ABIOMED INC
Form 10-Q
August 01, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 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 001-09585

ABIOMED, INC.

(Exact name of registrant as specified in its charter)

DELAWARE	04-2743260
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

22 CHERRY HILL DRIVE

DANVERS, MASSACHUSETTS 01923

(Address of principal executive offices, including zip code)

(978) 646-1400

(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 website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 229.405 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.:

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

As of July 28, 2017, 44,102,166 shares of the registrant's common stock, $.01 par value, were outstanding.

ABIOMED, INC. AND SUBSIDIARIES

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NOTE REGARDING COMPANY REFERENCES

Throughout this report on Form 10-Q (the "Report"), "Abiomed, Inc.," the "Company," "we," "us" and "our" refer to ABIOMED Inc. and its consolidated subsidiaries.

NOTE REGARDING TRADEMARKS

ABIOMED, IMPELLA, IMPELLA 2.5, IMPELLA 5.0, IMPELLA LD, IMPELLA CP and IMPELLA RP are trademarks of ABIOMED, Inc., and are registered in the U.S. and certain foreign countries. AB5000 and cVAD REGISTRY are trademarks of ABIOMED, Inc. RECOVER is a trademark of Abiomed Europe GmbH, a subsidiary of ABIOMED, Inc., and is registered in certain foreign countries.

PART 1. FINANCIAL INFORMATION

ITEM 1: FINANCIAL STATEMENTS
ABIOMED, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS

(Unaudited)

(in thousands, except share data)

	June 30, 2017	March 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$43,970	$39,040
Short-term marketable securities	207,441	190,908
Accounts receivable, net	53,557	54,055
Inventories	36,926	34,931
Prepaid expenses and other current assets	9,021	8,024
Total current assets	350,915	326,958
Long-term marketable securities	37,669	47,143
Property and equipment, net	92,804	87,777
Goodwill	33,199	31,045
In-process research and development	15,487	14,482
Long-term deferred tax assets, net	113,457	34,723
Other assets	8,686	8,286
Total assets	$652,217	$550,414
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$12,784	$20,620
Accrued expenses	35,695	37,703
Deferred revenue	9,697	10,495
Current portion of capital lease obligation	829	799
Total current liabilities	59,005	69,617
Other long-term liabilities	588	3,251
Contingent consideration	9,418	9,153
Long-term deferred tax liabilities	837	783
Capital lease obligation, net of current portion	15,325	15,539
Total liabilities	85,173	98,343
Commitments and contingencies (Note 10)		
Stockholders' equity:		
Class B Preferred Stock, $.01 par value	—	—
Authorized - 1,000,000 shares; Issued and outstanding - none		
Common stock, $.01 par value	441	437

Authorized - 100,000,000 shares; Issued - 45,791,680 shares at June 30, 2017 and 45,249,281 shares at March 31, 2017		
Outstanding - 44,080,941 shares at June 30, 2017 and 43,673,286 shares at March 31, 2017		
Additional paid in capital	580,017	565,962
Retained earnings (accumulated deficit)	65,661	(46,959)
Treasury stock at cost - 1,710,739 shares at June 30, 2017 and 1,575,995 shares at March 31, 2017	(64,567)	(46,763)
Accumulated other comprehensive loss	(14,508)	(20,606)
Total stockholders' equity	567,044	452,071
Total liabilities and stockholders' equity	$652,217	$550,414

The accompanying notes are an integral part of the condensed consolidated financial statements (unaudited)

ABIOMED, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(Unaudited)

(in thousands, except per share data)

	For the Three Months Ended June 30,	
	2017	2016
Revenue:		
Product revenue	$ 132,431	$ 102,989
Funded research and development	37	6
	132,468	102,995
Costs and expenses:		
Cost of product revenue	21,862	15,070
Research and development	16,931	15,660
Selling, general and administrative	60,597	51,032
	99,390	81,762
Income from operations	33,078	21,233
Other income (expense):		
Investment income, net	635	269
Other income (expense), net	79	(77)
	714	192
Income before income taxes	33,792	21,425
Income tax (benefit) provision	(3,582)	8,515
Net income	$ 37,374	$ 12,910
Basic net income per share	$ 0.85	$ 0.30
Basic weighted average shares outstanding	43,895	42,811
Diluted net income per share	$ 0.82	$ 0.29
Diluted weighted average shares outstanding	45,608	45,178

The accompanying notes are an integral part of the condensed consolidated financial statements (unaudited)

ABIOMED, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(Unaudited)

(in thousands)

	For the Three Months Ended June 30,	
	2017	2016
Net income	$37,374	$12,910
Other comprehensive gain (loss):		
Foreign currency translation gains (losses)	6,153	(1,699)
Net unrealized (losses) gains on marketable securities	(55)	150
Other comprehensive gain (loss)	6,098	(1,549)
Comprehensive income	$43,472	$11,361

The accompanying notes are an integral part of the condensed consolidated financial statements (unaudited)

ABIOMED, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(Unaudited)

(in thousands)

	For the Three Months Ended June 30,	
	2017	2016
Operating activities:		
Net income	$37,374	$12,910
Adjustments required to reconcile net income to net cash provided by operating activities:		
Depreciation expense	2,463	1,406
Bad debt expense	(42)	(31)
Stock-based compensation	8,656	8,397
Write-down of inventory	510	708
Excess tax benefit from stock-based awards	—	(1,041)
Deferred tax provision	(3,830)	7,000
Change in fair value of contingent consideration	265	176
Changes in assets and liabilities:		
Accounts receivable	795	1,517
Inventories	(1,302)	(3,393)
Prepaid expenses and other assets	(915)	7
Accounts payable	(4,391)	(145)
Accrued expenses and other liabilities	(2,436)	(952)
Deferred revenue	(853)	(179)
Net cash provided by operating activities	36,294	26,380
Investing activities:		
Purchases of marketable securities	(73,626)	(67,318)
Proceeds from the sale and maturity of marketable securities	66,622	47,090
Purchase of other investment	(400)	—
Purchases of property and equipment	(9,804)	(5,099)
Net cash used for investing activities	(17,208)	(25,327)
Financing activities:		
Proceeds from the exercise of stock options	3,555	2,770
Excess tax benefit from stock-based awards	—	1,041
Taxes paid related to net share settlement of vesting of stock awards	(17,805)	(15,033)
Principal payments on capital lease obligation	(184)	—
Net cash used for financing activities	(14,434)	(11,222)
Effect of exchange rate changes on cash	278	212
Net increase in cash and cash equivalents	4,930	(9,957)
Cash and cash equivalents at beginning of period	39,040	48,231

Cash and cash equivalents at end of period	$43,970	$38,274
Supplemental disclosure of cash flow information:		
Cash paid for income taxes	$479	$420
Cash paid for interest on capital lease obligation	130	—
Supplemental disclosure of non-cash investing and financing activities:		
Property and equipment in accounts payable and accrued expenses	1,872	996

The accompanying notes are an integral part of the condensed consolidated financial statements (unaudited)

ABIOMED, INC. AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

(In thousands, except share data)

Note 1. Nature of Business

Abiomed, Inc. (the "Company" or "Abiomed") is a provider of mechanical circulatory support devices and offers a continuum of care to heart failure patients. The Company develops, manufactures and markets proprietary products that are designed to enable the heart to rest, heal and recover by improving blood flow and/or performing the pumping function of the heart. The Company's products are used in the cardiac catheterization lab, or cath lab, by interventional cardiologists and in the heart surgery suite by heart surgeons for patients who are in need of hemodynamic support prophylactically or emergently before, during or after angioplasty or heart surgery procedures.

Note 2. Basis of Preparation and Summary of Significant Accounting Policies

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles, or GAAP, for interim financial reporting and in accordance with Article 10 of Regulation S-X. Accordingly, they do not include all of the information and note disclosures required by GAAP for complete financial statements. These statements should be read in conjunction with the 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 that has been filed with the Securities and Exchange Commission (the "SEC").

In the opinion of management, the accompanying unaudited condensed consolidated financial statements include all normal and recurring adjustments that are necessary for a fair presentation of results for the interim periods presented. The results of operations for any interim period may not be indicative of results for the full fiscal year or any other subsequent period.

There have been no changes in the Company's significant accounting policies for the three months ended June 30, 2017 as compared to the significant accounting policies described in the Company's Annual Report on Form 10-K for the fiscal year ended March 31, 2017 that has been filed with the SEC.

New Accounting Pronouncements Adopted

Effective April 1, 2017, the Company adopted the Financial Accounting Standards Board ("FASB") standard update ASU 2016-09, "Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting" ("ASU 2016-09") which simplifies several aspects of the accounting for share-based payment transactions, including income tax consequences, recognition of stock compensation award forfeitures, classification of awards as either equity or liabilities, the calculation of diluted shares outstanding and classification on the statement of cash flows.

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The following table summarizes the most significant impacts of the new accounting guidance for the three months ended June 30, 2017:

Description of Change:	Impact of Change Upon Adoption on April 1, 2017 and for the Three Months Ended June 30, 2017:	Adoption Method:
The new standard eliminates the requirement that excess tax benefits be realized through a reduction in income taxes payable before a company can recognize them in the statement of operations.	As a result, on April 1, 2017, the Company recorded a cumulative-effect adjustment to increase retained earnings and deferred tax assets by $76.4 million for excess tax benefits not previously recognized.	Modified-retrospective (required)
Excess tax benefits related to restricted stock unit vestings or stock option exercises are recorded through the statement of operations.	The income tax benefit for the three months ended June 30, 2017, included excess tax benefits of $16.8 million. These recognized excess tax benefits resulted from restricted stock units that vested or stock options that were exercised during the three months ended June 30, 2017.	Prospective (required)
Excess tax benefits related to restricted stock unit vestings or stock option exercises are classified as operating cash flows instead of financing cash flows.	Increase in cash flow from operating activities and decrease in cash flow from financing activities by approximately $16.8 million for the three months ended June 30, 2017. The statement of cash flows for prior periods have not been adjusted.	Prospective (elected)
Calculation of diluted weighted average shares outstanding under the treasury method no longer assume that tax benefits related to stock-based awards are used to repurchase common stock.	The Company excluded the related tax benefits when applying the treasury stock method for computing diluted shares outstanding on a prospective basis as required by ASU 2016-09.	Prospective (required)
An accounting policy election can be made to reduce stock-based compensation expense for forfeitures as they occur instead of	The Company made an accounting policy election to account for forfeitures as they occur with the change applied on a modified retrospective basis with a cumulative effect adjustment on April 1, 2017 to increase additional paid-in capital by $1.8 million, increase deferred tax assets by $0.7 million and decrease retained earnings by $1.1 million. The Company elected to make this	Modified-retrospective (elected)

estimating forfeitures that are expected to occur.	accounting policy change to simplify the accounting for stock-based compensation and believes this method provides a more accurate reflection of periodic stock based compensation cost. Prior to the adoption of this accounting standard, the Company estimated at grant the likelihood that the award would ultimately vest, and revised the estimate, if necessary, in future periods if the actual forfeiture rate differed.	
Cash payments to tax authorities for shares withheld to meet employee tax withholding requirements on restricted stock units are classified as financing cash flow instead of operating cash flow.	No change since the Company has historically presented these amounts as a financing activity. Prior to ASU 2016-09, U.S. GAAP has not specified how these types of transactions should be classified in the statement of cash flows.	N/A

See table below for the changes in beginning stockholders' equity as a result of this implementation.

	Common Stock		Treasury Stock					
	Number of shares	Par value	Number of shares	Amount	Additional Paid in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
Balance, March 31, 2017	43,673,286	$ 437	1,575,995	$ (46,763)	$ 565,962	$ (46,959)	$ (20,606)	$ 452,071
Cumulative effect of adoption of new accounting standard					1,835	75,246		77,081
Balance, April 1, 2017	43,673,286	$ 437	1,575,995	$ (46,763)	$ 567,797	$ 28,287	$ (20,606)	$ 529,152

Recent Accounting Pronouncements

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers to provide updated guidance on revenue recognition. This new standard will replace most of the existing revenue recognition guidance in U.S. GAAP when it becomes effective and permits the use of either the retrospective or cumulative effect transition method. ASU 2014-09 requires a company to recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. In doing so, companies may need to use more judgment and make more estimates than under the current accounting guidance. These may include identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. The guidance also requires expanded disclosures relating to the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. Additionally, qualitative and quantitative disclosures are required about customer contracts, significant judgments and changes in judgments, and assets recognized from the costs to obtain or fulfill a contract. The Company is assessing all of the potential impacts of the revenue recognition guidance. Although the Company has not yet completed its assessment of the new revenue recognition guidance, the Company believes that the new revenue recognition guidance generally supports the recognition of revenue at a point-in-time for product sales and over an extended period of time for preventative maintenance service agreements, which is consistent with its current revenue recognition model. The Company does anticipate that the new revenue standard will result in expanded financial statement disclosures relating to the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. As the Company completes its evaluation of this new accounting standard, new information may arise that could change the Company’s current understanding of the impact to revenue and expense recognized and financial statement disclosures. Additionally, the Company will continue to monitor industry activities and any additional guidance provided by regulators, standards setters, or the accounting profession and adjust the Company’s assessment and implementation plans accordingly, if required. ASU 2014-09 will become effective for the Company beginning in fiscal 2019.

In February 2016, the FASB issued ASU 2016-02, Leases. This guidance requires an entity to recognize lease liabilities and a right-of-use asset for all leases on the balance sheet and to disclose key information about the entity's leasing arrangements. ASU 2016-02 is effective for annual reporting periods beginning after December 15, 2018, including interim periods within that reporting period, with earlier adoption permitted. ASU 2016-02 must be adopted using a modified retrospective approach for all leases existing at, or entered into after the date of initial adoption, with an option to elect to use certain transition relief. The Company is currently in the process of evaluating its lessee arrangements to determine the impact of ASU 2016-02 amendment on its consolidated financial statements. This evaluation includes a review of the Company’s existing leasing arrangements on its facilities. ASU 2016-02 will become effective for the Company beginning in fiscal 2020.

Note 3. Net Income Per Share

Basic net income per share is computed by dividing net income by the weighted average number of common shares outstanding during the period. Diluted net income per share is computed by dividing net income by the weighted average number of dilutive common shares outstanding during the period. Diluted shares outstanding are calculated by adding to the weighted average shares outstanding any potential dilutive securities outstanding for the period. Potential dilutive securities include stock options, restricted stock units, performance-based stock awards and shares to be purchased under the Company’s employee stock purchase plan. The Company’s basic and diluted net income per share for the three months ended June 30, 2017 and 2016 were as follows (in thousands, except per share data):

	For the Three Months Ended June 30,	
	2017	2016
Basic Net Income Per Share		
Net income	$ 37,374	$ 12,910
Weighted average shares used in computing basic net income per share	43,895	42,811
Net income per share - basic	$ 0.85	$ 0.30

	For the Three Months Ended June 30,	
	2017	2016
Diluted Net Income Per Share		
Net income	$ 37,374	$ 12,910
Weighted average shares used in computing basic net income per share	43,895	42,811
Effect of dilutive securities	1,713	2,367
Weighted average shares used in computing diluted net income per share	45,608	45,178
Net income per share - diluted	$ 0.82	$ 0.29

For the three months ended June 30, 2017, approximately 54,000 shares underlying out-of-the-money stock options, were excluded in the computation of diluted earnings per share because their effect would have been anti-dilutive. Also, approximately 80,000 restricted shares in the three months ended June 30, 2017, respectively, related to performance-based awards for which milestones have not been met, were not included in the computation of diluted earnings per share.

For the three months ended June 30, 2016, approximately 48,000 shares underlying out-of-the-money stock options, were excluded in the computation of diluted earnings per share because their effect would have been anti-dilutive. Also, approximately 241,000 restricted shares in the three months ended June 30, 2016, related to performance-based awards for which milestones had not been met were not included in the computation of diluted earnings per share.

Note 4. Marketable Securities and Fair Value Measurements

Marketable Securities

The Company’s marketable securities are classified as available-for-sale securities and, accordingly, are recorded at fair value. The difference between amortized cost and fair value is included in stockholders’ equity.

The Company’s marketable securities at June 30, 2017 and March 31, 2017 are invested in the following:

	Amortized	Gross Unrealized	Gross Unrealized	Fair Market

	Cost (in $000's)	Gains	Losses	Value
June 30, 2017:				
Short-term U.S. Treasury mutual fund securities	$36,138	$ —	$ (20)	$36,118
Short-term government-backed securities	113,432	—	(138)	113,294
Short-term corporate debt securities	58,053	1	(25)	58,029
Long-term government-backed securities	34,970	1	(24)	34,947
Long-term corporate debt securities	2,718	4	—	2,722
	$245,311	$ 6	$ (207)	$245,110

	Amortized Cost (in $000's)	Gross Unrealized Gains	Gross Unrealized Losses	Fair Market Value
March 31, 2017				
Short-term U.S. Treasury mutual fund securities	$45,199	$ —	$ (13)	$45,186
Short-term government-backed securities	90,199	1	(87)	90,113
Short-term corporate debt securities	55,465	—	(31)	55,434
Long-term U.S. Treasury mutual fund securities	1,998	—	(3)	1,995
Long-term government-backed securities	43,484	5	(18)	43,471
Long-term corporate debt securities	1,853	—	(1)	1,852
	$238,198	$ 6	$ (153)	$238,051

Fair Value Hierarchy

Fair value is defined as the price that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three categories:

Level 1: Quoted market prices in active markets for identical assets or liabilities.

Level 2: Observable market-based inputs or unobservable inputs that are corroborated by market data.

Level 3: Unobservable inputs that are not corroborated by market data.

Level 1 primarily consists of financial instruments whose values are based on quoted market prices such as exchange-traded instruments and listed equities.

Level 2 includes financial instruments that are valued using models or other valuation methodologies. These models are primarily industry-standard models that consider various assumptions, including time value, yield curve, volatility factors, prepayment speeds, default rates, loss severity, current market and contractual prices for the underlying financial instruments, as well as other relevant economic measures. Substantially all of these assumptions are observable in the marketplace, can be derived from observable data or are supported by observable levels at which transactions are executed in the marketplace.

Level 3 is comprised of unobservable inputs that are supported by little or no market activity. Financial assets are considered Level 3 when their fair values are determined using pricing models, discounted cash flows, or similar techniques, and at least one significant model assumption or input is unobservable.

The following table presents the Company’s financial instruments recorded at fair value in the condensed consolidated balance sheets, classified according to the three categories described above:

June 30, 2017:	Level 1	Level 2	Level 3	Total
	(in $000's)			
Assets				
Short-term U.S. Treasury mutual fund securities	$—	$36,118	$—	$36,118
Short-term government-backed securities	—	113,294	—	113,294
Short-term corporate debt securities	—	58,029	—	58,029
Long-term government-backed securities	—	34,947	—	34,947
Long-term corporate debt securities	—	2,722	—	2,722
Liabilities				
Contingent consideration	—	—	9,418	9,418

March 31, 2017:	Level 1	Level 2	Level 3	Total
	(in $000's)			
Assets				
Short-term U.S. Treasury mutual fund securities	$—	$45,186	$—	$45,186

Short-term government-backed securities	—	90,113	—	90,113
Short-term corporate debt securities	—	55,434	—	55,434
Long-term U.S. Treasury mutual fund securities	—	1,995	—	1,995
Long-term government-backed securities	—	43,471	—	43,471
Long-term corporate debt securities	—	1,852	—	1,852
Liabilities				
Contingent consideration	—	—	9,153	9,153

The Company has determined that the estimated fair value of its investments in U.S. Treasury mutual fund securities, government-backed securities, and corporate debt securities are reported as Level 2 financial assets as they are not exchange-traded instruments.

The Company's financial liabilities consisted of contingent consideration potentially payable related to the acquisition of ECP Entwicklungsgesellschaft mbH ("ECP") and AIS GmbH Aachen Innovative Solutions ("AIS"), in July 2014. The Company acquired ECP for $13.0 million in cash, with additional potential payouts totaling $15.0 million based on the achievement of certain clinical and regulatory and revenue-based milestones. These potential milestone payments may be made, at the Company's option, by a combination of cash or Abiomed common stock. The Company uses a combination of an income approach, based on various revenue and cost assumptions and applying a probability to each outcome and a Monte-Carlo valuation model. For the clinical and regulatory milestone, probabilities were applied to each potential scenario and the resulting values were discounted using a rate that considers weighted average cost of capital as well as a specific risk premium associated with the riskiness of the earn out itself, the related projections, and the overall business. The revenue-based milestone is valued using a Monte-Carlo valuation model, which simulates estimated future revenues during the earn out-period using management's best estimates. Projected revenues are based on our most recent internal operational budgets and long-range strategic plans.

This liability is reported as Level 3 as the estimated fair value of the contingent consideration related to the acquisition of the ECP requires significant management judgment or estimation and is calculated using the following valuation methods:

	Fair Value at June 30, 2017 (in $000's)	Valuation Methodology	Significant Unobservable Input	Weighted Average (range, if applicable)
Clinical and regulatory milestone	$ 5,453	Probability weighted income approach	Projected fiscal year of milestone payments	2019 to 2022
			Discount rate	2.6% to 3.3%
			Probability of occurrence	Probability adjusted level of 40% for the base case scenario and 5% to 20% for various upside and downside scenarios
Revenue-based milestone	3,965	Monte Carlo simulation model	Projected fiscal year of milestone payments	2023 to 2035
			Discount rate	18%
			Expected volatility for forecasted revenues	50%
	$ 9,418			

The following table summarizes the change in fair value, as determined by Level 3 inputs, of the contingent consideration for the three months ended June 30, 2017 and 2016:

	For the Three Months Ended June 30,	
	2017	2016
	(in $000's)	
Level 3 liabilities, beginning balance	$9,153	$7,563
Additions	—	—
Payments	—	—
Change in fair value	265	176
Level 3 liabilities, ending balance	$9,418	$7,739

The change in fair value of the contingent consideration was primarily due to the passage of time on the fair value measurement of milestones related to the ECP acquisition. Adjustments associated with the change in fair value of contingent consideration are included in research and development expenses in the Company’s condensed consolidated statements of operations. Significant increases or decreases in any of the probabilities of success or changes in expected timelines for achievement of any of these milestones could result in a significantly higher or lower fair value of the liability. The fair value of the contingent consideration at

each reporting date is updated by reflecting the changes in fair value reflected in the Company's statement of operations. There is no assurance that any of the conditions for the milestone payments will be met.

Other Investments

The Company periodically makes investments in private medical device companies that focus on heart failure and heart pump technologies. The aggregate carrying amount of the Company's other investments was $7.6 million and $7.2 million at June 30, 2017 and March 31, 2017, respectively, and is classified within other assets in the unaudited condensed consolidated balance sheets. These investments are accounted for using the cost method and are measured at fair value only if there are identified events or changes in circumstances that may have a significant adverse effect on the fair value of these investments.

In July 2017, the Company made an additional $6.0 million investment in one of the private medical device companies noted above and will record this transaction in the quarter ending September 30, 2017.

Note 5. Property and Equipment

The components of property and equipment are as follows:

	June 30, 2017	March 31, 2017
Land	$4,326	$4,046
Building and building improvements	12,146	10,900
Capital lease asset	16,784	16,784
Leasehold improvements	34,962	34,854
Machinery and equipment	31,340	27,989
Furniture and fixtures	6,211	3,899
Construction in progress	10,075	9,257
Total cost	115,844	107,729
Less accumulated depreciation	(23,040)	(19,952)
	$92,804	$87,777

In August 2016, the Company entered into a new lease agreement for its existing corporate headquarters in Danvers, Massachusetts (see Note 10). The Company recorded $16.8 million for this lease as a capital lease asset with depreciation expense being recorded on a straight line basis over 15 years.

In December 2016, the Company entered into a purchase and sale agreement to acquire its existing European headquarters in Aachen, Germany, consisting of 33,000 square feet of space. Pursuant to the purchase and sale agreement, the Company acquired the property in February 2017. The acquisition cost for the land and building was

approximately $12.6 million, with $4.0 million being recorded to land and $8.6 million being recorded to the building and building improvements.

Note 6. Goodwill and In-Process Research and Development

The carrying amount of goodwill at June 30, 2017 and March 31, 2017 was $33.2 million and $31.0 million, respectively, and has been recorded in connection with the Company's acquisition of Impella Cardiosystems AG ("Impella Cardiosystems"), in May 2005 and ECP and AIS in July 2014. The goodwill activity is as follows:

	(in $000's)
Balance at March 31, 2017	$31,045
Foreign currency translation impact	2,154
Balance at June 30, 2017	$33,199

The Company evaluates goodwill and in-process research and development ("IPR&D") assets at least annually at October 31, as well as whenever events or changes in circumstances suggest that the carrying amount may not be recoverable. The Company has no accumulated impairment losses on goodwill or IPR&D assets.

The carrying amount of IPR&D assets at June 30, 2017 and March 31, 2017 was $15.5 million and $14.5 million, respectively, and has been recorded in conjunction with the Company's acquisition of ECP and AIS, in July 2014. The estimated fair value of IPR&D assets at the acquisition date was determined using a probability-weighted income approach, which discounts expected future cash flows to present value. The projected cash flows from the expandable catheter pump technology were based on certain key assumptions, including estimates of future revenue and expenses, taking into account the stage of development of the technology at the acquisition date and the time and resources needed to complete development. The Company used a discount rate of 21.5% and cash flows that have been probability adjusted to reflect the risks of product commercialization, which the Company believes are appropriate and representative of market participant assumptions.

The carrying value of the Company's IPR&D assets and the change in the balance for the three months ended June 30, 2017 are as follows:

	(in $000's)
Balance at March 31, 2017	$14,482
Foreign currency translation impact	1,005
Balance at June 30, 2017	$15,487

Note 7. Accrued Expenses

Accrued expenses consist of the following:

	June 30, 2017	March 31, 2017
	(in $000's)	
Employee compensation	$22,346	$23,290
Professional, legal and accounting fees	3,464	2,019
Sales and income taxes	3,112	3,180
Research and development	2,362	2,349
Marketing	1,356	1,827
Warranty	853	717
Accrued capital expenditures	430	2,300
Other	1,772	2,021
	$35,695	$37,703

Employee compensation consists primarily of accrued bonuses, accrued commissions and accrued employee benefits at June 30, 2017 and March 31, 2017.

Note 8. Stock-Based Compensation

The following table summarizes stock-based compensation expense by financial statement line item in the Company's condensed consolidated statements of operations for the three months ended June 30, 2017 and 2016:

	For the Three Months Ended June 30,	
	2017	2016
	(in $000's)	
Cost of product revenue	$359	$299
Research and development	1,339	1,255
Selling, general and administrative	6,958	6,843
	$8,656	$8,397

Stock Options

The following table summarizes the stock option activity for the three months ended June 30, 2017:

	Options (in thousands)	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (in thousands)
Outstanding at beginning of period	1,646	$ 32.09	5.46	
Granted	123	134.24		
Exercised	(223)	15.92		
Cancelled and expired	(22)	109.07		
Outstanding at end of period	1,524	$ 41.62	5.78	$ 154,937
Exercisable at end of period	1,147	$ 22.95	4.76	$ 138,019
Options vested and expected to vest at end of period	1,487	$ 40.93	5.72	$ 152,210

The aggregate intrinsic value of options exercised was $26.0 million for the three months ended June 30, 2017. The total fair value of options that vested during the three months ended June 30, 2017 was $3.6 million.

The remaining unrecognized stock-based compensation expense for unvested stock option awards at June 30, 2017 was approximately $12.7 million, net of forfeitures, and the weighted-average period over which this cost will be recognized is 2.7 years.

The Company estimates the fair value of each stock option granted at the grant date using the Black-Scholes option valuation model. The weighted average grant-date fair values and weighted average assumptions used in the calculation of fair value of options granted during the three months ended June 30, 2017 and 2016 was as follows:

	For the Three Months Ended June 30,	
	2017	2016
Weighted average grant-date fair value	$49.04	$40.33
Valuation assumptions:		
Risk-free interest rate	1.84 %	1.38 %
Expected option life (years)	4.07	4.13
Expected volatility	43.7 %	49.8 %

Restricted Stock Units

The following table summarizes activity of restricted stock units for the three months ended June 30, 2017:

	Number of Shares (in thousands)	Weighted Average Grant Date Fair Value (per share)
Restricted stock units at beginning of period	1,056	$ 80.50
Granted	271	$ 134.53
Vested	(319)	$ 50.32
Forfeited	(56)	$ 99.37
Restricted stock units at end of period	952	$ 104.90

The remaining unrecognized compensation expense for outstanding restricted stock units, including performance and market-based awards, as of June 30, 2017 was $47.5 million and the weighted-average period over which this cost will be recognized is 2.4 years.

Performance-Based Awards

In May 2017, performance-based awards of restricted stock units for the potential issuance of approximately 159,000 shares of common stock were issued to certain executive officers and employees, all of which vest upon achievement of prescribed service milestones by the award recipients and performance milestones by the Company. As of June 30, 2017, the Company is recognizing compensation expense based on the probable outcome related to the prescribed performance targets on the outstanding awards.

Note 9. Income Taxes

The Company recorded an income tax benefit of $3.6 million for the three months ended June 30, 2017 as compared to an income tax provision of $8.5 million for the three months ended June 30, 2016. As discussed further in “Note 2. Basis of Presentation and Summary of Significant Accounting Policies,” the Company adopted ASU 2016-09 in the first quarter of fiscal 2018. ASU 2016-09 requires excess tax benefits and shortfalls to be recognized in the income tax provision as discrete items in the period when restricted stock units vest or stock option exercises occur, whereas previously such income tax effects were recorded as part of additional paid-in capital only when the related tax deduction resulted in a reduction of current income taxes payable. On April 1, 2017, the Company recorded a cumulative-effect adjustment to increase retained earnings and deferred tax assets by $76.4 million for excess tax benefits not previously recognized. The adoption of ASU 2016-09 also resulted in excess tax benefits associated with stock-based awards of $16.8 million being recognized as an income tax benefit for three months ended June 30, 2017. These recognized excess tax benefits resulted from restricted stock units that vested or stock options that were exercised during the three months ended June 30, 2017. The amount of future excess tax benefits or shortfalls will likely fluctuate from period to period based on the price of the Company’s stock, the number of restricted stock unit vestings or stock option exercises, and the fair value assigned to such stock-based awards under U.S. GAAP. Accordingly, the Company’s expects that the adoption of ASU 2016-09 will result in more volatility to its effective income tax rate, net income and earnings per share in future periods.

The estimated annual effective income tax rate is based upon estimated income before income taxes for the year, the geographical composition of the estimated income before taxes and estimated permanent differences. The estimated annual effective income tax rate can fluctuate and may differ from the actual tax rate recognized in fiscal 2018 for various reasons, including estimates of income before taxes, tax legislation, permanent differences, discrete items, and any adjustments between tax provision calculations and filed tax returns.

The significant differences between the statutory tax rate and effective tax rate for the three months ended June 30, 2017 and 2016 were as follows:

	For the Three Months Ended June 30,			
	2017		2016	
Statutory income tax rate	35.0	%	35.0	%
Increase resulting from:				
Excess tax benefits from stock-based awards	(49.8)		—	

Credits	(1.2)	(1.3)
State taxes, net	3.5	3.4
Permanent differences	1.8	2.7
Other	0.1	(0.1)
Effective tax rate	(10.6)%	39.7 %

The Company and its subsidiaries are subject to U.S. federal income tax, as well as income tax of multiple state and foreign jurisdictions. Fiscal years 2012 through 2017 remain open to examination in Germany and Abiomed Europe GmbH, the Company's main operating subsidiary in Germany is currently being audited for fiscal years 2012 through 2015. In July 2017, the Company was notified by the Internal Revenue Service, or IRS, that it has selected our federal tax return for fiscal 2016 for examination. All tax years remain subject to examination by the IRS and state tax authorities, because the Company has net operating loss and tax credit carryforwards which may be utilized in future years to offset taxable income, those years may also be subject to review by relevant taxing authorities if the carryforwards are utilized.

Note 10. Commitments and Contingencies

Commitments

Leases

The Company's corporate headquarters is located in Danvers, Massachusetts. This facility encompasses most of the Company's U.S. operations, including research and development, manufacturing, sales and marketing and general and administrative departments. In August 2016, the Company entered into a new lease agreement to expand its existing corporate headquarters which includes 163,560 square feet of space. The initial term of the lease agreement commenced on August 12, 2016 and terminates on August 31, 2026. The Company has options to extend the initial term for three separate periods of five years each. In connection with the entry into this new lease agreement, the Company terminated the previously existing lease for the facility dated February 24, 2014, as amended by the First Amendment to Lease dated April 30, 2015 and the Second Amendment to Lease effective January 1, 2016.

The lease agreement provides the Company with an exclusive option to purchase the building on or before August 31, 2022, subject to certain conditions set forth therein. In addition, the lease agreement grants the Company a one-time right of first offer to purchase the building from September 1, 2022 until August 31, 2026, if the lessor decides to sell the building or receives an offer to purchase the building from a third-party buyer. The Danvers, Massachusetts building lease is being recorded as a capital lease. The payments under the lease are accounted for as interest and principal payments over 15 years.

A summary of future lease commitments related to the capital lease obligation is as follows:

	Capital Lease (in $000s)
Fiscal 2018, remaining portion	$ 997
Fiscal 2019	1,349
Fiscal 2020	1,349
Fiscal 2021	1,373
Fiscal 2022	1,390
Thereafter	13,746
Total minimum lease payments	20,204
Less amounts representing interest	(4,050)
Total capital lease obligation	$ 16,154
Less current capital lease obligation	(829)
Capital lease obligation, net of current portion	$ 15,325

In February 2017, the Company entered into a lease agreement for an additional office space in Danvers, Massachusetts which expires in July 2022. The annual rent expense for this lease agreement is estimated to be $0.2 million.

In September 2016, the Company entered into a lease agreement in Berlin, Germany which commences in May 2017 and expires in May 2024. The annual rent expense for this lease agreement is estimated to be $0.3 million.

The Company also entered into a lease agreement in October 2016 through September 2021 for an office in Tokyo, Japan which houses administrative, regulatory and training personnel as we prepare for commercial launch in Japan. The annual rent expense for this lease agreement is estimated to be $0.9 million.

License Agreements

In April 2014, the Company entered into an exclusive license agreement for the rights to certain optical sensor technologies in the field of cardio-circulatory assist devices. The Company made a $1.5 million upfront payment upon execution of the agreement and could make additional payments of up to $4.5 million upon the achievement of certain development milestones. The Company paid approximately $0.8 million in development milestones which are included with research and development expenses for the fiscal year ended March 31, 2017.

Contingencies

From time to time, the Company is involved in legal and administrative proceedings and claims of various types. In some actions, the claimants seek damages, as well as other relief, which, if granted, would require significant expenditures. The Company records a liability in its consolidated financial statements for these matters when a loss is known or considered probable and the amount can be reasonably estimated. The Company reviews these estimates each accounting period as additional information is known and adjusts the loss provision when appropriate. If a matter is both probable to result in liability and the amount of loss can be reasonably estimated, the Company estimates and discloses the possible loss or range of loss. If the loss is not probable or cannot be reasonably estimated, a liability is not recorded in its consolidated financial statements.

On April 25, 2014, the Company received an administrative subpoena from the Boston regional office of the United States Department of Health and Human Services, or HHS, Office of Inspector General requesting materials relating to the Company's reimbursement of employee expenses and remuneration to healthcare providers from July 2012 through December 2012, in connection with a civil investigation under the False Claims Act (the "FCA Investigation"). Subsequently, the Company received Civil Investigative Demands from the U.S. Attorney's Office for the District of Massachusetts that collectively sought additional information relating to this matter for the time period of January 1, 2011 through September 14, 2016. The Company continues to cooperate fully with the government in this investigation and is exploring various ways to resolve this matter with the government. The Company is not able to predict what action, if any, might be taken in the future as a result of the investigation, or the potential impact on its financial position.

Thoratec Corporation, or Thoratec, has challenged a number of Company owned patents in Europe in connection with the launch of their HeartMate PHP medical device, or PHP, in Europe. These actions all relate to Thoratec's ability to manufacture and sell their PHP product in Europe. These actions do not relate to the Company's ability to manufacture or sell its Impella line of devices. Thoratec is currently a subsidiary of Abbott Laboratories since January 2017.

In October 2012, Thoratec filed a notice of opposition in the European Patent Office, or EPO, to a Company owned European patent covering a 'pigtail' feature on a blood pump. In October 2014, the EPO dismissed Thoratec's opposition, and in December 2014, Thoratec filed a notice of appeal. The appeal was heard on January 20, 2017 by the EPO Board of Appeals. The Company prevailed at the EPO Board of Appeals and succeeded in upholding the patent in an amended form. The approved amended claim covers the combination of a blood pump with a pigtail and an expanding suction basket and funnel feature. The Board of Appeals is the highest level at the EPO so there are no further challenges to this patent possible at the EPO by Thoratec.

In December 2014, Thoratec filed a nullity suit in the German Federal Patent Court against a German "pigtail" patent owned by the Company with a flexible extension feature, and auxiliary pigtail, basket and funnel features. The validity hearing was held in November 2016 and the Federal Patent Court found the patent invalid. The Company is appealing this decision.

In August 2015, Thoratec filed a nullity action in the German Federal Patent Court against two Company owned patents covering a "magnetic clutch" feature. These magnetic clutch patents were acquired by the Company in July 2014, in connection with its acquisition of ECP and AIS. The validity hearing for the magnetic clutch patents was held in June 2017. The patents were upheld in an amended form to focus on the structure and interaction of the magnets in the clutch. The unamended claims are under appeal.

In September 2015, the Company filed counterclaims in the magnetic clutch action in Germany asserting that the PHP product infringes the two magnetic clutch patents and the two pigtail patents. The infringement trial has been stayed, pending resolution of the German nullity actions.

In February 2017, Thoratec filed an opposition against a Company patent acquired from ECP and AIS relating to a housing structure for an expandable pump. The deadline for the Company to respond to the opposition is in September 2017.

In December 2015, the Company received a letter from Maquet Cardiovascular LLC, or Maquet, a subsidiary of the Getinge Group, and maker of the intra-aortic balloon pump, asserting that the Company's Impella devices infringe certain claims having guidewire, lumen and sensor features which were in two Maquet patents and one pending patent application in the U.S. and elsewhere, and attached a draft litigation complaint and encouraged the Company to take a license from Maquet. In January 2016, the Company responded to Maquet stating that it believed that the cited claims were invalid and that its Impella devices did not infringe the cited patents. In May 2016, Maquet sent an additional letter notifying the Company that the pending U.S. patent application had been issued as a U.S. patent and repeated their earlier assertion and encouraged the Company to discuss taking a license from Maquet. The three patents expire September 2020, December 2020 and October 2021. On May 19, 2016, the Company filed suit in U.S. District Court for the District of Massachusetts, or D. Mass., against Maquet seeking a declaratory judgment that the Company's Impella devices do not infringe Maquet's cited patent rights.

In August 2016, Maquet sent another letter to the Company identifying four new U.S. continuation patent filings with claims that Maquet alleges are infringed by the Company's Impella devices. Of the four U.S. continuation applications, one issued as a patent on January 17, 2017, one issued as a patent on February 7, 2017, one issued as a patent on March 21, 2017, and one has recently begun substantive prosecution. The three issued new patents will expire in September 2020 and if the fourth continuation application issues it will also expire in September 2020. In September 2016, Maquet filed a response to the Company's suit in D. Mass., including various counterclaims alleging that the Company's Impella 2.5, Impella CP, Impella 5.0, and Impella RP heart pumps infringe certain claims of the three original issued U.S. patents. On June 15, 2017, Maquet filed a motion for leave to amend its infringement counterclaims to add the three additional U.S. continuation patents mentioned above and to file various false advertising, unfair competition claims under state law and under the Lanham Act, and a trademark cancellation in the pending case. Maquet's amended complaint and counterclaim, like those it originally filed, seek injunctive relief and monetary damages in the form of a reasonable royalty, with three times the amount for alleged willful infringement. The amended complaint admits that Maquet's currently commercially available products do not embody the claims of the asserted patents. On July 21, 2017, the Court granted the motion in part, allowing the three additional continuation patents to be added to the case, and denied the motion to add the false advertising, Lanham Act claims, and the trademark cancellation claims. Discovery in the case is in its early stages, and the case is ongoing and we cannot estimate what the potential outcome of these claims will be at this time. With regard to the six Maquet patents, in March and April 2017 the Company filed requests for inter partes review, or IPR, at the U.S. Patent & Trademark Office's Patent Trial and Appeals Board, or PTAB, asserting that the claims are invalid in view of prior art blood pump technology. The PTAB's decisions on whether to institute the IPRs are expected in September or October, 2017. On July 19, 2017, the Company filed a complaint in the United States District Court for the District of Massachusetts asserting false advertising claims under the Lanham Act and common law unfair competition claims regarding statements made about intra-aortic balloon pumps and/or Impella devices by various Maquet entities. Named as defendants are Getinge AB, Datascope Corp., Maquet Cardiovascular, LLC, Maquet Cardiovascular US Sales, LLC, d/b/a/ Maquet Medical Systems USA.

The Company is unable to estimate a potential liability with respect to the legal matters noted above. There are numerous factors that make it difficult to meaningfully estimate possible loss or range of loss at this stage of the legal proceedings, including that the FCA Investigation and patent disputes with Thoratec and Maquet remain either in relatively early stages, or there are significant factual and legal issues to be resolved and information obtained or rulings made during any lawsuits or investigations that could affect the methodology for calculation.

Note 11. Segment and Enterprise Wide Disclosures

The Company operates in one business segment—the research, development and sale of medical devices to assist or replace the pumping function of the failing heart. The Company's chief operating decision maker (determined to be the Chief Executive Officer) does not manage any part of the Company separately, and the allocation of resources and assessment of performance are based on the Company's consolidated operating results. International sales (sales outside the U.S. and primarily in Europe) accounted for 10% and 9% of total product revenue for each of the three months ended June 30, 2017 and 2016, respectively. Most of the Company's long-lived assets are located in the U.S. except for $26.4 million and $23.2 million at June 30, 2017 and March 31, 2017, respectively, which are located primarily in Germany.

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

Forward Looking Statements

This Report contains forward- looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, as amended. Any statements other than one conveying solely historical facts is a forward-looking statement. These forward-looking statements may be accompanied by words such as "anticipate," "believe," "estimate," "expect," "forecast," "intend," "may," "plan," "potential," "target," "will" and other words and terms of similar meaning. These forward-looking statements address various matters including, among others, future actions related to ongoing investigations and litigation and expenditures related thereto; the development and commercialization of new and existing products and anticipated costs, including research and development, sales and marketing and training costs associated with product development and commercialization; expected capital expenditures for the fiscal year ending March 31, 2018; commercial plans for our products into new markets such as Japan; demand and expected shipments of our products; anticipated shifts in the revenue mix associated with our products; our ability to increase revenue from our Impella® line of products and the sufficiency of revenue to fund future operations; the impact of market factors such as changes in interest rates, currency exchange rates on our securities and the fair value of our financial instruments; awards of performance and market-based restricted stock units; and the impact of ASU 2016-09 on our consolidated financial statements and disclosures. Each forward-looking statement in this Report is subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statement. Applicable risks and uncertainties include, among others, our inability to predict the outcome of investigations and litigation and associated expenses; possible delays in our research and development programs; our ability to obtain regulatory approvals and market our products, and uncertainties related to regulatory processes; greater government scrutiny and regulation of the medical device industry and our ability to respond to changing laws and regulations affecting our industry, including any reforms to the regulatory approval process administered by the U.S Food and Drug Administration, or FDA, and changing enforcement practices related thereto; the inability to manufacture products in commercial quantities at an acceptable cost; the acceptance by physicians and hospitals of our products; the impact of competitive products and pricing; uncertainties associated with future capital needs and the risks identified under Item 1A of Part I of our Annual Report on Form 10-K, for the year ended March 31, 2017, as well as the other information we file with the Securities and Exchange Commission. Readers are cautioned not to place considerable reliance on any forward-looking statements contained in this Report, which speak only as of the date of this Report. We undertake no obligation to update or revise these forward-looking statements whether as a result of new information, future events or otherwise, unless required by law. Our business is subject to substantial risks and uncertainties, including those referenced above. Investors, potential investors, and others should give careful consideration to these risks and uncertainties.

Overview

We are a leading provider of temporary mechanical circulatory support devices, and we offer a continuum of care to heart failure patients. We develop, manufacture and market proprietary products that are designed to enable the heart to rest, heal and recover by improving blood flow to the coronary arteries and end-organs and/or temporarily assisting the pumping function of the heart. Our products are used in the cardiac catheterization lab, or cath lab, by interventional cardiologists, the electrophysiology lab, the hybrid lab and in the heart surgery suite by heart surgeons. A physician may use our devices for patients who are in need of hemodynamic support prophylactically, urgently or emergently before, during or after angioplasty or heart surgery procedures. We believe that heart recovery is the optimal clinical outcome for a patient experiencing heart failure because it enhances the potential for the patient to go home with the patient's own native heart, facilitating the restoration of quality of life. In addition, we believe, that for the care of such patients, heart recovery is often the most cost-effective solution for the healthcare system.

Our strategic focus and the driver of the majority of our revenue growth is the market penetration of our family of Impella® heart pumps. The Impella device portfolio, which includes the Impella 2.5® Impella CP®, Impella RP®, Impella LD® and Impella 5.0® devices, has supported numerous patients worldwide. We expect that almost all of our product and service revenue in the near future will be from our Impella devices. Revenues from our non-Impella devices, largely focused on the AB5000 device used in the heart surgery suite, have been decreasing over the past several years and we are no longer selling the AB5000 as we have strategically shifted our sales and marketing efforts towards our Impella devices and the cath lab.

In March 2015, we received a Pre-Market Approval, or PMA, from the FDA for use of the Impella 2.5 device during elective and urgent high-risk percutaneous coronary intervention, or PCI, procedures. In December 2016, the FDA expanded this PMA approval in the U.S. to include the Impella CP device. With these PMA indications, the Impella 2.5 and Impella CP devices provide the only minimally invasive treatment options indicated for use during high-risk PCI procedures. In April 2016, the FDA approved a PMA supplement for our Impella 2.5, Impella CP, Impella 5.0 and Impella LD devices to provide treatment for ongoing cardiogenic shock that occurs following a heart attack or open heart surgery. The intent of the Impella system therapy is to reduce ventricular work and to provide the circulatory support necessary to allow heart recovery and early assessment of residual myocardial function.

Our Impella 2.5, Impella 5.0, Impella LD, Impella CP and Impella RP devices also have CE Mark approval and Health Canada approval, which allows us to market these devices in the European Union and Canada.

In September 2016, we received Pharmaceuticals and Medical Devices Agency, or PMDA, approval from the Japanese Ministry of Health, Labour & Welfare, or MHLW, for our Impella 2.5 and Impella 5.0 heart pumps to provide treatment of drug-resistant acute heart failure in Japan. In July 2017, we recently received approval from the MHLW for reimbursement on Impella 2.5 and 5.0 heart pumps and 10 physician societies in Japan have completed the hospital guidance document. Reimbursement in Japan for the Impella 2.5 and 5.0 is estimated to be equivalent to our average Impella sales price in the U.S. and commences in September 2017. We expect our first Japanese patient in September 2017 and anticipate a controlled Impella launch at a limited number of hospitals by the end of fiscal 2018. We do not expect to have any material revenue in Japan during fiscal 2018.

In May 2017, we announced the enrollment of the first patient in the FDA approved prospective feasibility study, STEMI Door to Unloading with Impella CP system in acute myocardial infarction. This trial will focus on feasibility and safety of unloading the left ventricle using the Impella CP heart pump prior to primary PCI in patients presenting with ST segment elevation myocardial infarction, or STEMI, without cardiogenic shock with the hypothesis that this will potentially reduce infarct size. The study, which received Investigational Device Exemption, or IDE, approval from the FDA in October 2016, is a prospective, multi-center feasibility study. Up to 50 patients at 10 sites will be enrolled in the study. We enrolled the first patient in this study in April 2017 and we expect to complete enrollment in fiscal 2019.

We expect to continue to make additional PMA supplement submissions for our Impella suite of devices for additional indications.

Our Products

Impella 2.5®

The Impella 2.5 device is a percutaneous micro heart pump with an integrated motor and sensors. The device is designed primarily for use by interventional cardiologists to support patients in the cath lab who may require assistance to maintain circulation. The Impella 2.5 heart pump can be quickly inserted via the femoral artery to reach the left ventricle of the heart where it is directly deployed to draw blood out of the ventricle and deliver it to the circulatory system. This function is intended to reduce ventricular work and provide blood flow to vital organs. The Impella 2.5 heart pump is introduced with normal interventional cardiology procedures and can pump up to 2.5 liters of blood per minute.

The Impella 2.5 device received 510(k) clearance from the FDA in June 2008 for partial circulatory support for up to six hours. In March 2015, we received a PMA from the FDA for the use of the Impella 2.5 device during elective and urgent high-risk PCI procedures. With this PMA indication, the Impella 2.5 device became the first FDA approved hemodynamic support device for use during high-risk PCI procedures. Under this first PMA, the Impella 2.5 is a temporary (up to six hours) ventricular support device indicated for use during high-risk PCI performed in elective or urgent hemodynamically stable patients with severe coronary artery disease and depressed left ventricular ejection fraction, when a heart team, including a cardiac surgeon, that has determined high-risk PCI is the appropriate therapeutic option. Use of the Impella 2.5 device in these patients may prevent hemodynamic instability that may occur during planned temporary coronary occlusions and may reduce periprocedural and post-procedural adverse events. The product labeling allows for the clinical decision by physicians to leave the Impella 2.5 device in place beyond the intended duration of up to six hours should unforeseen circumstances arise. Pursuant to our PMA approval requirements, we are conducting a single-arm, post-approval study on the Impella 2.5 device, collecting data on high-risk PCI patients. The study is a prospective, multi-center study comprised of 369 patients from up to 70 sites

supported with the Impella 2.5 system.

In April 2016, the FDA approved a supplement to our March 2015 PMA approval for the use of our Impella 2.5, Impella CP, Impella 5.0 and Impella LD devices to provide treatment for ongoing cardiogenic shock. This PMA supplement covers a set of indications related to the use of the Impella devices in patients suffering cardiogenic shock following acute myocardial infarction or cardiac surgery and allows for a longer duration of support.

The data submitted to the FDA in support of the PMA supplement included an analysis of 415 patients from the RECOVER 1 study and the U.S. Impella registry, or cVAD Registry™, as well as a literature review using the Impella devices in 692 patients from 17 clinical studies. The PMA supplement also included a safety analysis evalulating the information in the FDA medical device reporting, or MDR, database, following the use of the Impella devices in more than 24,000 patients and which draws from seven years of experience using the Impella devices in the U.S. We believe this is the most comprehensive review ever submitted to the FDA for circulatory support in the cardiogenic shock population.

Pursuant to the April 2016 PMA approval, the Impella 2.5, Impella CP, Impella 5.0 and Impella LD catheters, in conjunction with the Automated Impella Controller, or AIC, were approved as temporary ventricular support devices intended for short term use (≤ 4 days for the Impella 2.5 and Impella CP, and ≤ 6 days for the Impella 5.0 and LD) and indicated for the treatment of ongoing cardiogenic shock that occurs immediately (< 48 hours) following acute myocardial infarction or open heart surgery as a result of isolated left ventricular failure that is not responsive to optimal medical management and conventional treatment measures. The intent of the Impella system therapy is to reduce ventricular work and to provide the circulatory support necessary to allow heart recovery and early assessment of residual myocardial function. Optimal medical management and convention treatment measures include volume loading and use of pressors and inotropes, with or without an intraortic balloon pump, or IABP.

The Impella 2.5 device has CE Mark approval in Europe for up to five days of use and is approved for use in up to 40 countries. The Impella 2.5 device also has Health Canada approval which allows us to market the device in Canada.

In September 2016, we received PMDA approval from the Japanese MHLW for our Impella 2.5 and Impella 5.0 heart pumps to provide treatment of drug-resistant acute heart failure in Japan. In July 2017, we recently received approval from the MHLW for reimbursement on Impella 2.5 and 5.0 heart pumps and 10 physician societies in Japan have completed the hospital guidance document. Reimbursement in Japan for the Impella 2.5 and 5.0 is estimated to be equivalent to our average Impella sales price in the U.S. and commences in September 2017. We expect our first Japanese patient in September 2017 and anticipate a controlled Impella launch at a limited number of hospitals by the end of fiscal 2018. We do not expect to have any material revenue in Japan during fiscal 2018.

We expect to continue to make additional PMA supplement submissions for our Impella devices for additional clinical indications.

Impella CP®

In September 2012, we announced that the Impella CP device received 510(k) clearance from the FDA. The Impella CP device provides blood flow of approximately one liter more per minute than the Impella 2.5 device and is primarily used by either interventional cardiologists to support patients in the cath lab or by cardiac surgeons in the heart surgery suite.

In April 2016, the FDA approved the PMA supplement for certain of our devices, including our Impella CP device to provide treatment for ongoing cardiogenic shock.

In December 2016, we received PMA approval from the FDA for the use of the Impella CP device during elective and urgent high-risk PCI procedures, identical to the indication for use for the Impella 2.5 device. This approval allows the Impella CP to be used as a temporary (≤ 6 hours) ventricular support system indicated for use during high risk PCI procedures performed in elective or urgent hemodynamically stable patients with severe coronary artery disease and depressed left ventricular ejection fraction, when a heart team, including a cardiac surgeon, has determined that high risk PCI is the appropriate therapeutic option. The product labeling allows for the clinical decision by physicians to leave the Impella CP device in place beyond the intended duration of up to six hours should unforeseen circumstances arise.

In May 2017, we announced the enrollment of the first patient in the FDA approved prospective feasibility study, STEMI Door to Unloading with Impella CP system in acute myocardial infarction. This trial will focus on feasibility and safety of unloading the left ventricle using the Impella CP heart pump prior to primary PCI in patients presenting with ST segment elevation myocardial infarction, or STEMI, without cardiogenic shock with the hypothesis that this will potentially reduce infarct size. The study, which received Investigational Device Exemption, or IDE, approval from the FDA in October 2016, is a prospective, multi-center feasibility study. Up to 50 patients at 10 sites will be

enrolled in the study. We enrolled the first patient in this study in April 2017 and we expect to complete enrollment in fiscal 2019.

The primary endpoints of the feasibility study will focus on safety, including Adverse Cardiovascular and Cerebrovascular Events, or MACCE, at 30 days. All patients will undergo cardiac magnetic resonance imaging to assess infarct size as a percent of left ventricular mass at 30 days post-PCI. Patients will be randomized to Impella CP placement with immediate primary PCI, or to Impella CP placement with 30 minutes of unloading prior to primary PCI. The hypothesis of this novel approach to treating STEMI patients, based on extensive mechanistic research, is that unloading the left ventricle prior to PCI reduces myocardial work load, oxygen demand and also initiates a cardio-protective effect at the myocardial cell level, which may alleviate myocardial damage caused by reperfusion injury at the time of revascularization. This feasibility study will help refine the protocol and lay the groundwork for a future pivotal study with more sites and patients and will be designed for statistical significance.

We expect to continue to make additional PMA supplement submissions for our Impella devices for additional clinical indications.

The Impella CP device has CE Mark approval in Europe for up to five days of use and is approved for use in up to 40 countries.

Impella 5.0® and Impella LD®

The Impella 5.0 and Impella LD devices are percutaneous micro heart pumps with integrated motors and sensors for use primarily in the heart surgery suite. These devices are designed to support patients who require higher levels of circulatory support as compared to the Impella 2.5.

The Impella 5.0 device can be inserted into the left ventricle via femoral cut down or through the axillary artery. The Impella 5.0 device is passed into the ascending aorta, across the valve and into the left ventricle. The Impella LD device is similar to the Impella 5.0 device, but it is implanted directly into the ascending aorta through an aortic graft. Both of these procedures are normally performed with the assistance of heart surgeons in the surgery suite. The Impella 5.0 and Impella LD devices can pump up to five liters of blood per minute, potentially providing full circulatory support.

The Impella 5.0 and Impella LD devices originally received 510(k) clearance in April 2009, for circulatory support for up to six hours. In April 2016, the FDA approved the PMA supplement for certain of our devices, including our Impella 5.0 and Impella LD devices to provide treatment for ongoing cardiogenic shock following a heart attack or open heart surgery.

The Impella 5.0 and Impella LD devices have CE Mark approval in Europe for up to ten days' duration and are approved for use in over 40 countries.

In September 2016, we received PMDA approval from the Japanese MHLW for our Impella 2.5 and Impella 5.0 heart pumps to provide treatment of drug-resistant acute heart failure in Japan. In July 2017, we recently received approval from the MHLW for reimbursement on Impella 2.5 and 5.0 heart pumps and 10 physician societies in Japan have completed the hospital guidance document. Reimbursement in Japan for the Impella 2.5 and 5.0 is estimated to be equivalent to our average Impella sales price in the U.S. and commences in September 2017. We expect our first Japanese patient in September 2017 and anticipate a controlled Impella launch at a limited number of hospitals by the end of fiscal 2018. We do not expect to have any material revenue in Japan during fiscal 2018.

Impella RP®

The Impella RP is a percutaneous catheter-based axial flow pump that is designed to allow greater than four liters of blood flow per minute and is intended to provide the flow and pressure needed to compensate for right side heart failure. The Impella RP is the first percutaneous single access heart pump designed for right heart support to receive FDA approval. The Impella RP device is approved to provide support of the right heart during times of acute failure for certain patients who have received a left ventricle assist device or have suffered heart failure due to acute myocardial infarction, or AMI, a failed heart transplant, or following open heart surgery.

In November 2012, the Impella RP device received U.S. investigational device exemption, or IDE, approval from the FDA for use in RECOVER RIGHT, a pivotal clinical study in the U.S. This was a study of 30 patients who presented signs of right side heart failure, required hemodynamic support, and were capable of being treated in the catheterization lab or cardiac surgery suite. The study was completed in March 2014 and collected safety and effectiveness data on the percutaneous use of the Impella RP device and was submitted to the FDA in support of a Humanitarian Device Exemption, or HDE, submission. An HDE is similar to a PMA application but is intended for patient populations of 8,000 or less per year in the U.S. and is subject to certain profit and use restrictions. An HDE approval requires demonstration of the safety and probable benefit of the product, which is a lower standard than is

applied to a PMA. In order to receive an HDE, there must be no comparable devices approved under a PMA that are available to treat the targeted population. An approved HDE authorizes sales of the device to any hospital after review and approval by the hospital's Institutional Review Board. In January 2015, we received HDE approval for the Impella RP device from the FDA. As part of the HDE approval, we were required to conduct post approval studies for the Impella RP device. We have completed our Impella RP post-market studies and submitted a PMA application in March 2017 with the FDA and expect to convert our HDE approval to a PMA in fiscal 2018.

In April 2014, the Impella RP device received CE Mark approval which allows for commercial sales of the Impella RP device in the European Union and other countries that require a CE Mark approval for commercial sales.

ECP

In July 2014, we acquired all of the issued shares of ECP Entwicklungsgesellschaft mbH, or ECP, a German limited liability company, for $13.0 million in cash, with additional potential payments up to a maximum of $15.0 million based on the achievement of certain technical, regulatory and commercial milestones. In connection with our acquisition of ECP, ECP acquired all of the issued shares of AIS GmbH Aachen Innovative Solutions, or AIS, a German limited liability company, for $2.8 million in cash which was provided by us. AIS, based in Aachen, Germany, holds certain intellectual property useful to ECP's business, and, prior to being acquired by ECP, had licensed such intellectual property to ECP.

ECP, based in Berlin, Germany, is engaged in research, development, prototyping and the pre-serial production of a percutaneous expandable catheter pump which increases blood circulation from the heart with an external drive shaft. The ECP pump is designed for blood flow of >3 liters/minute. It is intended to be delivered on the standard Impella 9 Fr catheter and will include an 18 Fr expandable inflow in the left ventricle with a smooth membrane crossing the left ventricle. The ECP pump is still in early stages of research and development and has not been approved for commercial use or sale.

Critical Accounting Policies and Estimates

There have been no significant changes in our critical accounting policies during the three months ended June 30, 2017, as compared to the critical accounting policies disclosed in Management's Discussion and Analysis of Financial Condition and Results of Operations included in our Annual Report on Form 10-K for the fiscal year ended March 31, 2017.

Recent Accounting Pronouncements

Information regarding recent accounting pronouncements is included in "Note 2. Basis of Preparation and Summary of Significant Accounting Policies" to our condensed consolidated financial statements and is incorporated herein by reference.

Results of Operations

The following table sets forth certain condensed consolidated statements of operations data for the periods indicated as a percentage of total revenue:

	For the Three Months Ended June 30,	
	2017	2016
Revenue:		
Product revenue	100.0 %	100.0 %
Costs and expenses as a percentage of total revenue:		
Cost of product revenue	16.5	14.6
Research and development	12.8	15.2
Selling, general and administrative	45.7	49.6

Total costs and expenses	75.0		79.4	
Income from operations	25.0		20.6	
Income tax (benefit) provision and other	(3.2	)	8.1	
Net income as a percentage of total revenue	28.2	%	12.5	%

Three months ended June 30, 2017 compared with the three months ended June 30, 2016

Revenue

Our revenues are comprised of the following:

	For the Three Months Ended June 30,	
	2017	2016
	(in $000's)	
Impella product revenue	$127,193	$97,819
Service and other revenue	5,238	4,489
Other products	-	681
Total product revenue	132,431	102,989
Funded research and development	37	6
Total revenue	$132,468	$102,995

Impella product revenue encompasses Impella 2.5, Impella CP, Impella 5.0, Impella LD and Impella RP device sales. Service and other revenue represents revenue earned on service maintenance contracts and preventive maintenance calls. Other product revenue includes AB5000 and product accessory revenue.

Total revenue for the three months ended June 30, 2017 increased $29.5 million, or 29%, to $132.5 million from $103.0 million for three months ended June 30, 2016. The increase in total revenue was primarily due to higher Impella product revenue from increased utilization in the U.S and Europe.

Impella product revenue for the three months ended June 30, 2017 increased by $29.4 million, or 30%, to $127.2 million from $97.8 million for three months ended June 30, 2016. Most of the increase in Impella product revenue was from increased device sales in the U.S. of all of our Impella products, as we focus on increasing utilization of our disposable catheter products through continued investment in our field organization and physician training programs. Impella product revenue outside of the U.S. also increased primarily due to increased utilization in Germany as we expand our field organization in that country. We expect product revenue from our Impella product line to continue to increase due to our recent PMAs in the U.S. for our Impella devices to provide treatment for ongoing cardiogenic shock, continued utilization for high risk PCI procedures, continued controlled launch of Impella RP devices in the U.S. and expansion efforts in Europe, particularly Germany.

Service and other revenue for the three months ended June 30, 2017 increased by $0.7 million, or 16%, to $5.2 million from $4.5 million for three months ended June 30, 2016. The increase in service revenue was primarily due to an increase in preventative maintenance service contracts. We have expanded the number of Impella AIC consoles to most of our using sites and placed more consoles at existing higher using sites. We expect revenue growth for service revenue to be slower than our product revenue growth in the near future as most of these using sites in the U.S. have service contracts that normally have three year terms.

The decrease in other revenue was due to a decline in AB5000 disposable sales. We are no longer selling the AB5000 revenue device and we do not expect to have any other product revenue in the near future. We have transitioned our sales focus in the surgical suite from the AB5000 to Impella 5.0, Impella LD and Impella RP devices.

Costs and Expenses

Cost of Product Revenue

Cost of product revenue for three months ended June 30, 2017 increased by $6.8 million, or 45%, to $21.9 million from $15.1 million for three months ended June 30, 2016. Gross margin was 83% for the three months ended June 30, 2017 and 85% for the three months ended June 30, 2016. The increase in cost of product revenue was related to higher demand for our Impella devices and higher production volume and costs to support growing demand for our Impella devices. The decrease in gross margin was primarily due to larger number of shipments of AICs during three months ended June 30, 2017 and an increased investment in direct labor and overhead as we expand our manufacturing capacity in both Danvers and Aachen.

Research and Development Expenses

Research and development expenses for three months ended June 30, 2017 increased by $1.2 million, or 8%, to $16.9 million from $15.7 million for three months ended June 30, 2016. The increase in research and development expenses was primarily due to product development initiatives on our existing products and new technologies as we expanded our engineering organization, increased clinical spending primarily related to our STEMI trial and our continued focus on quality initiatives for our Impella devices.

We expect research and development expenses to increase for the remainder of fiscal 2018 as we continue to increase clinical spending related to our cVAD Registry™, STEMI trial and incur additional costs as we continue to focus on engineering initiatives to improve our existing products and develop new technologies, such as ECP.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for three months ended June 30, 2017 increased by $9.6 million, or 19%, to $60.6 million from $51.0 million for three months ended June 30, 2016. The increase in selling, general and administrative expenses was primarily due to the hiring of additional field sales and clinical personnel in the U.S. and Germany, increased spending on marketing initiatives as we continue to educate physicians on the benefits of hemodynamic support after receiving PMAs in the U.S. for Impella 2.5, Impella CP, Impella 5.0 and Impella LD devices, higher stock-based compensation expense, higher legal expenses related to the FCA Investigation, ongoing patent litigation and other legal matters discussed in “Note 10. Commitments and Contingencies—Litigation,” to our condensed consolidated financial statements and higher professional fees to support the growth of our business.

We expect to continue to increase our expenditures on sales and marketing activities, with particular investments in field sales and clinical personnel with cath lab expertise to drive recovery awareness for acute heart failure patients. We also plan to increase our marketing, service and training investments as a result of recent PMA approvals in the U.S. for our Impella devices and as we expand to new markets outside of the U.S., such as Japan. We also expect to continue to incur significant legal expenses for the foreseeable future related to the FCA Investigation and patent related matters. Our selling, general and administrative expense could increase in the fourth quarter of fiscal 2018 with the potential return of the medical device tax in the U.S. in January 2018, that was temporarily halted in January 2016.

Income Tax Provision

We recorded an income tax benefit of $3.6 million for the three months ended June 30, 2017, respectively, compared to an income tax provision of $8.5 million for the three months ended June 30, 2016, respectively.

As discussed further in “Note 2. Basis of Presentation and Summary of Significant Accounting Policies,” to our condensed consolidated financial statements, we adopted ASU 2016-09 in the first quarter of fiscal 2018. ASU 2016-09 requires excess tax benefits and shortfalls to be recognized in the income tax provision as discrete items in the period when restricted stock units vest or stock option exercises occur, whereas previously such income tax effects were recorded as part of additional paid-in capital only when the related tax deduction resulted in a reduction of current income taxes payable. As a result, on April 1, 2017, we recorded a cumulative-effect adjustment to increase retained earnings by $76.4 million for excess tax benefits not previously recognized. The adoption of ASU 2016-09 also resulted in excess tax benefits associated with stock-based awards of $16.8 million being recognized as an income tax benefit for three months ended June 30, 2017. The amount of future excess tax benefits or shortfalls will likely fluctuate from period to period based on the price of our stock, the volume of restricted stock unit vestings or stock option exercises, and the fair value assigned to such stock-based awards under U.S. GAAP. Accordingly, we expect that the adoption of ASU 2016-09 will result in more volatility to its effective income tax rate, net income and

earnings per share in future periods.

Net Income

For three months ended June 30, 2017, we recognized net income of $37.4 million, or $0.85 per basic share and $0.82 per diluted share, compared to $12.9 million, or $0.30 per basic share and $0.29 per diluted share for three months ended June 30, 2016.

As discussed above, we adopted ASU 2016-09 in the first quarter of fiscal 2018, which resulted in excess tax benefits associated with stock-based awards of $16.8 million being recognized in the income tax provision during the three months ended June 30, 2017. The adoption of ASU 2016-09 resulted in an increase in net income of $0.38 per basic share and $0.37 per diluted share, respectively, for the three months ended June 30, 2017. The amount of future excess tax benefits or shortfalls will likely fluctuate from period to period based on the price of our stock, the volume of restricted stock units vesting or stock option exercises, and the fair value assigned to such stock-based awards under U.S. GAAP. Accordingly, the we expect that the adoption of ASU 2016-09 will result in more volatility to our effective income tax rate, net income and earnings per share in future periods.

Our increased net income for fiscal 2018 was also driven by higher Impella product revenue due to greater utilization of our Impella devices in the U.S. and Germany.

Liquidity and Capital Resources

At June 30, 2017, our total cash, cash equivalents and marketable securities totaled $289.1 million, an increase of $12.0 million compared to $277.1 million at March 31, 2017. The increase in our cash, cash equivalents and marketable securities was due primarily to positive cash flows from operations in the three months ended June 30, 2017.

Following is a summary of our cash flow activities:

	For the Three Months Ended June 30,	
	2017	2016
Net cash provided by operating activities	$36,294	$26,380
Net cash used for investing activities	(17,208)	(25,327)
Net cash used for financing activities	(14,434)	(11,222)
Effect of exchange rate changes on cash	278	212
Net increase (decrease) in cash and cash equivalents	$4,930	$(9,957)

Cash Provided by Operating Activities

For the three months ended June 30, 2017, cash provided by operating activities consisted of net income of $37.4 million, adjustments for non-cash items of $8.0 million and cash used in working capital of $9.1 million. The increase in net income was primarily due to higher revenue from increased utilization of our Impella devices. Adjustments for non-cash items consisted primarily of $8.7 million of stock-based compensation expense, an $3.8 million change in deferred tax provision, $2.5 million of depreciation expense on property and equipment and $0.5 million in inventory write-downs. The change in cash from working capital included a $0.8 million decrease in accounts receivable due to increased collections, $1.3 million increase in inventory to support growing demand for our Impella devices, and a $6.8 million decrease in accounts payable and accrued expenses due to payment of annual bonuses during the quarter ended June 30, 2017.

For the three months ended June 30, 2016, cash provided by operating activities consisted of net income of $12.9 million, adjustments for non-cash items of $16.6 million and cash used in working capital of $3.1 million. The increase in net income was primarily due to higher revenue from increased utilization of our Impella devices.

Adjustments for non-cash items consisted primarily of $8.4 million of stock-based compensation expense, a $7.0 million change in deferred tax provision and $1.4 million of depreciation expense on property and equipment. The decrease in cash from changes in working capital included a $1.5 million decrease in accounts receivable due to increased collections, a $3.4 million increase in inventory as we build up our inventory safety stock to support growing demand for our Impella devices and $1.1 million decrease in accounts payable and accrued expenses.

Cash Used for Investing Activities

For the three months ended June 30, 2017, net cash used for investing activities primarily consisted of $7.0 million in purchases (net of maturities) of marketable securities and $9.8 million for the purchase of property and equipment mostly related to expansion of manufacturing capacity and office space in Danvers, Massachusetts and Aachen, Germany.

For the three months ended June 30, 2016, net cash used for investing activities included $20.2 million in purchases (net of maturities) of marketable securities and $5.1 million for the purchase of property and equipment mostly related to expansion of manufacturing capacity and office space in Danvers, Massachusetts and Aachen, Germany.

Capital expenditures for fiscal 2018 are estimated to range from $30 million to $50 million. We are also expecting to incur significant capital expenditures for software development projects and expanding research facilities, manufacturing capacity and office leasehold improvements in our Danvers, Massachusetts, Aachen, Germany, Berlin, Germany and Tokyo, Japan locations.

Cash Provided by Financing Activities

For the three months ended June 30, 2017, net cash used for financing activities included $17.8 million in payments in lieu of issuance of common stock for payroll withholding taxes upon vesting of certain equity awards and $0.2 million in principal payments on capital lease obligation. These amounts were offset by $3.6 million in proceeds from the exercise of stock options.

For the three months ended June 30, 2016, net cash used for financing activities included $15.0 million in payments in lieu of issuance of common stock for payroll withholding taxes upon vesting of certain equity awards. These amounts were offset by $2.8 million in proceeds from the exercise of stock options and $1.0 million in excess tax benefits on stock-based awards.

Operating Capital and Liquidity Requirements

We believe that our revenue from product sales together with existing resources will be sufficient to fund our operations for at least the next twelve months, exclusive of activities involving any future acquisitions of products or companies that complement or augment our existing line of products.

Our primary liquidity requirements are to fund the expansion of our commercial and operational infrastructure in the U.S., increase our manufacturing capacity, incur additional capital expenditures as we expand our office space and manufacturing capacity in Danvers and Aachen, increase our inventory levels in order to meet growing customer demand for our Impella devices, fund new product development initiatives, prepare for commercial launches of Impella devices in new markets in the future, such as Japan, increased clinical spending, costs of legal fees related to the FCA Investigation and ongoing patent litigation and to provide for general working capital needs. To date, we have primarily funded our operations through product sales and the sale of equity securities.

Our liquidity is influenced by our ability to sell our products in a competitive industry and our customers' ability to pay for our products. Factors that may affect liquidity include our ability to penetrate the market for our products, maintain or reduce the length of the selling cycle for our products, capital expenditures, investments in collaborative arrangements with other partners, and our ability to collect cash from customers after our products are sold. We also expect to continue to incur legal expenses for the foreseeable future related to the FCA Investigation, ongoing patent litigation and other legal matters. We continue to review our short-term and long-term cash needs on a regular basis. At June 30, 2017 we had no long-term debt outstanding.

Marketable securities at June 30, 2017 and March 31, 2017 consisted of $245.1 million and $238.1 million held in funds that invest in U.S. Treasury, government-backed and corporate debt securities, respectively. We are not a party to any interest rate swaps, currency hedges or derivative contracts of any type and have no exposure to commercial paper or auction rate securities markets.

Cash and cash equivalents held by our foreign subsidiaries totaled $9.3 million and $8.2 million at June 30, 2017 and March 31, 2017, respectively. Our operating income outside the U.S. is deemed to be permanently reinvested in foreign jurisdictions. We do not intend or currently foresee a need to repatriate cash and cash equivalents held by our foreign subsidiaries. If these funds are needed in the U.S., we believe that the potential U.S. tax impact to repatriate these funds would not have a material impact on our financial condition.

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ITEM 3: QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

Primary Market Risk Exposures

Our cash, cash equivalents and marketable securities are subject to interest rate risk and will fall in value if market interest rates increase. If market interest rates were to increase immediately and uniformly by 10% from levels at June 30, 2017, we believe the decline in fair market value of our investment portfolio would be immaterial.

Currency Exchange Rates

We have foreign currency exposure to exchange rate fluctuations and particularly with respect to the euro, British pound sterling and Japanese yen. Therefore, our investment in our subsidiaries is sensitive to fluctuations in currency exchange rates. The effect of a change in currency exchange rates on our net investment in international subsidiaries is reflected in the accumulated other comprehensive (loss) income component of stockholders' equity. If rates of exchange for the euro, British pound and Japanese yen were to have depreciated immediately and uniformly by 10% relative to the U.S. dollar from levels at June 30, 2017, the result would have been a reduction of stockholders' equity of approximately $8.1 million.

Fair Value of Financial Instruments

At June 30, 2017, our financial instruments consist primarily of cash and cash equivalents, marketable securities, accounts receivable, accounts payable and contingent consideration. The carrying amounts of accounts receivable and accounts payable are considered reasonable estimates of their fair value, due to the short maturity of these instruments. The estimated fair values of the financial instruments have been determined by us using available market information and appropriate valuation techniques. Considerable judgment is required, however, to interpret market data to develop the estimates of fair value. The use of different market assumptions and/or estimation methodologies may have a material effect on the estimated fair value amounts. The carrying value of our capital lease obligations approximates fair value based on the borrowing rates currently available to us for loans and capital leases with similar terms.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act), as of June 30, 2017. Based on this evaluation, our principal executive officer and principal financial officer concluded that, as of June 30, 2017, these disclosure controls and procedures are effective to provide reasonable assurance that material information required to be disclosed by us, including our consolidated subsidiaries, in reports that we file or submit under the Exchange Act, is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Evaluation of Changes in Internal Control over Financial Reporting

During the first quarter of our fiscal year ending March 31, 2018, there were no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings

We are from time to time involved in various legal actions, the outcomes of which are not within our complete control and may not be known for prolonged periods of time. In some actions, the claimants seek damages, as well as other relief, which, if granted, would require significant expenditures. We record a liability in our condensed consolidated financial statements for these actions when a loss is known or considered probable and the amount can be reasonably estimated. We review these estimates each accounting period as additional information is known and adjust the loss provision when appropriate. If the loss is not probable or cannot be reasonably estimated, a liability is not recorded in the condensed consolidated financial statements. Material legal proceedings are discussed in “Note 10. Commitments and Contingencies—Litigation” to our condensed consolidated financial statements and are incorporated herein by reference.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. In addition to the other information set forth in this Report, you should carefully consider the factors discussed in Part I, “Item 1A. Risk Factors” in our Annual Report on Form 10-K for the year ended March 31, 2017, which could materially affect our business, financial condition or future results. As of the date of this Report there has been no material change in any of the risk factors described in our Annual Report on Form 10-K for the fiscal year ended March 31, 2017, except as noted below:

We must comply with healthcare “fraud and abuse” laws, and we could face substantial penalties for non-compliance and be excluded from government healthcare programs, which would adversely affect our business, financial condition and results of operations.

Certain federal and state healthcare laws and regulations pertaining to fraud and abuse and patients’ rights may be applicable to our business. We may be subject to healthcare fraud and abuse regulation and patient privacy regulation by both the federal government and the states in which we conduct our business. The laws and regulations that govern our business operations, products, and technologies, and may affect our ability to operate include:

- federal, state, and foreign anti-kickback laws and regulations, which generally prohibit payments to physicians or other purchasers of medical products as an inducement to purchase a product;
- the Stark law, which prohibits physicians from referring Medicare or Medicaid patients to a provider that bills these programs for the provision of certain designated health services if the physician (or a member of the physician's immediate family) has a financial relationship with that provider;
- federal and state laws and regulations that protect the confidentiality of certain patient health information, including patient records, and restrict the use and disclosure of such information, in particular, the Health Insurance Portability and Accountability Act of 1996, or HIPAA;
- the Physician Payments Sunshine Act, or PPSA, which requires public disclosure of the financial relationships of U.S. physicians and teaching hospitals with applicable manufacturers, including medical device, pharmaceutical, and biologics companies;
- the False Claims Act, or FCA, which prohibits the submission of false or otherwise improper claims for payment to a federally funded health care program, and health care fraud statutes that prohibit false statements and improper claims to any third-party payer; and
- the U.S. Foreign Corrupt Practices Act, or FCPA, which can be used to prosecute companies in the U.S. for arrangements with foreign government officials or other parties outside the U.S.

Failure to comply with these laws and regulations could result in criminal liability, significant fines or penalties, negative publicity, and substantial costs and expenses associated with investigation, enforcement activities, and individual settlement agreements that impose a government monitor for a period of several years. To assist in our compliance efforts, we adhere to many codes of ethics and conduct regarding our sales and marketing activities in the

United States and other countries in which we operate.

On April 25, 2014, we received an administrative subpoena from the Boston regional office of the U.S. Department of Health and Human Services, or HHS, Office of Inspector General requesting materials relating to our reimbursement of employee expenses and remuneration to healthcare providers from July 2012 through December 2012, in connection with a civil investigation under the False Claims Act (the "FCA Investigation"). Subsequently, we received Civil Investigative Demands from the U.S. Attorney's Office for the District of Massachusetts that collectively sought additional information relating to this matter for the time period of January 1, 2011 through September 14, 2016. We continue to cooperate fully with the government in this investigation and are exploring various ways to resolve this matter with the government. We are not able to predict what action, if any, might be taken in the future as a result of the investigation, or the potential impact to our financial position.

We own patents, trademarks, trade secrets, copyrights and other intellectual property and know-how that we believe give us a competitive advantage. If we cannot protect our intellectual property and develop or otherwise acquire additional intellectual property, competition could force us to lower our prices, which could hurt our profitability.

Our intellectual property rights are and will continue to be a critical component of our success. We rely and expect to continue to rely on a combination of intellectual property, including patent, trademark, copyright, trade secret and domain name protection laws, as well as confidentiality agreements with our employees and others, to protect our intellectual property and proprietary rights. If we fail to obtain and maintain adequate intellectual property protection, we may not be able to prevent third parties from using our proprietary technologies or from marketing products that are very similar or identical to ours.

A substantial portion of our intellectual property rights relating to the Impella devices and other products under development is in the form of trade secrets, rather than patents. Unlike patents, trade secrets are only recognized under applicable law if they are kept secret by restricting their disclosure to third parties. We protect our trade secrets and proprietary knowledge in part through confidentiality agreements with employees, consultants and other parties. However, certain consultants and third parties with whom we have business relationships, and to whom in some cases we have disclosed trade secrets and other proprietary knowledge, may also provide services to other parties in the medical device industry, including companies, universities and research organizations that are developing competing products. In addition, some of our former employees who were aware of certain of our trade secrets and other proprietary knowledge in the course of their employment may seek employment with, and become employed by, our competitors. We cannot be assured that consultants, employees and other third parties with whom we have entered into confidentiality agreements will not breach the terms of such agreements by improperly using or disclosing our trade secrets or other proprietary knowledge, that we will have adequate remedies for any such breach, or that our trade secrets will not become known to or be independently developed by our competitors. The loss of trade secret protection for technologies or know-how relating to our product portfolio and products under development could adversely affect our business and our prospects.

Our business position also depends in part on our ability to maintain and defend our existing patents and obtain, maintain, and defend additional patents and other intellectual property rights. We intend to seek additional patents, but our pending and future patent applications may not result in issued patents or be granted on a timely basis. In addition, issued patents may not contain claims sufficiently broad to protect us against third parties with similar technologies or products or provide us with any competitive advantage, including exclusivity in a particular product area. The scope of our patent claims also may vary between countries, as individual countries have distinctive patent laws. We may be subject to challenges by third parties regarding our intellectual property, including, among others, claims regarding validity, enforceability, scope and effective term. Patent prosecution, related proceedings, and litigation in the U.S. and in other countries may be expensive, time consuming and ultimately unsuccessful. In addition, patents issued by foreign countries may afford less protection than is available under U.S. patent law and may not adequately protect our proprietary information. Our competitors may independently develop proprietary technologies and processes that are the same as or substantially equivalent to ours or design around our patents. Our

competition may also hold or obtain intellectual property rights that would threaten our ability to develop or commercialize our product offerings. The expiration of patents on which we rely for protection of key products could diminish our competitive advantage and adversely affect our business and our prospects.

Companies in the medical device industry typically obtain patents and frequently engage in substantial intellectual property litigation. Our products and technologies could infringe on the rights of others. If a third-party successfully asserts a claim for infringement against us, we may be liable for substantial damages, be unable to sell products using that technology, or have to seek a license or redesign the related product. These alternatives may be uneconomical or impossible. Intellectual property litigation could be costly, result in product development delays and divert the efforts and attention of management from our business.

For a discussion of our material legal proceedings as of June 30, 2017, please see Note 10 to our condensed consolidated financial statements entitled “Commitments and Contingencies,” which is incorporated by reference into this item.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds
(a) Not applicable.

(b) Not applicable.

(c) Not applicable.

Item 3. Defaults Upon Senior Securities
None

Item 4. Mine Safety Disclosures
Not applicable.

Item 5. Other Information
None

Item 6. Exhibits

Exhibit No.	Description	Filed with This Form 10-Q	Incorporated by Reference Form	Filing Date	Exhibit No.
2.1	Agreement on the Sale and Transfer of all shares in ECP Entwicklungsgellschaft mbH		8-K	July 7, 2014 (File No. 001-09585)	2.1
2.2	Agreement on the Sale and Transfer of all shares in AIS GmbH Aachen Innovation Solutions		8-K	July 7, 2014 (File No. 001-09585)	2.2
3.1	Restated Certificate of Incorporation.		S-3	September 29, 1997	3.1
3.2	Restated By-Laws, as amended.		10-K	May 27, 2004 (File No. 001-09585)	3.2
3.3	Certificate of Designations of Series A Junior Participating Preferred Stock.		S-3	September 29, 1997	3.3
3.4	Amendment to the Company's Restated Certificate of Incorporation to increase the authorized shares of common stock from 25,000,000 to 100,000,000.		8-K	March 21, 2007 (File No. 001-09585)	3.4
31.1	Principal Executive Officer Certification pursuant to Securities Exchange Act Rules 13a-14(a) and 15d-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X			
31.2	Principal Financial Officer Certification pursuant to Securities Exchange Act Rule 13a-14(a) and 15d-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X			
32.1	Principal Executive Officer and Principal Financial Officer Certifications pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	X			
101	The following financial information from the ABIOMED, Inc. Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, formatted in Extensible	X			

Business Reporting Language (XBRL): (i) Condensed Consolidated Balance Sheets as of June 30, 2017 and March 31, 2017; (ii) Condensed Consolidated Statements of Operations for the three months ended June 30, 2017 and 2016; (iii) Condensed Consolidated Statements of Comprehensive Income for the three months ended June 30, 2017 and 2016; (iv) Condensed Consolidated Statements of Cash Flows for the three months ended June 30, 2017 and 2016; and (v) Notes to Condensed Consolidated Financial Statements.

ABIOMED, INC. AND SUBSIDIARIES

PART II. OTHER INFORMATION

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.

ABIOMED, Inc.

Date: August 1, 2017 /s/ MICHAEL J. TOMSICEK
Michael J. Tomsicek
Vice President and Chief Financial Officer
(Principal Accounting and Financial Officer)