debt Issuance Costs. ASU No. 2015-03 requires that debt issuance costs be presented not as an asset but as a reduction of the carrying amount of the related debt liability, similar to a debt discount. ASU No. 2015-03 is effective for annual periods beginning after December 15, 2015, and interim periods within those annual periods, with early adoption permitted. The Company adopted ASU No. 2015-03 retrospectively on January 1, 2016, and the adoption did not have a material impact on its consolidated financial statements, aside from a balance sheet reclassification. Refer to Note 6, "Debt," for details.

In April 2015, the FASB issued ASU No. 2015-05, Customer's Accounting for Fees Paid in a Cloud Computing Arrangement, which provides guidance on whether an entity should account for the fees paid as a customer under a cloud computing arrangement as a license of internal-use software or as a service contract. ASU No. 2015-05 is effective for annual periods beginning after December 15, 2015, and interim periods within those annual periods, with early adoption permitted. The Company adopted ASU No. 2015-05 prospectively on January 1, 2016, and the adoption did not have a material impact on its consolidated financial statements as the Company accounts for all subscription fees paid under its cloud computing arrangements as service contracts.

- 8 -

Table of Contents

MEDIDATA SOLUTIONS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

In May 2015, the FASB issued ASU No. 2015-07, Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent). ASU No. 2015-07 removes the requirement to categorize within the fair value hierarchy those investments that are measured at fair value using net asset value per share as a practical expedient and requires that sufficient information be provided to permit reconciliation of the fair value of assets categorized within the fair value hierarchy to amounts presented on the balance sheets. ASU No. 2015-07 is effective for annual periods beginning after December 15, 2015, and interim periods within those annual periods, with early adoption permitted. The Company adopted ASU No. 2015-07 retrospectively on January 1, 2016, and the adoption did not have a material impact on its consolidated financial statements.

Recently Issued Accounting Pronouncements — There have been no changes in the expected dates of adoption or estimated effects on the Company's consolidated financial statements of recently issued accounting pronouncements from those disclosed in the Company's Annual Report on Form 10-K, except as described below.

In January 2016, the FASB issued ASU No. 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities, which enhances the reporting model for financial instruments by amending certain aspects of existing guidance on recognition, measurement, presentation, and disclosure to provide financial statement users with more decision-useful information. ASU No. 2016-01 is effective for annual periods beginning after December 15, 2017, and interim periods within those annual periods. The Company will adopt ASU No. 2016-01 on January 1, 2018, and is presently evaluating the impact of the adoption on its consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases, which replaces previous lease guidance in its entirety with Accounting Standards Codification ("ASC") 842, Leases. The new guidance requires lessees to recognize lease assets and lease liabilities for those arrangements classified as operating leases under previous guidance, with the exception of leases with a term of twelve months or less. The new guidance also adds quantitative and qualitative disclosure requirements around leasing activities. ASU No. 2016-02 is effective for annual periods beginning after December 15, 2018, including interim periods within those annual periods, and requires a modified retrospective approach. Early adoption is permitted. The Company will adopt ASU No. 2016-02 on January 1, 2019, and is presently evaluating the impact of the adoption on its consolidated financial statements.

In March 2016, the FASB issued ASU No. 2016-09, Improvements to Employee Share-Based Payment Accounting, which simplifies several aspects of the accounting for share-based payment transactions, including income tax consequences, classification of awards as either equity or liability, and classification on the statement of cash flows. ASU No. 2016-09 is effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted in any interim or annual period. The Company will adopt ASU No. 2016-09 no later than January 1, 2017 but is presently evaluating the impact of the adoption on its consolidated financial statements and may consider early adoption.

2. STOCKHOLDERS' EQUITY

Common Stock — Common stockholders are entitled to one vote for each share of common stock held. Common stockholders may receive dividends if and when the Board of Directors determines, at its sole discretion.

Treasury Stock — From time to time, the Company grants nonvested restricted stock awards ("RSAs"), restricted stock units ("RSUs"), and performance-based restricted stock units ("PBRsUs") to its employees pursuant to the terms of its Second Amended and Restated 2009 Long-Term Incentive Plan (the "2009 Plan"). Under the provisions of the 2009 Plan, unless otherwise elected, participants fulfill their related income tax withholding obligation by having shares withheld at the time of vesting. On the date of vesting, the Company divides the participant's income tax withholding obligation in dollars by the closing price of its common stock and withholds the resulting number of vested shares. The shares withheld are then transferred to the Company's treasury stock at cost for future reissuance. During the six months ended June 30, 2016 and 2015, the Company withheld 326,568 shares at an average price of \$35.59 and 321,008 shares at an average price of \$50.32, respectively, in connection with the vesting of equity awards.

Nonvested restricted stock awards forfeited by plan participants are transferred to the Company's treasury stock at par. During the six months ended June 30, 2016 and 2015, 99,876 and 73,455 forfeited shares, respectively, were transferred to treasury stock at their par value of \$0.01.

3. MARKETABLE SECURITIES

Marketable securities, which the Company classifies as available-for-sale securities, primarily consist of high quality commercial paper, corporate bonds, and U.S. government debt obligations. Marketable securities with remaining effective maturities of twelve months or less from the balance sheet date are classified as short-term; otherwise, they are classified as long-term on the consolidated balance sheet.

- 9 -

Table of Contents

MEDIDATA SOLUTIONS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

The following table provides the Company's marketable securities by security type as of June 30, 2016 and December 31, 2015 (in thousands):

	As of June 30, 2016			
	Cost	Gross	Gross	Estimated
		Unrealized	Unrealized	Fair
		Gains	Losses	Value
Commercial paper and corporate bonds	\$384,295	\$ 234	\$ (156)	\$384,373
U.S. government agency debt securities	34,139	16	(2)	34,153
Total	\$418,434	\$ 250	\$ (158)	\$418,526
	As of December 31, 2015			
	Cost	Gross	Gross	Estimated
		Unrealized	Unrealized	Fair
		Gains	Losses	Value
Commercial paper and corporate bonds	\$401,824	\$ —	\$ (1,522)	\$400,302
U.S. government agency debt securities	28,958	2	(95)	28,865
Total	\$430,782	\$ 2	\$ (1,617)	\$429,167

Contractual maturities of the Company's marketable securities as of June 30, 2016 and December 31, 2015 are summarized as follows (in thousands):

	As of June 30, 2016		As of December 31, 2015	
	Cost	Estimated	Cost	Estimated
		Fair Value		Fair Value
Due in one year or less	\$254,031	\$253,930	\$220,492	\$220,126
Due in one to five years	164,403	164,596	210,290	209,041
Total	\$418,434	\$418,526	\$430,782	\$429,167

At June 30, 2016, the Company had \$0.2 million of gross unrealized losses primarily due to a decrease in the fair value of certain corporate bonds.

The Company regularly reviews its investment portfolio to identify and evaluate investments that have indications of possible impairment. Investments that are impaired are those that are considered to have losses that are other-than-temporary. Factors considered in determining whether a loss is temporary include:

- the length of time and extent to which fair value has been lower than the cost basis;
- the financial condition, credit quality and near-term prospects of the investee; and
- whether it is more likely than not that the Company will be required to sell the security prior to recovery.

As the Company has the ability and intent to hold these investments until a recovery of fair value, which may be until maturity, the Company has determined that the gross unrealized losses on such investments at June 30, 2016 are temporary in nature. Accordingly, the Company did not consider its investments in marketable securities to be other-than-temporarily impaired as of June 30, 2016.

The following tables provide the fair market value and the gross unrealized losses of the Company's marketable securities with unrealized losses, aggregated by security type, as of June 30, 2016 and December 31, 2015 (in thousands):

In Loss Position for Less than 12 Months			
As of June 30, 2016		As of December 31, 2015	
Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses

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Commercial paper and corporate bonds	\$ 120,536	\$ (66)	\$ 359,566	\$ (1,443)
U.S. government agency debt securities	10,131	(2)	25,863	(95)
Total	\$ 130,667	\$ (68)	\$ 385,429	\$ (1,538)

- 10 -

Table of Contents

MEDIDATA SOLUTIONS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

In Loss Position for More than 12
Months

	As of June 30, 2016		As of December 31, 2015	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
Commercial paper and corporate bonds	\$85,242	\$ (90)	\$38,726	\$ (79)
Total	\$85,242	\$ (90)	\$38,726	\$ (79)

During the three and six months ended June 30, 2016 and 2015, the Company recorded an insignificant amount of net realized gains from the sale of marketable securities.

4. FAIR VALUE

The following table summarizes, as of June 30, 2016 and December 31, 2015, our financial assets that are measured at fair value on a recurring basis, according to the fair value hierarchy described in our significant accounting policies included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2015 (in thousands):

	As of June 30, 2016			As of December 31, 2015		
	Fair Value Measurement Using			Fair Value Measurement Using		
	Level 1	Level 2	Total	Level 1	Level 2	Total
Cash	62,216	—	62,216	48,917	—	48,917
Money market funds	131	—	131	645	—	645
Commercial paper	—	1,999	1,999	—	—	—
Total cash and cash equivalents	62,347	1,999	64,346	49,562	—	49,562
Commercial paper and corporate bonds	—	384,373	384,373	—	400,302	400,302
U.S. government agency debt securities	—	34,153	34,153	—	28,865	28,865
Total marketable securities	—	418,526	418,526	—	429,167	429,167
Total financial assets measured at fair value on a recurring basis	62,347	420,525	482,872	49,562	429,167	478,729

As of June 30, 2016 and December 31, 2015, the Company had no financial liabilities measured at fair value on a recurring basis, and none of its financial assets measured at fair value on a recurring basis relied upon Level 3 inputs. Investments in commercial paper, corporate bonds, and U.S. government agency debt securities have been classified as Level 2 as they are valued using quoted prices in less active markets or other directly or indirectly observable inputs. Fair values of corporate bonds and U.S. government agency debt securities were derived from a consensus or weighted-average price based on input of market prices from multiple sources at each reporting period. With regard to commercial paper, all of the securities had high credit ratings and one year or less to maturity; therefore, fair value was derived from accretion of purchase price to face value over the term of maturity or quoted prices for similar instruments if available. During the six months ended June 30, 2016 and 2015, there were no transfers of financial assets between Level 1 and Level 2.

The carrying amounts of all other current financial assets and current financial liabilities reflected in the consolidated balance sheets approximate fair value due to their short-term nature.

5. GOODWILL AND INTANGIBLE ASSETS

On April 1, 2016, the Company acquired Intelimage, LLC ("Intelimage"), a medical image sharing and workflow management company for a net purchase price of \$17.1 million, broadening its offerings with the addition of digital image management technology. The acquisition resulted in the recognition of the following intangible assets (in thousands):

Weighted-Average Useful Life

Acquisition-Date	
Fair Value	
Acquired	
\$ 3,750	4 years
technology	
Customer	
1,472	6 years
relationships	
Total	
\$5,222	

Table of Contents

MEDIDATA SOLUTIONS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

The change in the carrying amount of goodwill during the six months ended June 30, 2016 was as follows (in thousands):

Balance as of January 1, 2016	\$18,797
Additions related to acquisition of Intelemage	\$11,963
Foreign currency translation adjustments	(440)
Balance as of June 30, 2016	\$30,320

Total intangible assets are summarized as follows (in thousands):

	As of June 30, 2016			As of December 31, 2015		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Acquired technology	\$8,824	\$ (4,581)	\$ 4,243	\$5,223	\$ (4,336)	\$ 887
Customer relationships	3,596	(2,051)	1,545	2,165	(1,994)	171
Non-competition agreements	150	(51)	99	150	(36)	114
Total	\$12,570	\$ (6,683)	\$ 5,887	\$7,538	\$ (6,366)	\$ 1,172

Amortization of intangible assets for the next five years is expected to be as follows (in thousands):

Remainder of year ending December 31, 2016 \$796

Years ending December 31,

2017	1,569
2018	1,488
2019	1,230
2020	498
2021	245

6. DEBT

The Company's 1.00% convertible senior notes (the "Notes"), issued in August 2013, consisted of the following components as of June 30, 2016 and December 31, 2015 (in thousands):

	June 30, 2016	December 31, 2015
Equity component, net of equity issue costs	\$60,222	\$ 60,222
Liability component:		
Principal	287,500	287,500
Less: unamortized debt discount	(28,488)	(34,712)
Less: unamortized debt issuance costs	(2,662)	(3,301)
Net carrying amount	\$256,350	\$ 249,487

On January 1, 2016, the Company retrospectively adopted ASU No. 2015-03, Simplifying the Presentation of Debt Issuance Costs, which requires unamortized debt issuance costs to be presented as a reduction of the carrying amount of the related debt liability, similar to a debt discount. This resulted in the reclassification of \$3.3 million in unamortized debt issuance costs from other assets to 1.00% convertible senior notes on the Company's consolidated balance sheet as of December 31, 2015.

As of June 30, 2016 and December 31, 2015, the estimated fair value of the Notes was \$312.8 million and \$313.0 million, respectively. The Company considers this disclosure to be a Level 2 measurement because it is based upon a recent modeled bid-price quote for the Notes, reflecting activity in a less than active market. As of June 30, 2016, the Notes are not convertible. Based on the closing price of the Company's common stock on June 30, 2016 of \$46.87, which is less than the Notes' initial conversion price of \$58.05, the if-converted value of the Notes was less than their principal amount.

As of June 30, 2016, the remaining life of the Notes was approximately 25 months.

Table of Contents

MEDIDATA SOLUTIONS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

The following table sets forth total interest expense recognized related to the Notes for the three and six months ended June 30, 2016 and 2015 (in thousands except percentages):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Contractual interest expense	\$719	\$719	\$1,438	\$1,438
Amortization of debt issuance costs	320	320	639	639
Amortization of debt discount	3,135	2,953	6,224	5,862
Total	\$4,174	\$3,992	\$8,301	\$7,939

Effective interest rate 6.5 % 6.5 % 6.5 %

7. STOCK-BASED COMPENSATION

For the three and six months ended June 30, 2016 and 2015, the components of stock-based compensation expense were as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Stock options	\$998	\$1,689	\$2,053	\$2,836
Restricted stock awards and units	6,263	5,082	11,741	9,303
Performance-based restricted stock units	2,235	6,377	4,869	11,582
Employee stock purchase plan	951	988	2,034	2,085
Total stock-based compensation	\$10,447	\$14,136	\$20,697	\$25,806

Stock Options

The fair value of each stock option granted during the three and six months ended June 30, 2016 and 2015 was estimated on the date of grant using a Black-Scholes pricing model with the following weighted-average assumptions:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Expected volatility	44 %	43 %	43 %	43 %
Expected life	6 years	6 years	6 years	6 years
Risk-free interest rate	1.40 %	1.69 %	1.45 %	1.69 %
Dividend yield	—	—	—	—

The following table summarizes the status of the Company's stock options as of June 30, 2016, and changes during the six months then ended (in thousands, except per share data):

	Number of Shares	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Outstanding at January 1, 2016	1,940	\$ 21.73		
Granted	117	39.53		
Exercised	(108)	15.74		
Forfeited	(18)	43.12		
Expired	(3)	13.99		
Outstanding at June 30, 2016	1,928	\$ 22.96	5.64	\$ 48,010
Exercisable at June 30, 2016	1,502	\$ 16.61	4.79	\$ 46,206

Vested and expected to vest at June 30, 2016	1,872	\$ 22.08	5.54	\$ 47,782
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- 13 -

Table of Contents

MEDIDATA SOLUTIONS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

The weighted-average grant-date fair value of stock options granted during the three months ended June 30, 2016 and 2015 was \$17.34 and \$22.11, respectively. The weighted-average grant-date fair value of stock options granted during the six months ended June 30, 2016 and 2015 was \$17.14 and \$22.11, respectively. The total intrinsic value of stock options exercised during the three months ended June 30, 2016 and 2015 was \$2.3 million and \$5.1 million, respectively. The total intrinsic value of stock options exercised during the six months ended June 30, 2016 and 2015 was \$3.0 million and \$12.4 million, respectively. The total fair value of stock options vested during the three months ended June 30, 2016 and 2015 was \$1.3 million and \$1.1 million, respectively. The total fair value of stock options vested during the six months ended June 30, 2016 and 2015 was \$2.1 million and \$2.4 million, respectively. As of June 30, 2016, there was \$7.6 million in unrecognized compensation cost related to all non-vested stock options granted. This cost is expected to be recognized over a weighted-average remaining period of 2.62 years.

Restricted Stock Awards and Units

The following table summarizes the status of the Company's nonvested time-based RSAs and RSUs as of June 30, 2016, and changes during the six months then ended (in thousands, except per share data):

	Number of Shares	Weighted- Average Grant-Date Fair Value
Nonvested at January 1, 2016	1,355	\$ 40.82
Granted	1,027	36.38
Vested	(453)	33.16
Forfeited	(105)	41.78
Nonvested at June 30, 2016	1,824	\$ 40.17

The total fair value of RSAs and RSUs vested during the three months ended June 30, 2016 and 2015 was \$7.5 million and \$18.2 million, respectively. The total fair value of RSAs and RSUs vested during the six months ended June 30, 2016 and 2015 was \$16.9 million and \$27.2 million, respectively. As of June 30, 2016, there was \$63.0 million in unrecognized compensation cost related to all nonvested RSAs and RSUs granted. This cost is expected to be recognized over a weighted-average remaining period of 2.89 years.

Performance-Based Restricted Stock Units

No PBRsUs were granted during the three months ended June 30, 2016 and 2015.

During the six months ended June 30, 2016, the Company granted 223 thousand PBRsUs ("2016 TSR PBRsUs") with market conditions based on the Company's total stockholder return ("TSR") relative to that of the Russell 2000 Index over the three-year period ending December 31, 2018, vesting in full in three years with the number of PBRsUs ultimately earned ranging from zero to 200% of the target number of shares. The Company also granted an insignificant number of other PBRsUs with performance conditions based on achievement of certain individual performance objectives.

During the six months ended June 30, 2015, the Company granted 242 thousand PBRsUs ("2015 TSR PBRsUs") with market conditions based on the Company's TSR relative to that of the Russell 2000 Index over the one-, two-, and three-year periods ending December 31, 2015, 2016, and 2017, respectively, vesting in equal parts over three years with the number of PBRsUs ultimately earned ranging from zero to 200% of the target number of shares.

The fair value of PBRsUs with market conditions granted during the six months ended June 30, 2016 and 2015 was estimated as of the date of grant using a Monte Carlo valuation model with the following weighted average assumptions:

	2016 TSR PBRsUs	2015 TSR PBRsUs
Expected volatility - Medidata	48 %	46 %
Expected volatility - comparison index	43 %	41 %
Expected life	2.84 years	2.88 years

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Risk-free interest rate	0.91	%	0.99	%
Dividend yield	—		—	

- 14 -

Table of Contents

MEDIDATA SOLUTIONS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

The following table summarizes the status of the Company's PBRsUs based upon expected performance as of June 30, 2016, and changes during the six months then ended (in thousands, except per share data):

	Revenue	TSR	Other	Total Number of Shares	Weighted-Average Grant Date Fair Value
Nonvested at January 1, 2016	136	347	7	490	\$ 49.86
Granted (based on performance at 100% of targeted levels)	—	223	16	239	46.45
Adjustment related to expected performance	—	22	—	22	60.64
Vested	(136)	(164)	—	(300)	38.47
Forfeited	—	(6)	—	(6)	68.61
Nonvested at June 30, 2016	—	422	23	445	\$ 55.99

No PBRsUs vested during the three months ended June 30, 2016 and 2015. The total fair value of PBRsUs vested during the six months ended June 30, 2016 and 2015 was \$10.0 million and \$10.6 million, respectively. As of June 30, 2016, there was \$14.8 million in unrecognized compensation cost related to all nonvested PBRsUs. This cost is expected to be recognized over a weighted-average remaining period of 2.05 years.

Employee Stock Purchase Plan

The fair value shares granted under the Company's employee stock purchase plan ("ESPP") was estimated using a Black-Scholes pricing model with the following weighted-average assumptions:

	Three Months Ended June 30,		Six Months Ended June 30,		
	2016	2015	2016	2015	
Expected volatility	46	% 51	% 46	% 51	%
Expected life	1.68 years	1.56 years	1.68 years	1.56 years	
Risk-free interest rate	0.58	% 0.35	% 0.58	% 0.35	%
Dividend yield	—	—	—	—	

During the three and six months ended June 30, 2016, 89 thousand shares were purchased under the ESPP at a weighted-average price of \$38.35. During the three and six months ended June 30, 2015, 86 thousand shares were purchased under the ESPP at a weighted-average price of \$37.93. As of June 30, 2016, there was \$1.4 million in unrecognized compensation cost related to ESPP shares. This cost is expected to be recognized over a weighted-average remaining period of 1.22 years.

During the second quarter of 2016, the Company increased the number of shares reserved under the ESPP from 0.3 million to 0.8 million.

Modifications

Net incremental expense associated with modifications to stock options, RSAs, RSUs, and PBRsUs during the three and six months ended June 30, 2016 was \$0.1 million and \$0.3 million in the aggregate, respectively, and immaterial on an individual basis.

During the three and six months ended June 30, 2015, net incremental expense associated with modifications was \$1.3 million as a result of the Company's CFO transition in the second quarter of 2015.

8. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

The changes in the balances of each component of accumulated other comprehensive loss during the six months ended June 30, 2016 are as follows (in thousands):

Foreign currency translation adjustments	Unrealized gains (losses) on marketable securities	Total
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Balance as of January 1, 2016	\$ (2,405) \$ (999) \$(3,404)
Other comprehensive income, net of tax	(652) 1,126	474
Balance as of June 30, 2016	\$ (3,057	) \$ 127	\$(2,930)

- 15 -

Table of Contents

MEDIDATA SOLUTIONS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

For the six months ended June 30, 2016 and 2015, reclassifications of items from accumulated other comprehensive loss to net income were insignificant.

9. EARNINGS PER SHARE

Basic earnings per share is calculated by dividing net income available to common stockholders by the weighted-average number of shares outstanding during the period. The holders of unvested RSAs do not have nonforfeitable rights to dividends or dividend equivalents and therefore, such unvested awards do not qualify as participating securities and are excluded from the basic earnings per share calculation. Diluted earnings per share includes the determinants of basic net income per share and, in addition, gives effect to the potential dilution that would occur if securities or other contracts to issue common stock are exercised, vested, or converted into common stock, unless they are antidilutive. As the Company intends to settle the principal amount of the Notes (see Note 6, "Debt") in cash upon conversion, their dilutive effect, if any, will be reflected in diluted earnings per share using the treasury stock method, which considers the number of shares that would be required to settle any premium above principal at the average stock price for the period. During the three and six months ended June 30, 2016 and 2015, the average price of the Company's stock was below the conversion price of the Notes; as a result the Notes were not dilutive for these periods.

A reconciliation of the numerator and denominator of basic earnings per share and diluted earnings per share for the three and six months ended June 30, 2016 and 2015 is shown in the following table (in thousands, except per share data):

	Three Months Ended June 30, 2016		Six Months Ended June 30, 2015	
Numerator				
Net income	\$4,937	\$1,513	\$10,785	\$1,670
Denominator				
Denominator for basic earnings per share:				
Weighted average common shares outstanding	55,392	53,647	55,255	53,453
Denominator for diluted earnings per share:				
Dilutive potential common shares:				
Stock options	744	916	746	953
Restricted stock awards and units	324	450	403	518
Performance-based restricted stock units	144	1,178	190	1,126
Weighted average common shares outstanding with assumed conversion	56,604	56,191	56,594	56,050
Basic earnings per share	0.09	\$0.03	\$0.20	\$0.03
Diluted earnings per share	0.09	\$0.03	\$0.19	\$0.03

Antidilutive common stock equivalents excluded from the calculation of diluted earnings per share for the three and six months ended June 30, 2016 and 2015 are shown in the following table (in thousands, except per share data):

	Three Months Ended June 30, 2016		Six Months Ended June 30, 2015	
Stock options	613	362	634	440
Restricted stock awards and units	15	9	35	24
Performance-based restricted stock units	—	1	2	1
Employee stock purchase plan	233	220	233	220
Total	861	592	904	685

10. INCOME TAXES

The Company had approximately \$4.3 million and \$8.1 million of gross unrecognized tax benefits as of June 30, 2016 and December 31, 2015, respectively. The \$3.8 million decrease in gross unrecognized tax benefits during the six months ended June 30, 2016 was primarily the result of the Internal Revenue Service ("IRS") concluding its examination of the Company's 2012 federal income tax return. The Company redetermined its unrecognized tax benefits, including similar items in open tax years, based on the agreed adjustments with the IRS and other associated information and analysis, resulting in a discrete item in the period.

- 16 -

Table of Contents

MEDIDATA SOLUTIONS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

11. COMMITMENTS AND CONTINGENCIES

Legal Matters — The Company is subject to legal proceedings and claims that arise in the ordinary course of business and records an estimated liability for these matters when an adverse outcome is considered to be probable and can be reasonably estimated. Although the outcome of the litigation cannot be predicted with certainty and some lawsuits, claims, or proceedings may be disposed of unfavorably to the Company, which could materially and adversely affect its financial condition or results of operations, the Company does not believe that it is currently a party to any material legal proceedings.

On March 4, 2011, DataTrak International, Inc. ("DataTrak") filed a complaint for alleged patent infringement against the Company in DataTrak International v. Medidata Solutions, C.A. No. 1:11-cv-00458 in the U.S. District Court for the Northern District of Ohio (the "NDOH District Court"). The complaint asserted infringement of U.S. Patent No. 7,464,087 (the "'087 Patent"). On November 6, 2015, the NDOH District Court granted the Company's motion to dismiss DataTrak's complaint on the grounds that the '087 Patent is invalid for lack of patentable subject matter under 35 U.S.C. §101. On January 5, 2016, the Company entered into a settlement agreement resolving all related aspects of its litigation with DataTrak. No monies were exchanged.

Contractual Warranties — The Company typically provides contractual warranties to its customers covering its solutions and services. To date, any refunds provided to customers have been immaterial.

Change in Control Agreements — The Company has change in control agreements with its chief executive officer and certain other executive officers. These agreements provide for payments to be made to such officers upon involuntary termination of their employment by the Company without cause or by such officers for good reason as defined in the agreements, within a period of 2 years following a change in control. The agreements provide that, upon a qualifying termination event, such officers will be entitled to (a) a severance payment equal to the officer's base salary plus target bonus amount; (b) continuation of health benefits for 12 months; and (c) immediate vesting of remaining unvested equity awards, unless otherwise specified in the equity award agreements.

Table of Contents

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

This Quarterly Report on Form 10-Q contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended ("Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended ("Exchange Act"). Forward-looking statements reflect our current estimates, expectations and projections about our future results, performance, prospects and opportunities. Forward-looking statements include, among other things, the information concerning our possible future results of operations, business and growth strategies, financing plans, expectations that regulatory developments or other matters will not have a material adverse effect on our business or financial condition, our competitive position and the effects of competition, the projected growth of the industry in which we operate, the benefits and synergies to be obtained from our completed and any future acquisitions, and statements of management's goals and objectives, and other similar expressions concerning matters that are not historical facts. Words such as "may," "should," "could," "would," "predicts," "potential," "continue," "expects," "anticipates," "future," "intends," "plans," "believes," "estimates," "appears," "projects" and similar expressions, as well as statements in the future tense, identify forward-looking statements. Forward-looking statements should not be read as a guarantee of future performance or results, and will not necessarily be accurate indications of the times at, or by which, such performance or results will be achieved. Forward-looking information is based on information available at the time and/or management's good faith belief with respect to future events, and is subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in the statements. Important factors that could cause such differences include, but are not limited to the factors discussed under the "Risk Factors" section included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015 filed with the Securities and Exchange Commission ("SEC") on February 29, 2016.

The following is a discussion and analysis of our financial condition and results of operations and should be read together with our condensed consolidated financial statements and related notes to condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q and our audited consolidated financial statements and related notes to audited consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015.

Overview

We are the leading global provider of cloud-based solutions for life sciences, transforming clinical development through our applications and data analytics. We are committed to powering smarter treatments and healthier people while advancing the competitive and scientific goals of our life sciences customers worldwide. Our industry-leading technology platform, the Medidata Clinical Cloud®, is the primary technology solution powering clinical trials for 17 of the world's top 25 global pharmaceutical companies, bringing new levels of productivity and quality to the clinical testing of promising medical treatments, from study design and planning through execution, management and reporting.

Subscription revenues, which are comprised of fees from clients accessing our cloud-based solutions, represented 85% of our revenues for the first half of 2016. Professional services revenues, which are derived from the provision of services that help our clients realize higher value in their clinical development processes, represented 15% of total revenues.

Second Quarter and First Half 2016 Highlights

- Total revenues increased 17% and 15% compared with the second quarter and first half of 2015, respectively.
- Professional services revenues increased 26% and 15% compared with the second quarter and first half of 2015, respectively. For the second quarter of 2016, professional services revenues were a record \$17.9 million.
- Operating income increased 124% and 110% compared with the second quarter and first half of 2015, respectively.
- Cash flow from operations for the first half of 2016 was \$38.0 million, compared with \$28.7 million for the first half of 2015.
- We added 132 new clients during the first half of 2016, including 32 from the recently acquired Intelemage business, 45% more than the number of customers added during the same period last year.

Table of Contents

Results of Operations

Revenues

Revenues for the three- and six-month periods ended June 30, 2016 and 2015 were as follows:

	Three Months Ended June 30,			Six Months Ended June 30,		
	2016	2015	Change	2016	2015	Change
Revenues:	(amounts in thousands except percentages)					
Subscription	\$96,760	\$83,929	15.3 %	\$186,728	\$162,678	14.8 %
Percentage of total revenues	84.4	% 85.6	%	85.3	% 85.4	%
Professional services	17,850	14,155	26.1 %	32,120	27,846	15.3 %
Percentage of total revenues	15.6	% 14.4	%	14.7	% 14.6	%
Total revenues	\$114,610	\$98,084	16.8 %	\$218,848	\$190,524	14.9 %

Year-over-year growth in subscription revenues was driven by major platform customer wins and strong sales growth in our risk-based monitoring, mobile and patient data capture, and randomization solutions among both new and existing customers. We added 96 and 132 clients in the three and six months ended June 30, 2016, respectively, to end the first half of the year with 711 customers, up 32% compared with June 30, 2015. Of these customers, 32 were gained in connection with our acquisition of Intelimage. As of June 30, 2016, we had remaining subscription backlog of \$178 million, representing the future contract value of outstanding arrangements, billed and unbilled, to be recognized during the rest of 2016, excluding renewals. This reflects an increase of 13% compared with remaining subscription backlog of \$158 million at June 30, 2015.

Year-over-year growth in professional services revenues was driven by increased demand from new and existing customers for implementation and other professional services. Large implementation projects during the second quarter resulted in record professional services revenues for the three months ended June 30, 2016.

Cost of Revenues

Cost of revenues for the three- and six-month periods ended June 30, 2016 and 2015 was as follows:

	Three Months Ended June 30,			Six Months Ended June 30,		
	2016	2015	Change	2016	2015	Change
Cost of revenues:	(amounts in thousands except percentages)					
Subscription	\$15,600	\$12,354	26.3 %	\$29,929	\$23,827	25.6 %
Percentage of total revenues	13.6	% 12.6	%	13.7	% 12.5	%
Professional services	13,457	10,557	27.5 %	23,796	21,260	11.9 %
Percentage of total revenues	11.8	% 10.8	%	10.8	% 11.2	%
Total cost of revenues	\$29,057	\$22,911	26.8 %	\$53,725	\$45,087	19.2 %
Percentage of total revenues	25.4	% 23.4	%	24.5	% 23.7	%

Gross profit	\$85,553	\$75,173	13.8 %	\$165,123	\$145,437	13.5 %
Gross margin	74.6	% 76.6	%	75.5	% 76.3	%

Subscription margin	83.9	% 85.3	%	84.0	% 85.4	%
Professional services margin	24.6	% 25.4	%	25.9	% 23.7	%

Year-over-year growth in cost of subscription revenues was primarily due to higher vendor software and third-party cloud hosting costs resulting from increased platform activity and platform enhancements, as well as investment in hosting infrastructure, including our data center in Europe. Additionally, our business growth drove a year-over-year headcount increase of roughly 13%, resulting in increased personnel-related costs. Subscription gross margin decreased to 83.9% and 84.0% for the three and six months ended June 30, 2016, respectively, compared with 85.3% and 85.4% for the three and six months ended June 30, 2015, respectively, as a result of these investments.

Year-over-year growth in cost of professional services revenues was largely due to increased personnel-related and consulting costs in response to growing demand for platform adoption and other professional services.

Table of Contents

Overall gross margin decreased to 74.6% and 75.5% for the three and six months ended June 30, 2016, respectively, compared with 76.6% and 76.3% for the three and six months ended June 30, 2015, respectively, driven by lower subscription margins and a greater mix of professional services in the second quarter and first half of 2016.

Operating Costs and Expenses

Operating costs and expenses for the three- and six-month periods ended June 30, 2016 and 2015 were as follows:

	Three Months Ended June 30,			Six Months Ended June 30,		
	2016	2015	Change	2016	2015	Change
Operating costs and expenses:	(amounts in thousands except percentages)					
Research and development	\$28,267	\$22,519	25.5 %	\$56,495	\$44,430	27.2 %
Percentage of total revenues	24.6 %	23.0 %		25.8 %	23.3 %	
Sales and marketing	27,609	25,724	7.3 %	53,067	50,042	6.0 %
Percentage of total revenues	24.1 %	26.2 %		24.3 %	26.3 %	
General and administrative	18,531	21,943	(15.5)%	37,777	42,512	(11.1)%
Percentage of total revenues	16.2 %	22.3 %		17.3 %	22.3 %	
Total operating costs and expenses	\$74,407	\$70,186	6.0 %	\$147,339	\$136,984	7.6 %
Percentage of total revenues	64.9 %	71.5 %		67.4 %	71.9 %	
Operating income	\$11,146	\$4,987	123.5 %	\$17,784	\$8,453	110.4 %
Operating margin	9.7 %	5.1 %		8.1 %	4.4 %	

The year-over-year growth in research and development expenses was primarily driven by net increases in personnel-related costs of \$4.5 million and \$8.8 million for the three and six months ended June 30, 2016, respectively, resulting from a 25% year-over-year headcount increase due to our hiring of skilled engineering talent. Increased fees for specialized consultants and outside experts of \$1.1 million and \$2.8 million for the three and six months ended June 30, 2016, respectively, associated with investments to enhance the value of our platform, were also a contributor.

The year-over-year growth in sales and marketing expenses was predominantly driven by net increases in personnel-related costs of \$1.2 million and \$4.8 million for the three and six months ended June 30, 2016, respectively, resulting from a 10% year-over-year headcount increase to expand our global sales organization and partner team, partially offset by a decrease in stock-based compensation expense due to certain material equity awards becoming fully vested during the fourth quarter of 2015 and first quarter of 2016.

The year-over-year decline in general and administrative expenses was largely driven by decreases in stock-based compensation expense of \$3.3 million and \$4.6 million for the three and six months ended June 30, 2016, respectively, associated with certain material equity awards becoming fully vested during the fourth quarter of 2015 and first quarter of 2016, partially offset by net increases in other non-equity personnel-related costs associated with an 11% year-over-year headcount increase. Lower legal and professional fees also impacted expenses.

In the first quarter of 2016, the state of New Jersey enacted legislation that allows us to recognize grants associated with the New Jersey Business Employment Incentive Program, which incentivizes businesses to locate and expand jobs in New Jersey. The benefits of these grants were applied against the underlying salary expense relating to our employees in research and development, sales and marketing, and general and administrative functions in New Jersey in the first quarter, reducing total operating expenses by \$2.3 million for the six months ended June 30, 2016.

Income Taxes

Provision for income taxes for the three- and six-month periods ended June 30, 2016 and 2015 was as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Provision for income taxes	\$2,961	\$55	\$492	\$(94)

(amounts in thousands)

The difference between our effective tax rate and the U.S. statutory rate is primarily due to the relative mix of pre-tax income subject to tax in various jurisdictions, non-deductible expenses, share-based compensation, change in tax reserves, and U.S. tax incentives. The benefit from U.S. credits and incentives will likely continue to have a favorable impact on our overall effective tax rate in the future. In the first quarter of 2016, the Internal Revenue Service concluded its examination of our 2012 federal income

- 20 -

Table of Contents

tax return. As a result, we redetermined our unrecognized tax benefits for previously recorded reserves, resulting in a material discrete item in the period.

Our quarterly tax provision and quarterly estimate of the annual effective tax rate are subject to significant variation due to several factors, including variability in accuracy of predictions of pre-tax book and taxable income or loss, the mix of jurisdictions to which they relate, and changes in tax law in the jurisdictions in which we conduct business. We expect our annual effective tax rate for 2016 to be closer to the U.S. statutory rate.

Critical Accounting Estimates

Our condensed consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States of America, which require us to make estimates and assumptions about certain items and future events. These estimates inherently involve levels of subjectivity and judgment and may have a material impact on our financial condition or results of operations. Accordingly, actual results could differ from those estimates. Our critical accounting estimates as of June 30, 2016 are the same as those at December 31, 2015, which are included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015. Also see Note 1, "Summary of Significant Accounting Policies," to the condensed consolidated financial statements included in this Quarterly Report on Form 10-Q, which discusses our significant accounting policies.

Effects of Recently Issued Accounting Pronouncements on Current and Future Trends

Refer to Note 1, "Summary of Significant Accounting Policies — Recently Issued Accounting Pronouncements," to the condensed consolidated financial statements included in this Quarterly Report on Form 10-Q. No other recently issued accounting pronouncements have had or are expected to have a material impact on our current or future trends.

Liquidity and Capital Resources

We believe that our cash flows from operations, cash and cash equivalents, and highly liquid marketable securities will be sufficient to satisfy the anticipated cash requirements associated with our existing operations for the foreseeable future. Our future capital expenditures and other cash requirements could be higher than we currently expect as a result of various factors, including any expansion of our business that we may complete. The following table presents selected financial information related to our liquidity and capital resources as of June 30, 2016 and December 31, 2015, and for the six-month periods ended June 30, 2016 and 2015 (in thousands):

	June 30, 2016	December 31, 2015
Cash, cash equivalents, and marketable securities	\$482,872	\$ 478,729
Furniture, fixtures and equipment, net	54,683	51,043
1.00% convertible senior notes, net	256,350	249,487
	Six months ended June 30,	
	2016	2015
Cash provided by operating activities	\$37,998	\$ 28,745
Cash provided by investing activities	(19,838)	(20,613)
Cash used in financing activities	(3,773)	(4,300)

Cash, Cash Equivalents, and Marketable Securities

For the six months ended June 30, 2016, cash provided by operating activities of \$38.0 million was driven by strong customer collections, partially offset by operating expenditures and cash interest expense on our 1.00% convertible senior notes. Cash used in investing activities of \$19.8 million consisted of a net payment of \$17.1 million to acquire Intelimage, LLC ("Intelimage") and cash payments for capital expenditures of \$13.4 million, partially offset by net sales of marketable securities of \$10.6 million. Cash used in financing activities of \$3.8 million resulted primarily from the acquisition of \$13.8 million of treasury stock in connection with equity plan participant tax withholdings upon vesting, partially offset by equity plan proceeds of \$5.1 million.

For the six months ended June 30, 2015, cash provided by operating activities of \$28.7 million was driven by strong customer collections, partially offset by operating expenditures and cash interest expense on our 1.00% convertible senior notes. Cash used in investing activities of \$20.6 million consisted of net purchases of marketable securities of

\$14.2 million and cash payments for capital expenditures of \$5.9 million. Cash used in financing activities of \$4.3 million resulted primarily from the acquisition of \$16.2 million of treasury stock in connection with equity plan participant tax withholdings upon vesting, partially offset by equity plan proceeds of \$8.2 million.

- 21 -

Table of Contents**Capital Assets**

We acquired \$9.8 million in capital assets during the six months ended June 30, 2016, predominantly related to our new office spaces in Iselin, NJ and San Francisco, CA, as well as investments in our new European data center. On a cash basis, our capital expenditures during the six months ended June 30, 2016 were \$13.4 million and included payments for previously accrued assets. We expect to acquire approximately \$6 to \$8 million in additional capital assets during the remainder of 2016, primarily related to data center investments.

Debt

In August 2013, we issued \$287.5 million of 1.00% convertible senior notes (the "Notes") that will mature on August 1, 2018 unless earlier repurchased or converted. Upon conversion, we will deliver to the holders of the Notes either cash, shares of our common stock, or a combination thereof, at our election. If converted, we intend to settle the principal amount of the Notes in cash and any excess conversion value beyond the principal amount in shares of our common stock, cash, or a combination thereof. As of June 30, 2016, the Notes are not convertible and therefore are classified as long term liabilities in our condensed consolidated balance sheet. For further information, see Note 6, "Debt," to the condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Contractual Obligations, Commitments and Contingencies

The table below summarizes the aggregate effect that our material contractual obligations as of June 30, 2016 are expected to have on our cash flows in the periods indicated (in thousands):

	Payments Due by Period				
	Total	Remainder 2017 - of 2016	2018	2019 - 2020	2021 and later
Contractual Obligations:					
1.00% convertible senior notes	\$287,500	\$ —	\$287,500	\$—	\$—
Interest payments on convertible senior notes	7,188	1,438	5,750	—	—
Operating lease obligations	114,665	7,400	28,580	28,852	49,833
Total	\$409,353	\$ 8,838	\$321,830	\$28,852	\$49,833

Legal Matters

For a discussion of legal matters, refer to Note 11, "Commitments and Contingencies — Legal Matters," to the condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Item 3. Quantitative and Qualitative Disclosures about Market Risk**Interest Rate Sensitivity**

We had unrestricted cash and cash equivalents totaling \$64.3 million at June 30, 2016. Our cash equivalents are invested principally in commercial paper and money market funds. We also had investments in marketable securities, which we classify as available-for-sale securities, totaling \$418.5 million at June 30, 2016. Substantially all of our marketable securities are fixed income securities, which primarily consist of high quality commercial paper and corporate bonds. Due to the short duration, laddered maturities, and high credit ratings of these investments, we believe that we do not have any material exposure to changes in the fair value of our investment portfolio as a result of changes in interest rates.

Exchange Rate Sensitivity

Our non-U.S. operating subsidiaries are located in the United Kingdom, Japan, South Korea, Singapore, and China. The functional currencies for these subsidiaries are the respective local currencies. We have exposure to exchange rate movements that are captured in translation adjustments for these subsidiaries. Such cumulative adjustments are recorded in accumulated other comprehensive income (loss). The estimated potential translation loss for the six months ended June 30, 2016 resulting from a hypothetical 10% adverse change in quoted foreign currency exchange rates amounted to \$1.4 million.

We bill our customers primarily in U.S. dollars. Any billings in foreign currency are billed from Medidata Solutions, Inc., a U.S. entity, and are mainly denominated in Euros, British pounds sterling, Australian dollars, and Canadian dollars. Our foreign currency-denominated costs and expenses are mainly incurred by our non-U.S. operating subsidiaries. Accordingly, future changes in currency exchange rates will impact our future operating results. For the

six months ended June 30, 2016, 4.8% of our revenues and 14.1% of our expenses were denominated in foreign currencies. Gains and losses arising from transactions denominated in foreign currencies are recorded as foreign currency transaction gains (losses) in general and administrative expenses on our condensed consolidated statements of operations and amounted to \$(0.2) million for the six months ended June 30, 2016.

- 22 -

Inflation

We do not believe that inflation has had a material impact on our business, financial condition, or results of operations.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

As of June 30, 2016, an evaluation was performed with the participation of our Disclosure Committee and our management, including the Chief Executive Officer ("CEO") and the Chief Financial Officer ("CFO") of the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). Disclosure controls and procedures are controls and procedures that are designed to ensure that information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures are also designed to ensure that such information is accumulated and communicated to our management, including our CEO and CFO, as appropriate to allow timely decisions regarding required disclosure. Based upon such evaluation, our CEO and CFO have concluded that our disclosure controls and procedures were effective as of June 30, 2016.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during our most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Table of Contents**PART II - OTHER INFORMATION****Item 1. Legal Proceedings**

See Note 11, "Commitments and Contingencies – Legal Matters," to the condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for a description of current legal proceedings.

Item 1A. Risk Factors

We operate in a rapidly changing environment that involves a number of risks, some of which are beyond our control. The risks described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015 are those that we believe are the material risks we face. There have been no material changes in our risk factors since our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, except that the following language shall be added to the end of the first bullet point in the list of risks identified in the in the risk factor titled Our revenues derived from international operations are subject to risks that could have an adverse effect on our results of operations: "and the United Kingdom referendum to withdraw from the European Union ('Brexit');". Any of those disclosed risk factors or additional risks and uncertainties not presently known to us, or that we currently deem immaterial, could have a material adverse effect on our business, financial condition and results of operations.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds**Purchases of Equity Securities by the Issuer and Affiliated Purchasers**

From time to time, we grant nonvested restricted stock awards, restricted stock units, or performance-based restricted stock units to our employees pursuant to the terms of our Second Amended and Restated 2009 Long-Term Incentive Plan ("2009 Plan"). Under the provisions of the 2009 Plan, unless otherwise elected, participants fulfill their related income tax withholding obligation by having shares withheld at the time of vesting. On the date of vesting, we divide the participant's income tax withholding obligation in dollars by the closing price of our common stock and withhold the resulting number of vested shares.

A summary of our repurchases of shares of our common stock for the three months ended June 30, 2016 is as follows:

	Total Number of Shares Purchased (1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet be Purchased under the Plans or Programs
April 1 – April 30, 2016	2,041	\$ 46.56	—	—
May 1 – May 31, 2016	64,486	\$ 42.97	—	—
June 1 – June 30, 2016	2,163	\$ 46.32	—	—
Total	68,690	\$ 43.18	—	—

(1) Represents the number of shares acquired as payment by employees of applicable statutory minimum withholding taxes owed upon vesting of restricted stock awards, restricted stock units, or performance-based restricted stock units granted under the 2009 Plan.

Item 3. Defaults upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

The information required by this Item 6 is set forth on the exhibit index that follows the signature page of this report.

Table of Contents

Signature

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.

MEDIDATA SOLUTIONS, INC.

By: /s/ ROUVEN BERGMANN

Rouven Bergmann

Chief Financial Officer (Principal Financial and Principal Accounting Officer)

Date: August 4, 2016

- 25 -

Table of Contents

EXHIBIT INDEX

Exhibit No.	Description	Form	Incorporated by Reference File No.	Date Filed
3.1	Fifth Amended and Restated Certificate of Incorporation of Medidata Solutions, Inc.	10-Q	001-34387	8/7/2014
3.2	Certificate of Amendment of Fifth Amended and Restated Certificate of Incorporation of Medidata Solutions, Inc., dated June 2, 2016	8-K	001-34387	6/7/2016
31.1*	Certification of CEO pursuant to Rule 13a-14(a) or Rule 15d-14(a) under the Exchange Act			
31.2*	Certification of CFO pursuant to Rule 13a-14(a) or Rule 15d-14(a) under the Exchange Act			
32.1**	Certification of CEO pursuant to Rules 13a-14(b) or 15d-14(b) under the Exchange Act and 18 U.S.C. 1350			
32.2**	Certification of CFO pursuant to Rules 13a-14(b) or 15d-14(b) under the Exchange Act and 18 U.S.C. 1350			
101.INS*	XBRL Instance Document			
101.SCH*	XBRL Taxonomy Extension Schema Document			
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document			
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document			
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document			
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document			

* Filed herewith.

**Furnished herewith.