ABIOMED INC
Form 10-Q
February 06, 2018

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 December 31, 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 January 31, 2018, 44,277,825 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.

PART 1. FINANCIAL INFORMATION

ITEM 1: FINANCIAL STATEMENTS
ABIOMED, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS

(Unaudited)

(in thousands, except share data)

| | December 31, 2017 | March 31, 2017 |
|---|---|---|
| ASSETS | | |
| Current assets: | | |
| Cash and cash equivalents | $50,502 | $39,040 |
| Short-term marketable securities | 250,751 | 190,908 |
| Accounts receivable, net | 64,862 | 54,055 |
| Inventories | 46,891 | 34,931 |
| Prepaid expenses and other current assets | 9,192 | 8,024 |
| Total current assets | 422,198 | 326,958 |
| Long-term marketable securities | 49,485 | 47,143 |
| Property and equipment, net | 107,977 | 87,777 |
| Goodwill | 34,814 | 31,045 |
| In-process research and development | 16,241 | 14,482 |
| Long-term deferred tax assets, net | 75,201 | 34,723 |
| Other assets | 13,686 | 8,286 |
| Total assets | $719,602 | $550,414 |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current liabilities: | | |
| Accounts payable | $21,991 | $20,620 |
| Accrued expenses | 41,565 | 37,703 |
| Deferred revenue | 11,797 | 10,495 |
| Current portion of capital lease obligation | — | 799 |
| Total current liabilities | 75,353 | 69,617 |
| Other long-term liabilities | 466 | 3,251 |
| Contingent consideration | 10,423 | 9,153 |
| Long-term deferred tax liabilities | 878 | 783 |
| Capital lease obligation, net of current portion | — | 15,539 |
| Total liabilities | 87,120 | 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 | 443 | 437 |
| Authorized - 100,000,000 shares; Issued - 45,995,445 shares at December 31, 2017 and 45,249,281 shares at March 31, 2017 | | |

| | | |
|---|---|---|
| Outstanding - 44,271,905 shares at December 31, 2017 and 43,673,286 shares at March 31, 2017 | | |
| Additional paid in capital | 605,697 | 565,962 |
| Retained earnings (accumulated deficit) | 103,610 | (46,959 ) |
| Treasury stock at cost - 1,723,540 shares at December 31, 2017 and 1,575,995 shares at March 31, 2017 | (66,622 ) | (46,763 ) |
| Accumulated other comprehensive loss | (10,646 ) | (20,606 ) |
| Total stockholders' equity | 632,482 | 452,071 |
| Total liabilities and stockholders' equity | $719,602 | $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 December 31, | | For the Nine Months Ended December 31, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Revenue: | | | | |
| Product revenue | $ 153,989 | $ 114,624 | $ 419,202 | $ 320,541 |
| Funded research and development | 33 | 50 | 111 | 83 |
| | 154,022 | 114,674 | 419,313 | 320,624 |
| Costs and expenses: | | | | |
| Cost of product revenue | 24,994 | 18,987 | 68,483 | 51,366 |
| Research and development | 17,706 | 16,349 | 54,027 | 50,061 |
| Selling, general and administrative | 66,556 | 53,935 | 187,233 | 158,053 |
| | 109,256 | 89,271 | 309,743 | 259,480 |
| Income from operations | 44,766 | 25,403 | 109,570 | 61,144 |
| Other income (expense): | | | | |
| Investment income, net | 969 | 457 | 2,385 | 1,068 |
| Other expense, net | (81) | (34) | (25) | (225) |
| | 888 | 423 | 2,360 | 843 |
| Income before income taxes | 45,654 | 25,826 | 111,930 | 61,987 |
| Income tax provision | 32,208 | 10,394 | 36,607 | 24,770 |
| Net income | $ 13,446 | $ 15,432 | $ 75,323 | $ 37,217 |
| | | | | |
| Basic net income per share | $ 0.30 | $ 0.36 | $ 1.71 | $ 0.86 |
| Basic weighted average shares outstanding | 44,247 | 43,431 | 44,095 | 43,125 |
| | | | | |
| Diluted net income per share | $ 0.29 | $ 0.34 | $ 1.65 | $ 0.83 |
| Diluted weighted average shares outstanding | 45,869 | 44,770 | 45,731 | 44,597 |

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 December 31, | | For the Nine Months Ended December 31, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Net income | $13,446 | $15,432 | $75,323 | $37,217 |
| | | | | |
| Other comprehensive gain (loss): | | | | |
| Foreign currency translation gains (losses) | 1,557 | (5,873) | 10,406 | (6,760) |
| Net unrealized losses on marketable securities | (401) | (269) | (446) | (137) |
| Other comprehensive gain (loss) | 1,156 | (6,142) | 9,960 | (6,897) |
| | | | | |
| Comprehensive income | $14,602 | $9,290 | $85,283 | $30,320 |

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 Nine Months Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Operating activities: | | |
| Net income | $75,323 | $37,217 |
| Adjustments required to reconcile net income to net cash provided by operating activities: | | |
| Depreciation expense | 8,100 | 4,488 |
| Bad debt expense | (8) | (12) |
| Stock-based compensation | 29,170 | 24,521 |
| Write-down of inventory and other assets | 3,212 | 2,059 |
| Excess tax benefit from stock-based awards | — | (4,595) |
| Deferred tax provision | 34,740 | 18,817 |
| Change in fair value of contingent consideration | 1,270 | 612 |
| Changes in assets and liabilities: | | |
| Accounts receivable | (10,342) | (7,555) |
| Inventories | (11,974) | (8,615) |
| Prepaid expenses and other assets | (1,033) | (3,923) |
| Accounts payable | 2,595 | 3,542 |
| Accrued expenses and other liabilities | 3,874 | 11,040 |
| Deferred revenue | 1,220 | 265 |
| Net cash provided by operating activities | 136,147 | 77,861 |
| Investing activities: | | |
| Purchases of marketable securities | (209,834) | (177,591) |
| Proceeds from the sale and maturity of marketable securities | 148,095 | 144,670 |
| Purchase of other investment | (6,400) | (149) |
| Purchases of property and equipment | (44,168) | (24,039) |
| Net cash used for investing activities | (112,307) | (57,109) |
| Financing activities: | | |
| Proceeds from the exercise of stock options | 7,626 | 8,265 |
| Excess tax benefit from stock-based awards | — | 4,595 |
| Taxes paid related to net share settlement of vesting of stock awards | (19,860) | (19,898) |
| Proceeds from the issuance of stock under employee stock purchase plan | 1,063 | 769 |
| Principal payments on capital lease obligation | (517) | (264) |
| Net cash used for financing activities | (11,688) | (6,533) |
| Effect of exchange rate changes on cash | (690) | (1,381) |
| Net increase in cash and cash equivalents | 11,462 | 12,838 |
| Cash and cash equivalents at beginning of period | 39,040 | 48,231 |

| | | |
|---|---|---|
| Cash and cash equivalents at end of period | $50,502 | $61,069 |
| Supplemental disclosure of cash flow information: | | |
| Cash paid for income taxes | $845 | $735 |
| Cash paid for interest on capital lease obligation | 302 | 223 |
| Supplemental disclosure of non-cash investing and financing activities: | | |
| Property and equipment under capital lease obligation | — | 16,784 |
| Property and equipment in accounts payable and accrued expenses | 3,836 | 3,717 |

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 and nine months ended December 31, 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 ASU 2016-09 for the three and nine months ended December 31, 2017:

| Description of Change: | Impact of Change Upon Adoption on April 1, 2017 and for the Three and Nine Months Ended December 31, 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 and nine months ended December 31, 2017, included excess tax benefits of $3.2 million and $24.5 million, respectively. These recognized excess tax benefits resulted from restricted stock units that vested or stock options that were exercised during the three and nine months ended December 31, 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 $24.5 million for the nine months ended December 31, 2017. The statement of cash flows for the prior period has 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 | The Company made an accounting policy election to account for forfeitures as they occur with the change applied on a modified | Modified-retrospective (elected) |

| | | |
|---|---|---|
| reduce stock-based compensation expense for forfeitures as they occur instead of estimating forfeitures that are expected to occur. | 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 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. The Company is reviewing and updating its internal controls and processes over revenue recognition in order to prepare for the adoption of and ongoing accounting under the new standard. 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 can be applied retrospectively to each prior reporting period presented, or retrospectively with the cumulative effect of the change recognized at the date of the initial application. The Company will apply the new guidance effective April 1, 2018 using the modified retrospective method to contracts that are not completed as of April 1, 2018. The Company does not expect the adoption of this standard, including the cumulative effect of any adjustment to the opening balance of retained earnings, to have a material impact to its consolidated financial statements.

In January 2016, the FASB issued ASU 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities. This guidance changes accounting for financial assets and financial liabilities under the fair value option and includes additional presentation and disclosure requirements for financial instruments. ASU 2016-01 requires certain financial assets to be measured at fair value with changes in fair value recognized in the statement of operations. ASU 2016-01 eliminates the available-for-sale classification for marketable securities in which changes in fair value are currently recorded as a component of other comprehensive income. ASU 2016-01 also impacts the recognition and measurement of equity investments, which are currently carried at cost, but will be measured at fair

value in the Company's consolidated statement of operations. ASU 2016-01 is effective for annual reporting periods beginning after December 15, 2017, with early adoption permitted with specific application guidance. ASU 2016-01 will become effective for the Company beginning in fiscal 2019. The Company is evaluating the impact to its consolidated financial statements but ASU 2016-01 could have a significant impact, including additional volatility in other income (expense) within its statement of operations in future periods if there are measurable changes in fair value of equity investments.

In February 2016, the FASB issued ASU 2016-02, Leases. The new guidance significantly impacts lessee accounting and financial statement disclosures. Specifically, this guidance requires lessees to identify arrangements that should be accounted for as leases. Under this guidance, for lease arrangements exceeding a one year term, a right-of-use asset and lease obligation is recorded by the lessee for all leases on the balance sheet, whether operating or financing, while the statement of operations includes lease expense for operating leases and amortization and interest expense for financing leases. The balance sheet amount recorded at the date of adoption of this guidance must be calculated using the applicable incremental borrowing rate at the date of adoption. Leases with a term of one year or less will be accounted for similar to existing guidance for operating leases. The Company is currently in the process of evaluating its lessee arrangements to determine the impact of ASU 2016-02 on its consolidated financial statements. This evaluation includes a review of the Company's existing leasing arrangements on its facilities. 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. 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 and nine months ended December 31, 2017 and 2016 were as follows (in thousands, except per share data):

| | For the Three Months Ended December 31, | | For the Nine Months Ended December 31, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Basic Net Income Per Share | | | | |
| Net income | $ 13,446 | $ 15,432 | $ 75,323 | $ 37,217 |
| Weighted average shares used in computing basic net income per share | 44,247 | 43,431 | 44,095 | 43,125 |
| Net income per share - basic | $ 0.30 | $ 0.36 | $ 1.71 | $ 0.86 |

| | For the Three Months Ended December 31, | | For the Nine Months Ended December 31, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Diluted Net Income Per Share | | | | |
| Net income | $ 13,446 | $ 15,432 | $ 75,323 | $ 37,217 |
| Weighted average shares used in computing basic net income per share | 44,247 | 43,431 | 44,095 | 43,125 |
| Effect of dilutive securities | 1,622 | 1,339 | 1,636 | 1,472 |
| Weighted average shares used in computing diluted net income per share | 45,869 | 44,770 | 45,731 | 44,597 |
| Net income per share - diluted | $ 0.29 | $ 0.34 | $ 1.65 | $ 0.83 |

For the three and nine months ended December 31, 2017, approximately 2,600 and 4,800 shares underlying out-of-the-money stock options, respectively, were excluded in the computation of diluted earnings per share because their effect would have been anti-dilutive. Also, approximately 128,000 restricted shares in each of the three and nine months ended December 31, 2017, respectively, related to performance-based and market-based awards for which

milestones have not been met, were not included in the computation of diluted earnings per share.

For the three and nine months ended December 31, 2016, approximately 28,000 and 17,000 shares underlying out-of-the-money stock options, respectively, were excluded in the computation of diluted earnings per share because their effect would have been anti-dilutive. Also, approximately 185,000 restricted shares in each of the three and nine months ended December 31, 2016, respectively, related to performance-based and market-based awards for which milestones have 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. At December 31, 2017 and March 31, 2017, the Company’s 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 investments.

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

| | Amortized Cost (in $000's) | Gross Unrealized Gains | Gross Unrealized Losses | Fair Market Value |
|---|---|---|---|---|
| December 31, 2017: | | | | |
| Short-term U.S. Treasury mutual fund securities | $21,068 | $ — | $ (25) | $21,043 |
| Short-term government-backed securities | 152,586 | — | (343) | 152,243 |
| Short-term corporate debt securities | 77,592 | 3 | (130) | 77,465 |
| Long-term government-backed securities | 47,587 | — | (96) | 47,491 |
| Long-term corporate debt securities | 1,997 | — | (3) | 1,994 |
| | $300,830 | $ 3 | $ (597) | $300,236 |

| | 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:

| December 31, 2017: | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| | (in $000's) | | | |
| Assets | | | | |
| Short-term U.S. Treasury mutual fund securities | $— | $21,043 | $— | $21,043 |
| Short-term government-backed securities | — | 152,243 | — | 152,243 |
| Short-term corporate debt securities | — | 77,465 | — | 77,465 |
| Long-term government-backed securities | — | 47,491 | — | 47,491 |
| Long-term corporate debt securities | — | 1,994 | — | 1,994 |
| Liabilities | | | | |
| Contingent consideration | — | — | 10,423 | 10,423 |

| 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 related to the development of the future Impella ECP™ expandable catheter pump technology. 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.

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

| | Fair Value at December 31, 2017 (in $000's) | Valuation Methodology | Significant Unobservable Input | Weighted Average (range, if applicable) |
|---|---|---|---|---|
| Clinical and regulatory milestone | $ 5,654 | Probability weighted income approach | Projected fiscal year of milestone payments | 2019 to 2022 |
| | | | Discount rate | 2.8% to 3.3% |
| | | | Probability of occurrence | Probability adjusted level of 40% for the base case scenario and 12% to 30% for various upside and downside scenarios |
| Revenue-based milestone | 4,769 | Monte Carlo simulation model | Projected fiscal year of milestone payments | 2023 to 2035 |
| | | | Discount rate | 18% |
| | | | Expected volatility for forecasted revenues | 50% |
| | $ 10,423 | | | |

The following table summarizes the change in fair value, as determined by Level 3 inputs, of the contingent consideration for the three and nine months ended December 31, 2017 and 2016:

| | For the Three Months Ended December 31, | | For the Nine Months Ended December 31, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| | (in $000's) | | (in $000's) | |
| Level 3 liabilities, beginning balance | $9,835 | $7,749 | $9,153 | $7,563 |
| Additions | — | — | — | — |

| | | | | |
|---|---|---|---|---|
| Payments | — | — | — | — |
| Change in fair value | 588 | 426 | 1,270 | 612 |
| Level 3 liabilities, ending balance | $10,423 | $8,175 | $10,423 | $8,175 |

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, heart pump and other medical device technologies. The aggregate carrying amount of the Company's other investments was $12.6 million and $7.2 million at December 31, 2017 and March 31, 2017, respectively, and is classified within other assets in the unaudited condensed consolidated balance sheets. During the nine months ended December 31, 2017, the Company made investments of $6.4 million in private medical device companies. These investments are accounted for using the cost method and are evaluated for impairment and 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.

Note 5. Property and Equipment

The components of property and equipment are as follows:

| | December 31, 2017 (in $000's) | March 31, 2017 |
|---|---|---|
| Land | $7,550 | $4,046 |
| Building and building improvements | 61,086 | 10,900 |
| Capital lease asset | — | 16,784 |
| Leasehold improvements | 2,173 | 34,854 |
| Machinery and equipment | 38,336 | 27,989 |
| Furniture and fixtures | 7,503 | 3,899 |
| Construction in progress | 15,958 | 9,257 |
| Total cost | 132,606 | 107,729 |
| Less accumulated depreciation | (24,629 ) | (19,952 ) |
| | $107,977 | $87,777 |

In October 2017, the Company entered into a purchase and sale agreement to acquire the Company’s headquarters that it had been leasing in Danvers, Massachusetts. The total acquisition cost for the land and building was approximately $16.5 million, with $3.0 million being recorded to land and $13.0 million being recorded to building and building improvements. In addition, the Company reclassified $32.6 million in leasehold improvements to building and building improvements due to the termination of the lease agreement upon the property acquisition.

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. The Company acquired the property in February 2017. The original 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 December 31, 2017 and March 31, 2017 was $34.8 million and $31.0 million, respectively, and has been recorded in connection with the Company’s acquisition of Impella Cardiosystems AG, 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 | 3,769 |
| Balance at December 31, 2017 | $34,814 |

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 December 31, 2017 and March 31, 2017 was $16.2 million and $14.5 million, respectively, and was 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 flow estimates for the future Impella ECP™ 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% 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 nine months ended December 31, 2017 are as follows:

| | (in $000's) |
|---|---|
| Balance at March 31, 2017 | $14,482 |
| Foreign currency translation impact | 1,759 |
| Balance at December 31, 2017 | $16,241 |

Note 7. Accrued Expenses

Accrued expenses consist of the following:

| | December 31, 2017 | March 31, 2017 |
|---|---|---|
| | (in $000's) | |
| Employee compensation | $26,077 | $23,290 |
| Sales and income taxes | 4,612 | 3,180 |
| Professional, legal and accounting fees | 3,294 | 2,019 |
| Research and development | 2,271 | 2,349 |
| Marketing | 2,254 | 1,827 |
| Warranty | 1,010 | 717 |
| Accrued capital expenditures | — | 2,300 |
| Other | 2,047 | 2,021 |
| | $41,565 | $37,703 |

Employee compensation consists primarily of accrued bonuses, accrued commissions and accrued employee benefits at December 31, 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 and nine months ended December 31, 2017 and 2016:

| | For the Three Months Ended December 31, | | For the Nine Months Ended December 31, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| | (in $000's) | | (in $000's) | |
| Cost of product revenue | $489 | $234 | $1,221 | $754 |
| Research and development | 1,673 | 900 | 4,217 | 4,793 |
| Selling, general and administrative | 9,070 | 5,340 | 23,732 | 18,974 |
| | $11,232 | $6,474 | $29,170 | $24,521 |

Stock Options

The following table summarizes the stock option activity for the nine months ended December 31, 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 | 152 | 140.41 | | |
| Exercised | (371) | 20.54 | | |
| Cancelled and expired | (55) | 100.57 | | |
| Outstanding at end of period | 1,372 | $ 44.49 | 5.42 | $ 196,132 |
| Exercisable at end of period | 1,048 | $ 24.03 | 4.42 | $ 171,235 |
| Options vested and expected to vest at end of period | 1,347 | $ 43.85 | 5.37 | $ 193,386 |

The aggregate intrinsic value of options exercised was $46.1 million for the nine months ended December 31, 2017. The total fair value of options that vested during the nine months ended December 31, 2017 was $4.8 million.

The remaining unrecognized stock-based compensation expense for unvested stock option awards at December 31, 2017 was approximately $10.6 million and the estimated weighted-average period over which this cost will be recognized is 2.4 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 and nine months ended December 31, 2017 and 2016 was as follows:

| | For the Three Months Ended December 31, | | For the Nine Months Ended December 31, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Weighted average grant-date fair value | $70.14 | $48.15 | $51.20 | $42.21 |
| | | | | |
| Valuation assumptions: | | | | |
| Risk-free interest rate | 2.13 % | 1.37 % | 1.86 % | 1.32 % |
| Expected option life (years) | 4.08 | 4.17 | 4.07 | 4.14 |
| Expected volatility | 42.2 % | 48.5 % | 43.6 % | 49.5 % |

Restricted Stock Units

The following table summarizes activity of restricted stock units for the nine months ended December 31, 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 | 295 | $ 136.80 |
| Vested | (363) | $ 53.16 |
| Forfeited | (94) | $ 98.08 |
| Restricted stock units at end of period | 894 | $ 108.35 |

The remaining unrecognized compensation expense for outstanding restricted stock units, including performance and market-based awards, as of December 31, 2017 was $38.5 million and the estimated weighted-average period over which this cost will be recognized is 2.0 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, which vest upon achievement of prescribed service milestones by the award recipients and performance milestones by the Company. As of December 31, 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

On December 22, 2017, the Tax Cut and Jobs Act, or the Tax Reform Act, was signed into law. The Tax Reform Act included significant changes to existing law, including among other items, a reduction to the U.S. federal statutory corporate tax rate from 35% to 21% effective January 1, 2018. ASC 740, Income Taxes (Topic 740), or ASC 740, requires that the effects of changes in tax laws or rates be recognized in the period in which the law is enacted. Those effects, both current and deferred, are reported as part of the tax provision, regardless of income in which the underlying pretax income (expense) or asset (liability) was or will be reported.

The Company’s estimated fiscal 2018 blended U.S. federal statutory corporate income tax rate of 31.5% was applied in the computation of the income tax provision for the three and nine months ended December 31, 2017. The blended U.S. federal statutory corporate tax rate of 31.5% represents the weighted average rate between the pre-enactment U.S. federal statutory corporate tax rate of 35% prior to the January 1, 2018 effective date and the post-enactment U.S. federal statutory corporate tax rate of 21% thereafter.

The Company’s income tax provision was $32.2 million and $36.6 million for the three and nine months ended December 31, 2017, respectively, and $10.4 million and $24.8 million for the three and nine months ended December 31, 2016, respectively. The Company’s effective tax rate was 70.6% and 32.7% for the three and nine months ended December 31, 2017, respectively, and 40.2% and 40.0% for the three and nine months ended December 31, 2016, respectively. Consistent with guidance issued by the SEC, which provides for a measurement period of one year from the enactment date to finalize the accounting for effects of the Tax Reform Act, the Company provisionally recorded an income tax expense of $22.0 million during the three and nine months ended December 31, 2017, due to the re-measurement of its net deferred tax assets due to the lower U.S. federal statutory corporate tax rate. This provisional estimate reflects estimable current year impacts of the Tax Reform Act on the Company’s estimated annual effective tax rate and discrete items resulting directly from the enactment of the Tax Reform Act based on the information available, prepared, or analyzed (including computations) in reasonable detail. Any adjustments to this provisional estimate will be recorded as adjustments to income tax expense in the period in which those adjustments become estimable and/or are finalized, if necessary.

As discussed in “Note 2. Basis of Presentation and Summary of Significant Accounting Policies,” the Company also recognized excess tax benefits associated with stock-based awards of $3.2 million and $24.5 million as an income tax benefit for three and nine months ended December 31, 2017, respectively. These recognized excess tax benefits resulted from restricted stock units that vested or stock options that were exercised during the three and nine months ended December 31, 2017.

The significant differences between the statutory income tax rate and effective income tax rate for the three and nine months ended December 31, 2017 and 2016 were as follows:

| | For the Three Months Ended December 31, | | For the Nine Months Ended December 31, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Statutory income tax rate | 31.5 % | 35.0 % | 31.5 % | 35.0 % |
| Increase resulting from: | | | | |
| Excess tax benefits from stock-based awards | (7.0 ) | — | (21.9) | — |
| Credits | (2.1 ) | (1.2 ) | (2.1 ) | (1.2 ) |
| State taxes, net | 3.7 | 3.3 | 3.7 | 3.3 |
| Permanent differences | 1.7 | 2.7 | 1.7 | 2.7 |
| Effect of the Tax Reform Act on net deferred tax assets | 42.1 | — | 19.6 | — |
| Other | 0.7 | 0.4 | 0.2 | 0.2 |
| Effective tax rate | 70.6 % | 40.2 % | 32.7 % | 40.0 % |

The recently enacted Tax Reform Act allows for a 100% deduction for the repatriation of foreign subsidiary earnings with minimal U.S. income tax consequences other than the one-time deemed repatriation toll charge. Since most of the Company’s cash

and cash equivalents are held by foreign subsidiaries which are disregarded entities for domestic tax purposes, any repatriation of such funds to the U.S. would likely have a nominal tax impact, if any.

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 the Company's federal tax return for fiscal 2016 for examination. In September 2017, the Company was notified by German tax authorities that our ECP subsidiary in Germany will be audited for the year ended December 31, 2014 and the three months ended March 31, 2015. 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 October 2017, the Company entered into a purchase and sale agreement to purchase its corporate headquarters for approximately $16.5 million and terminated its existing lease arrangement (See Note 5).

In February 2017, the Company entered into a lease agreement for an additional 21,603 square feet of office space in Danvers, Massachusetts, which expires on July 31, 2022. In December 2017, the Company entered into an amendment to this lease to extend the lease term through August 31, 2025 and to add an additional 6,607 square feet of space in which rent would begin around June 1, 2018. The amendment also allows the Company a right of first offer to purchase the property from January 1, 2018 through August 31, 2035, if the lessor decides to sell the building or receives an offer to purchase the building from a third-party buyer. The annual rent expense for the lease is estimated to be $0.4 million.

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

In October 2016, the Company entered into a lease agreement for an office in Tokyo, Japan and expires in September 2021. The office houses administrative, regulatory, and training personnel in connection with the Company's commercial launch in Japan. The annual rent expense for the lease is estimated to be $0.9 million.

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.

In April 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 with the government in this investigation and is exploring 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, a subsidiary of Abbott Laboratories, 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 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.

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 Company's patents were upheld in an amended form to focus on the structure and interaction of the magnets in the clutch. The Federal Patent Court found certain unamended claims to be invalid. The Company is appealing the decision with respect to the unamended claims.

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, a European pigtail patent, and the German pigtail patent. The infringement trial has been stayed, pending resolution of the German nullity actions.

In February 2017, Thoratec filed an opposition in the European Patent Office against a Company owned patent acquired in connection with the acquisition of ECP and AIS relating to a housing structure for an expandable pump. The Company filed an initial response to the opposition in July 2017. In December 2017, Thoratec filed an opposition in the European Patent Office against a Company owned patent acquired in connection with the acquisition of ECP and AIS relating to a pump having a shaft cap with an atraumatic ball. The Company's due date for responding to the opposition is May 27, 2018.

In December 2015, the Company received a letter from Maquet Cardiovascular LLC, or Maquet, a subsidiary of the Getinge Group, 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 notified the Company that its pending U.S. patent application had been issued as a U.S. patent, 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. In May 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 a 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 issued as a patent on October 17, 2017. These four issued patents will 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 first 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 claims, Lanham Act claims, and the trademark cancellation claims. On October 26, 2017, Maquet filed an amended answer, adding a new counterclaim alleging infringement of an additional seventh patent. Maquet did not seek leave to amend the pleadings and did not first consult with the Company concerning this addition. On November 11, 2017, after Maquet refused to withdraw the patent, the Company filed a motion to strike the seventh patent of Maquet's counterclaims on the grounds that Maquet did not seek leave to add the patent and had amended its pleadings after the deadline set by the Court. On November 15, 2017, Maquet informed the Court that it would agree to voluntarily withdraw the seventh patent. In response on November 22, 2017, Maquet filed a second lawsuit in D. Mass alleging that the Company's Impella 2.5, Impella CP, and Impella 5.0 heart pumps infringe certain claims of the seventh patent. In the complaint Maquet seeks injunctive relief and monetary damages in the form of a reasonable royalty, with three times the amount for alleged willful infringement. Discovery is ongoing and the Markman Hearing on claim interpretation has been rescheduled for March 13, 2018.

With regard to the first six Maquet patents mentioned above, 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. In September and October 2017, the PTAB denied institution on these IPR requests filed by the Company. In September 2017, the Company filed additional IPRs and the institution decisions are expected in March 2018.

The Company cannot estimate what the potential outcome of these claims will be at this time. Discovery is ongoing and the hearing on claim interpretation is scheduled for March 2018.

The Company is unable to estimate the 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 11% of total product revenue in each of the three and nine months ended December 31, 2017, respectively, and 9% of total product revenue in each of the three and nine months ended December 31, 2016, respectively. Most of the Company's long-lived assets are located in the U.S. except for $31.7 million and $23.2 million at December 31, 2017 and March 31, 2017, respectively, which are located primarily in Germany.

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; the anticipated launch dates of technological improvements in existing products and studies in pipeline products; expected capital expenditures for the fiscal year ending March 31, 2018; commercial plans for our products into new markets such as Japan; expected enrollment in our prospective feasibility study; 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, including, 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 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 the U.S. 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 our 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.

In September 2017, we received a PMA from the FDA for the Impella RP® heart pump. This latest approval follows the prior FDA Humanitarian Device Exemption (HDE) received in January 2015 and adds the Impella RP heart pump to our platform of PMA approved devices. The Impella RP heart pump is indicated for providing temporary right ventricular support for up to 14 days in patients with a body surface area ≥1.5 m², who develop acute right heart failure or decompensation following left ventricular assist device implantation, myocardial infarction, heart transplant, or open-heart surgery. With this approval, the Impella RP heart pump is the only percutaneous temporary ventricular support device that is FDA-approved as safe and effective for right heart failure as stated in the indication.

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 received approval from the MHLW for reimbursement for the Impella 2.5 and 5.0 heart pumps. Reimbursement in Japan for the Impella 2.5 and 5.0 is equivalent to our average Impella sales price in the U.S. and we commenced commercialization in Japan during the three months ended September 30, 2017. The first Japanese patient was treated with the Impella device in October 2017 and we are conducting a controlled Impella device launch at a limited number of hospitals. 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 multi-center feasibility study, STEMI Door to Unloading with Impella CP system in acute myocardial infarction. The trial focuses on the 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 FDA approval in October 2016, will enroll up to 50 patients at 10 sites. We expect to complete enrollment in fiscal 2019.

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

Our Existing 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.

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.

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 received approval from the MHLW for reimbursement for the Impella 2.5 and 5.0 heart pumps. Reimbursement in Japan for the Impella 2.5 and 5.0 is equivalent to our average Impella sales price in the U.S. and we commenced commercialization in Japan during the three months ended September 30, 2017. The first Japanese patient was treated with the Impella device in October 2017 and we are conducting a controlled Impella device launch at a limited number of hospitals. We do not expect to have any significant revenue in Japan during fiscal 2018.

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 multi-center feasibility study, STEMI Door to Unloading with Impella CP system in acute myocardial infarction. The trial focuses on the 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 FDA approval in October 2016, will enroll up to 50 patients at 10 sites. 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 are currently developing optical sensor technology which is intended to provide enhanced monitoring capability, reduce setup time and improve ease of use for physicians. The optical sensor technology is approved under CE Mark in Europe and we anticipate beginning to incorporate the technology into our Impella CP devices in fiscal 2019.

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 the 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 July 2017, we received approval from the MHLW for reimbursement for the Impella 2.5 and 5.0 heart pumps. Reimbursement in Japan for the Impella 2.5 and 5.0 is equivalent to our average Impella sales price in the U.S. and we commenced commercialization in Japan during the three months ended September 30, 2017. The first Japanese patient was treated with the Impella device in October 2017 and we are conducting a controlled Impella launch at a limited number of hospitals. 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 an 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. In January 2015, we received HDE approval for the Impella RP device from the FDA.

In September 2017, we received a PMA from the FDA for the Impella RP heart pump. This latest approval follows the prior FDA HDE received in January 2015 and adds the Impella RP heart pump to our platform of PMA approved devices. The Impella RP heart pump is indicated for providing temporary right ventricular support for up to 14 days in patients with a body surface area ≥1.5 $m^2$, who develop acute right heart failure or decompensation following left

ventricular assist device implantation, myocardial infarction, heart transplant, or open-heart surgery. With this approval, the Impella RP heart pump is the only percutaneous temporary ventricular support device that is FDA-approved as safe and effective for right heart failure as stated in the indication.

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.

Our Product Pipeline

Impella 5.5™

The Impella 5.5™ device is designed to be a percutaneous micro heart pump with integrated motors and sensors. The Impella 5.5™ device is designed to be smaller, provide months of hemodynamic support and is expected to allow for greater than five liters of blood flow per minute. We anticipate conducting a first-in-man trial outside of the U.S. in calendar year 2018. The Impella 5.5™ pump is still in development and has not been approved for commercial use or sale.

Impella ECP™

The Impella ECP™ pump is designed for blood flow of greater than three liters per minute. It is intended to be delivered on a standard sized catheter and will include an expandable inflow in the left ventricle. We anticipate conducting a first-in-man trial outside of the U.S. in calendar year 2018. The Impella ECP™ pump is still in development and has not been approved for commercial use or sale.

In July 2014, we acquired all of the issued shares of ECP Entwicklungsgesellschaft mbH, or ECP, a German limited liability company based in Berlin, Germany, 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.

Impella BTR™

The Impella BTR™ device is designed to be a percutaneous micro heart pump with integrated motors and sensors. The Impella BTR™ device is designed to be smaller, provide up to one year of hemodynamic support and is expected to allow for greater than five liters of blood flow per minute. The Impella BTR™ device also includes a wearable driver designed for hospital discharge. The Impella BTR™ pump is still in 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 and nine months ended December 31, 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 December 31, | | For the Nine Months Ended December 31, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Revenue: | | | | |
| Product revenue | 100.0 % | 100.0 % | 100.0 % | 100.0 % |
| | | | | |
| Costs and expenses as a percentage of total revenue: | | | | |
| Cost of product revenue | 16.2 | 16.6 | 16.3 | 16.0 |
| Research and development | 11.5 | 14.3 | 12.9 | 15.6 |
| Selling, general and administrative | 43.2 | 46.9 | 44.7 | 49.3 |
| Total costs and expenses | 70.9 | 77.8 | 73.9 | 80.9 |
| Income from operations | 29.1 | 22.2 | 26.1 | 19.1 |
| Income tax provision and other | 20.4 | 8.7 | 8.1 | 7.5 |
| Net income as a percentage of total revenue | 8.7 % | 13.5 % | 18.0 % | 11.6 % |

Three and nine months ended December 31, 2017 compared with the three and nine months ended December 31, 2016

Revenue

Our revenues are comprised of the following:

| | For the Three Months Ended December 31, | | For the Nine Months Ended December 31, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| | (in $000's) | | (in $000's) | |
| Impella product revenue | $147,989 | $109,235 | $402,583 | $304,759 |
| Service and other revenue | 6,000 | 4,791 | 16,619 | 13,945 |
| Other products | - | 598 | - | 1,837 |
| Total product revenue | 153,989 | 114,624 | 419,202 | 320,541 |
| Funded research and development | 33 | 50 | 111 | 83 |
| Total revenue | $154,022 | $114,674 | $419,313 | $320,624 |

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 primarily includes sales of the AB5000 that we no longer actively market.

Total revenue for the three months ended December 31, 2017 increased $39.3 million, or 34%, to $154.0 million from $114.7 million for three months ended December 31, 2016. Total revenue for the nine months ended December 31, 2017 increased $98.7 million, or 31%, to $419.3 million from $320.6 million for nine months ended December 31, 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 December 31, 2017 increased by $38.8 million, or 36%, to $148.0 million from $109.2 million for three months ended December 31, 2016. Impella product revenue for the nine months ended December 31, 2017 increased by $97.8 million, or 32%, to $402.6 million from $304.8 million for the nine months ended December 31, 2016. Most of the increase in Impella product revenue was from increased device sales in the U.S., 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. We expect product revenue from our Impella devices to continue to increase due to our recent PMAs in the U.S. for our Impella devices, including the PMA approval on the Impella RP device received in September 2017, continued utilization for high risk PCI procedures and ongoing cardiogenic shock, our continued controlled launch of Impella devices outside of the U.S. with a focus on Germany and Japan.

Service and other revenue for the three months ended December 31, 2017 increased by $1.2 million, or 25%, to $6.0 million from $4.8 million for three months ended December 31, 2016. Service and other revenue for the nine months ended December 31,

2017 increased by $2.7 million, or 19%, to $16.6 million from $13.9 million for the nine months ended December 31, 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 at many of our existing higher volume customer sites and continue to sell additional consoles to new customer 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 actively marketing 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 the three months ended December 31, 2017 increased by $6.0 million, or 32%, to $25.0 million from $19.0 million for the three months ended December 31, 2016. Gross margin was 84% for the three months ended December 31, 2017 and 83% for the three months ended December 31, 2016.

Cost of product revenue for the nine months ended December 31, 2017 increased by $17.1 million, or 33%, to $68.5 million from $51.4 million for the nine months ended December 31, 2016. Gross margin was 84% for each of the nine months ended December 31, 2017 and 2016, respectively.

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 increase in gross margin for the three months ended December 31, 2017 was due to the shipment of more Impella pumps and higher manufacturing production during the quarter as compared to the prior year.

Research and Development Expenses

Research and development expenses for three months ended December 31, 2017 increased by $1.4 million, or 9%, to $17.7 million from $16.3 million for three months ended December 31, 2016. Research and development expenses for the nine months ended December 31, 2017 increased $3.9 million, or 8%, to $54.0 million from $50.1 million for the nine months ended December 31, 2016. The increase in research and development expenses was primarily due to product development initiatives on our existing products and new technologies in development such as Impella ECP™, Impella 5.5™ and Impella BTR™ as we expanded our engineering organization, increased clinical spending primarily related to our STEMI trial and continued our focus on quality initiatives for our existing 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.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for three months ended December 31, 2017 increased by $12.7 million, or 24%, to $66.6 million from $53.9 million for three months ended December 31, 2016. Selling, general and administrative expenses for the nine months ended December 31, 2017 increased by $29.1 million, or 18%, to $187.2 million from $158.1 million for the nine months ended December 31, 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 sales and 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, Impella LD and Impella RP 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 continue our expansion in Japan and other new markets outside of the U.S. We also expect to continue to incur significant legal expenses for the foreseeable future related to the FCA Investigation and patent related matters.

Income Tax Provision

Our income tax provision was $32.2 million and $36.6 million for the three and nine months ended December 31, 2017, respectively, and $10.4 million and $24.8 million for the three and nine months ended December 31, 2016, respectively. Our effective tax rate was 70.6% and 32.7% for the three and nine months ended December 31, 2017, respectively, and 40.2% and 40.0% for the three and nine months ended December 31, 2016, respectively. The increase in the effective tax rate for the three and nine months ended December 31, 2017 was primarily due to the $22.0 million provisional income tax expense estimate from the re-measurement of our net deferred tax assets due to the Tax Reform Act, as discussed in “Note 9. Income Taxes.” As discussed in “Note 2. Basis of Presentation and Summary of Significant Accounting Policies,” we also recognized excess tax benefits associated with stock-based awards of $3.2 million and $24.5 million as an income tax benefit for three and nine months ended December 31, 2017, respectively. These recognized excess tax benefits resulted from restricted stock units that vested or stock options that were exercised during the three and nine months ended December 31, 2017, respectively. These recognized excess tax benefits resulted from restricted stock units that vested or stock options that were exercised during the three and nine months ended December 31, 2017.

Net Income

For the three months ended December 31, 2017, net income was $13.4 million, or $0.30 per basic share and $0.29 per diluted share, compared to $15.4 million, or $0.36 per basic share and $0.34 per diluted share for three months ended December 31, 2016. For the nine months ended December 31, 2017, net income was $75.3 million, or $1.71 per basic share and $1.65 per diluted share, compared to $37.2 million, or $0.86 per basic share and $0.83 per diluted share for the nine months ended December 31, 2016. As discussed above, the enactment of the Tax Reform Act resulted in a decrease in net income of $22.0 million, or $0.50 per basic and $0.48 per diluted share for the three and nine months ended December 31, 2017. As discussed above, the adoption of ASU 2016-09 resulted in an increase in net income of $0.07 per basic and diluted share for the three months ended December 31, 2017 and $0.56 per basic share and $0.54 per diluted share for the nine months ended December 31, 2017.

Our 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 December 31, 2017, our total cash, cash equivalents and marketable securities totaled $350.7 million, an increase of $73.6 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 nine months ended December 31, 2017.

Following is a summary of our cash flow activities:

| | For the Nine Months Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Net cash provided by operating activities | $136,147 | $77,861 |
| Net cash used for investing activities | (112,307) | (57,109) |

| | | |
|---|---|---|
| Net cash used for financing activities | (11,688) | (6,533) |
| Effect of exchange rate changes on cash | (690) | (1,381) |
| Net increase in cash and cash equivalents | $11,462 | $12,838 |

Cash Provided by Operating Activities

For the nine months ended December 31, 2017, cash provided by operating activities consisted of net income of $75.3 million, adjustments for non-cash items of $76.5 million and cash used in working capital of $15.7 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 $29.2 million of stock-based compensation expense, a $34.7 million change in deferred tax provision due to the revaluation of our net deferred tax assets related to the Tax Reform Act, $8.1 million of depreciation expense on property and equipment and $3.2 million in inventory and other asset write-downs. The change in cash from working capital included a $10.3 million increase in accounts receivable associated with higher revenue, $12.0 million increase in inventory to support growing demand for our Impella devices, a $6.5 million increase in accounts payable and accrued expenses and a $1.2 increase in deferred revenue.

For the nine months ended December 31, 2016, cash provided by operating activities consisted of net income of $37.2 million, adjustments for non-cash items of $45.9 million and cash used in working capital of $5.2 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 $24.5 million of stock-based compensation expense, an $18.8 million change in deferred tax provision, $4.6 million in excess tax benefits on stock-based awards, $4.5 million of depreciation expense on property, plant and equipment and $2.1 million in inventory write-downs. The change in cash from working capital included a $7.6 million increase in accounts receivable associated with our higher revenue, an $8.6 million increase in inventory to support growing demand for our Impella devices, $14.6 million increase in accounts payable and accrued expenses and a $0.3 million increase in deferred revenue.

Cash Used for Investing Activities

For the nine months ended December 31, 2017, net cash used for investing activities primarily consisted of $61.7 million in purchases (net of maturities) of marketable securities and $44.2 million for the purchase of property and equipment primarily related to the purchase of our corporate headquarters building in Danvers, Massachusetts during the three months ended December 31, 2017 and the continued expansion of manufacturing capacity, office space and research development facilities in Danvers and Aachen, Germany. We also have made $6.4 million of investments in private medical technology companies during fiscal 2018.

For the nine months ended December 31, 2016, net cash used for investing activities primarily consisted of $32.9 million in purchases (net of maturities) of marketable securities and $24.0 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 $50 million to $60 million. Most of the significant capital expenditures were for software development projects and expanding research facilities, manufacturing capacity and building improvements in our Danvers, Massachusetts, Aachen, Germany, Berlin, Germany and Tokyo, Japan locations.

Cash Provided by Financing Activities

For the nine months ended December 31, 2017, net cash used for financing activities included $19.9 million in payments in lieu of issuance of common stock for payroll withholding taxes upon vesting of certain equity awards and $0.5 million in principal payments on capital lease obligation. The capital lease obligation previously recorded was removed as a result of the acquisition of our headquarters in October 2017. These amounts were offset by $7.6 million in proceeds from the exercise of stock options and $1.1 million in proceeds from the issuance of stock under the employee stock purchase plan.

For the nine months ended December 31, 2016, net cash used for financing activities included $19.9 million in payments in lieu of issuance of common stock for payroll withholding taxes upon vesting of certain equity awards and $0.3 million in principal payments on capital lease obligation. These amounts were offset by $8.3 million in proceeds from the exercise of stock options, $4.6 million in excess tax benefits on stock-based awards and $0.8 million in proceeds from the issuance of stock under the employee stock purchase plan.

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, 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, continue our commercial launch in Japan and expand to potential new markets, increase clinical spending, legal expenses related to the FCA Investigation and ongoing patent litigation, payments in lieu of issuance of common stock for payroll withholding taxes upon vesting of certain equity awards 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 December 31, 2017 we had no long-term debt outstanding.

Marketable securities at December 31, 2017 and March 31, 2017 consisted of $300.2 million and $238.1 million held in investment 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 $13.7 million and $8.2 million at December 31, 2017 and March 31, 2017, respectively. Our operating income outside the U.S. is deemed to be permanently reinvested in foreign jurisdictions. The recently enacted Tax Reform Act allows for a 100% deduction for the repatriation of foreign subsidiary earnings with minimal U.S. income tax consequences other than the one-time deemed repatriation toll charge. Since most of our cash and cash equivalents are held by foreign subsidiaries which are disregarded entities for domestic tax purposes, any repatriation of such funds to the U.S. would likely have a nominal tax impact, if any.

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 December 31, 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 December 31, 2017, the result would have been a reduction of stockholders' equity of approximately $9.7 million.

Fair Value of Financial Instruments

At December 31, 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.

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 December 31, 2017. Based on this evaluation, our principal executive officer and principal financial officer concluded that, as of December 31, 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 third 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—Contingencies” 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, as supplemented by our Quarterly Report on Form 10-Q for the quarter ended June 30, 2017.

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 |
| 10.1 | Lease agreement for additional space in Danvers, Massachusetts dated February 2, 2017 | X | | | |
| 10.2 | Lease agreement amendment for additional space in Danvers, Massachusetts dated December 14, 2017 | X | | | |
| 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 December 31, 2017, formatted in Extensible Business Reporting Language (XBRL): (i) Condensed Consolidated Balance Sheets as of December 31, 2017 and March 31, 2017; (ii) Condensed Consolidated Statements of Operations for the three and nine months ended December 31, 2017 and 2016; (iii) Condensed Consolidated Statements of Comprehensive Income for the three and nine months ended December 31, 2017 and 2016; (iv) Condensed Consolidated Statements of Cash Flows for the nine months ended December 31, 2017 and 2016; and (v) Notes to Condensed Consolidated Financial Statements. | X |

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: February 6, 2018 /s/ IAN W. MCLEOD
Ian W. McLeod
Vice President and Corporate Controller
(Interim Principal Financial and
Accounting Officer)