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**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 September 30, 2016

Or

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

For the transition period from            to

Commission file number 000-30941

**AXCELIS TECHNOLOGIES, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**34-1818596**  
(IRS Employer  
Identification No.)

**108 Cherry Hill Drive**  
**Beverly, Massachusetts 01915**  
(Address of principal executive offices, including zip code)

**(978) 787-4000**  
(Registrant's telephone number, including area code)

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

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

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

Large accelerated filer

Accelerated filer

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

Smaller reporting company

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 October 31, 2016 there were 29,368,142 shares of the registrant's common stock outstanding.

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**PART 1—FINANCIAL INFORMATION**

**Item 1. Financial Statements.**

**Axcelis Technologies, Inc.**  
**Consolidated Statements of Operations**  
(In thousands, except per share amounts)  
(Unaudited)

	Three months ended		Nine months ended	
	September 30,		September 30,	
	2016	2015	2016	2015
Revenue:				
Product	\$ 59,302	\$ 73,795	\$ 180,336	\$ 214,073
Services	6,348	5,522	17,286	16,964
Total revenue	<u>65,650</u>	<u>79,317</u>	<u>197,622</u>	<u>231,037</u>
Cost of revenue:				
Product	36,360	45,698	111,262	137,443
Services	5,186	4,440	13,709	13,861
Total cost of revenue	<u>41,546</u>	<u>50,138</u>	<u>124,971</u>	<u>151,304</u>
Gross profit	24,104	29,179	72,651	79,733
Operating expenses:				
Research and development	8,493	8,581	25,607	24,679
Sales and marketing	5,992	6,322	17,742	17,808
General and administrative	5,988	6,584	18,262	18,916
Restructuring charges	—	—	282	18
Total operating expenses	<u>20,473</u>	<u>21,487</u>	<u>61,893</u>	<u>61,421</u>
Income from operations	3,631	7,692	10,758	18,312
Other (expense) income:				
Interest income	53	7	161	16
Interest expense	(1,342)	(1,274)	(3,727)	(3,627)
Other, net	(55)	(167)	(352)	(551)
Total other (expense) income	<u>(1,344)</u>	<u>(1,434)</u>	<u>(3,918)</u>	<u>(4,162)</u>
Income before income taxes	2,287	6,258	6,840	14,150
Income tax provision (benefit)	136	157	(196)	298
Net income	<u>\$ 2,151</u>	<u>\$ 6,101</u>	<u>\$ 7,036</u>	<u>\$ 13,852</u>
Net income per share:				
Basic	<u>\$ 0.07</u>	<u>\$ 0.21</u>	<u>\$ 0.24</u>	<u>\$ 0.49</u>
Diluted	<u>\$ 0.07</u>	<u>\$ 0.20</u>	<u>\$ 0.23</u>	<u>\$ 0.46</u>
Shares used in computing net income per share:				
Basic weighted average common shares	<u>29,221</u>	<u>28,700</u>	<u>29,118</u>	<u>28,480</u>
Diluted weighted average common shares	<u>31,037</u>	<u>30,466</u>	<u>30,760</u>	<u>30,155</u>

See accompanying Notes to these Consolidated Financial Statements

**Axcelis Technologies, Inc.**  
**Consolidated Statements of Comprehensive Income**  
**(In thousands)**  
**(Unaudited)**

	<b>Three months ended</b>		<b>Nine months ended</b>	
	<b>September 30,</b>		<b>September 30,</b>	
	<b>2016</b>	<b>2015</b>	<b>2016</b>	<b>2015</b>
Net income	\$ 2,151	\$ 6,101	\$ 7,036	\$ 13,852
Other comprehensive income (loss):				
Foreign currency translation adjustments	936	(1,672)	1,529	(2,353)
Amortization of actuarial gains from pension plan	26	18	78	56
Total other comprehensive income (loss)	<u>962</u>	<u>(1,654)</u>	<u>1,607</u>	<u>(2,297)</u>
Comprehensive income	<u>\$ 3,113</u>	<u>\$ 4,447</u>	<u>\$ 8,643</u>	<u>\$ 11,555</u>

See accompanying Notes to these Consolidated Financial Statements

**Axcelis Technologies, Inc.**  
**Consolidated Balance Sheets**  
**(In thousands, except per share amounts)**  
**(Unaudited)**

	September 30, 2016	December 31, 2015
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 65,623	\$ 78,889
Accounts receivable, net	44,993	36,868
Inventories, net	117,001	109,408
Prepaid expenses and other current assets	4,701	4,792
Total current assets	232,318	229,957
Property, plant and equipment, net	30,804	30,031
Long-term restricted cash	6,865	6,936
Other assets	21,163	14,860
Total assets	<u>\$ 291,150</u>	<u>\$ 281,784</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 20,241	\$ 19,849
Accrued compensation	4,508	9,059
Warranty	2,597	3,363
Income taxes	235	143
Deferred revenue	7,074	7,863
Other current liabilities	5,057	4,091
Total current liabilities	39,712	44,368
Sale leaseback obligation	47,586	47,586
Long-term deferred revenue	788	679
Other long-term liabilities	5,136	5,387
Total liabilities	93,222	98,020
Commitments and contingencies (Note 14)		
Stockholders' equity:		
Preferred stock, \$0.001 par value, 30,000 shares authorized; none issued or outstanding	—	—
Common stock, \$0.001 par value, 75,000 shares authorized; 29,347 shares issued and outstanding at September 30, 2016; 29,025 shares issued and 28,995 shares outstanding at December 31, 2015	29	29
Additional paid-in capital	533,392	529,089
Treasury stock, at cost, no shares at September 30, 2016 and 30 shares at December 31, 2015	—	(1,218)
Accumulated deficit	(335,669)	(342,705)
Accumulated other comprehensive income (loss)	176	(1,431)
Total stockholders' equity	197,928	183,764
Total liabilities and stockholders' equity	<u>\$ 291,150</u>	<u>\$ 281,784</u>

See accompanying Notes to these Consolidated Financial Statements

**Axcelis Technologies, Inc.**  
**Consolidated Statements of Cash Flows**  
(In thousands)  
(Unaudited)

	Nine months ended September 30,	
	2016	2015
<b>Cash flows from operating activities</b>		
Net income	\$ 7,036	\$ 13,852
Adjustments to reconcile net income to net cash (used in) provided by operating activities:		
Depreciation and amortization	3,193	3,608
Gain on sale of equipment	(162)	—
Deferred taxes	465	84
Stock-based compensation expense	3,930	4,467
Provision for doubtful accounts	106	—
Provision for excess and obsolete inventory	1,142	835
Changes in operating assets & liabilities:		
Accounts receivable	(7,898)	3,541
Inventories	(7,534)	(19,096)
Prepaid expenses and other current assets	(58)	(3,637)
Accounts payable and other current liabilities	(4,122)	9,849
Deferred revenue	(704)	2,967
Income taxes	85	73
Other assets and liabilities	(8,494)	(4,120)
Net cash (used in) provided by operating activities	(13,015)	12,423
<b>Cash flows from investing activities</b>		
Proceeds from sale of equipment	162	—
Expenditures for property, plant and equipment	(2,261)	(1,329)
Net cash used in investing activities	(2,099)	(1,329)
<b>Cash flows from financing activities</b>		
Decrease in restricted cash	71	764
Financing fees and other expenses	(146)	(847)
Principal payments on term loan	—	(14,530)
Principal payments on sale leaseback obligation	—	(392)
Proceeds from sale leaseback obligation	—	48,940
Proceeds from exercise of stock options	1,737	3,537
Proceeds from Employee Stock Purchase Plan	—	213
Net cash provided by financing activities	1,662	37,685
Effect of exchange rate changes on cash and cash equivalents	186	339
Net (decrease) increase in cash and cash equivalents	(13,266)	49,118
Cash and cash equivalents at beginning of period	78,889	30,753
Cash and cash equivalents at end of period	<u>\$ 65,623</u>	<u>\$ 79,871</u>
<b>Supplemental disclosure of total cash, cash equivalents and restricted cash:</b>		
Cash and cash equivalents at end of period	\$ 65,623	\$ 79,871
Restricted cash at end of period	6,865	61
Total cash, cash equivalents and restricted cash at end of period	<u>\$ 72,488</u>	<u>\$ 79,932</u>

See accompanying Notes to these Consolidated Financial Statements

**Axcelis Technologies, Inc.**  
**Notes to Consolidated Financial Statements (Unaudited)**

**Note 1. Nature of Business**

Axcelis Technologies, Inc. (“Axcelis” or the “Company”) was incorporated in Delaware in 1995, and is a worldwide producer of ion implantation and other processing equipment used in the fabrication of semiconductor chips in the United States, Europe and Asia. In addition, the Company provides extensive aftermarket service and support, including spare parts, equipment upgrades, used equipment and maintenance services to the semiconductor industry.

The accompanying unaudited consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. In the opinion of management, all adjustments which are of a normal recurring nature and considered necessary for a fair presentation of these financial statements have been included. Operating results for the interim periods presented are not necessarily indicative of the results that may be expected for other interim periods or for the year as a whole.

The balance sheet at December 31, 2015 has been derived from the audited financial statements at that date but does not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. For further information, refer to the consolidated financial statements and footnotes thereto included in Axcelis Technologies, Inc.’s Annual Report on Form 10-K for the year ended December 31, 2015.

**Note 2. Correction of Accounting Error in Prior Period**

Subsequent to March 31, 2016, but prior to filing the Form 10-Q for the quarter ended June 30, 2016, the Company discovered a cumulative error associated with the elimination of profits on sales of inventory to its subsidiaries. This error had no impact upon the Company’s consolidated statement of operations or consolidated statement of cash flows subsequent to the year ended December 31, 2010. The following financial statement line items reported in the Company’s consolidated balance sheets for the years ended December 31, 2015 and 2014 were affected by the correction of this accounting error:

(in thousands)	Previously Reported December 31, 2015	Adjusted December 31, 2015	Effect of Change
Inventory, net	\$ 115,904	\$ 109,408	\$ (6,496)
Total current assets	236,453	229,957	(6,496)
Total assets	288,280	281,784	(6,496)
Accumulated deficit	(336,209)	(342,705)	(6,496)
Total stockholders' equity	190,260	183,764	(6,496)
Total liabilities and stockholders' equity	\$ 288,280	\$ 281,784	\$ (6,496)

  

(in thousands)	Previously Reported December 31, 2014	Adjusted December 31, 2014	Effect of Change
Inventory, net	\$ 104,063	\$ 97,567	\$ (6,496)
Total current assets	185,135	178,639	(6,496)
Total assets	227,654	221,158	(6,496)
Accumulated deficit	(350,887)	(357,383)	(6,496)
Total stockholders' equity	168,352	161,856	(6,496)
Total liabilities and stockholders' equity	\$ 227,654	\$ 221,158	\$ (6,496)

This error was associated with transactions occurring prior to September 2010, at which time the Company revised its methodology to compute and eliminate intercompany profits. However, the Company failed to identify and record an entry to eliminate the cumulative error resulting from the prior methodology. This \$6.5 million error resulted in an overstatement of inventory and a cumulative understatement of cost of product revenue as of September 2010. Thereafter, the effect was an overstatement of inventory and understatement of accumulative deficit for each subsequent reporting period. The consolidated balance sheets as of December 31, 2015 and 2014 have been revised to reflect the correction of the error through a decrease in inventory and an increase in accumulated deficit of \$6.5 million. In the opinion of management, the effect is not material to the consolidated financial position or results of operations for any previously reported period. However, prior year amounts will be revised, as reflected above, in future filings.

**Note 3. 1-for-4 Reverse Stock Split**

As of 6:00 PM Eastern Time on June 30, 2016, the Company effected a 1-for-4 reverse stock split of its common stock. The Company continues to be traded under its unchanged symbol "ACLS." All previously reported common stock share amounts in the accompanying financial statements and related notes have been retroactively adjusted to reflect the reverse stock split. As a result of the reduced number of shares outstanding after the reverse stock split, the stated capital attributable to common stock on the Company's balance sheet (which consists of the unchanged \$0.001 par value per share multiplied by the aggregate number of shares issued and outstanding), has been reduced. Correspondingly, the Company's additional paid-in capital account, which consists of the difference between its stated capital and the aggregate amount paid to the Company upon issuance of all currently outstanding shares of its common stock, has been credited with the amount by which the stated capital was reduced. The Company's stockholders' equity, in the aggregate, remains unchanged.

Immediately prior to the effectiveness of the reverse stock split, the Company retired 120,000 shares of common stock held in treasury to the status of authorized and unissued.

**Note 4. Stock-Based Compensation**

The Company maintains the Axcelis Technologies, Inc. 2012 Equity Incentive Plan (the "2012 Equity Plan"), which became effective on May 2, 2012, and permits the issuance of options, restricted stock, restricted stock units and performance awards to selected employees, directors and consultants of the Company. The Company's 2000 Stock Plan (the "2000 Stock Plan"), expired on May 1, 2012 and no new grants may be made under that plan after that date. However, unexpired awards granted under the 2000 Stock Plan remain outstanding and subject to the terms of the 2000 Stock Plan. The Company also maintains the Axcelis Technologies, Inc. Employee Stock Purchase Plan (the "ESPP"), an Internal Revenue Code Section 423 plan.

The 2012 Equity Plan and the ESPP are more fully described in Note 14 to the consolidated financial statements in the Company's 2015 Annual Report on Form 10-K.

The Company recognized stock-based compensation expense of \$1.9 million and \$1.4 million for the three month periods ended September 30, 2016 and 2015, respectively. The Company recognized stock-based compensation expense of \$3.9 million and \$4.5 million for the nine month periods ended September 30, 2016 and 2015, respectively. These amounts include compensation expense related to restricted stock units, non-qualified stock options and stock to be issued to participants under the ESPP.

In the three month and nine month periods ended September 30, 2016, the Company issued 0.2 million and 0.4 million shares of common stock, respectively, in connection with the exercise of stock options, resulting in proceeds of \$1.2 million and \$1.7 million, respectively.

**Note 5. Computation of Net Earnings per Share**

Basic earnings per share is computed by dividing income available to common stockholders (the numerator) by the weighted-average number of common shares outstanding (the denominator) for the period. The computation of diluted earnings per share is similar to basic earnings per share, except that the denominator is increased by the number of additional common shares that would have been outstanding if the potentially dilutive common shares issuable for stock options, restricted stock units and employee stock purchase plan accounts had been issued, calculated using the treasury stock method. The earnings per share amounts presented within our financial statements and related notes and the related basic and diluted weighted average share amounts stated below have been revised to reflect the 1-for-4 reserve stock split described in Note 3 above.

The components of net earnings per share are as follows:

	Three months ended September 30,		Nine months ended September 30,	
	2016	2015	2016	2015
(in thousands, except per share data)				
Net income available to common stockholders	\$ 2,151	\$ 6,101	\$ 7,036	\$ 13,852
Weighted average common shares outstanding used in computing basic earnings per share	29,221	28,700	29,118	28,480
Incremental options and RSUs	1,816	1,766	1,642	1,675
Weighted average common shares outstanding used in computing diluted net earnings per share	31,037	30,466	30,760	30,155
Net earnings per share				
Basic	\$ 0.07	\$ 0.21	\$ 0.24	\$ 0.49
Diluted	\$ 0.07	\$ 0.20	\$ 0.23	\$ 0.46

Diluted weighted average common shares outstanding does not include options and restricted stock units outstanding to purchase 0.9 million and 0.9 million common equivalent shares for the three month periods ended September 30, 2016 and 2015, respectively, and does not include options and restricted stock units outstanding to purchase 0.9 million and 1.0 million common equivalent shares for the nine month periods ended September 30, 2016 and 2015, respectively, as their effect would have been anti-dilutive.

**Note 6. Accumulated Other Comprehensive Income (Loss)**

The following table presents the changes in accumulated other comprehensive income (loss), net of tax, by component for the nine months ended September 30, 2016:

	Foreign currency	Defined benefit pension plan	Total
(in thousands)			
Balance at December 31, 2015	\$ (744)	\$ (687)	\$ (1,431)
Other comprehensive income and pension reclassification <sup>(1)</sup>	1,529	78	1,607
Balance at September 30, 2016	\$ 785	\$ (609)	\$ 176

(1) The tax effect for pension reclassification was not material to the consolidated financial statements.

**Note 7. Inventories, net**

The components of inventories are as follows:

	September 30, 2016	December 31, 2015
	(in thousands)	
Raw materials	\$ 77,498	\$ 72,070
Work in process	30,903	29,219
Finished goods (completed systems)	8,600	8,119
	<u>\$ 117,001</u>	<u>\$ 109,408</u>

The value of raw materials shown for December 31, 2015, reflects the correction of an immaterial error discussed in Note. 2.

When recorded, inventory reserves are intended to reduce the carrying value of inventories to their net realizable value. The Company establishes inventory reserves when conditions exist that indicate inventory may be in excess of anticipated demand or is obsolete based upon assumptions about future demand for the Company's products or market conditions. The Company regularly evaluates the ability to realize the value of inventories based on a combination of factors including the following: forecasted sales or usage, estimated product end of life dates, estimated current and future market value and new product introductions. Purchasing and usage alternatives are also explored to mitigate inventory exposure. As of September 30, 2016 and December 31, 2015, inventories are stated net of inventory reserves of \$9.4 million and \$10.5 million, respectively.

**Note 8. Product Warranty**

The Company generally offers a one year warranty for all of its systems, the terms and conditions of which vary depending upon the product sold. For all systems sold, the Company accrues a liability for the estimated cost of standard warranty at the time of system shipment and defers the portion of systems revenue attributable to the fair value of non-standard warranty. Costs for non-standard warranty are expensed as incurred. Factors that affect the Company's warranty liability include the number of installed units, historical and anticipated product failure rates, material usage and service labor costs. The Company periodically assesses the adequacy of its recorded liability and adjusts the amount as necessary.

The changes in the Company's standard product warranty liability are as follows:

	Nine months ended September 30,	
	2016	2015
	(in thousands)	
Balance at January 1 (beginning of year)	\$ 3,555	\$ 1,526
Warranties issued during the period	2,286	3,543
Settlements made during the period	(3,570)	(1,611)
Changes in estimate of liability for pre-existing warranties during the period	551	345
Balance at September 30 (end of period)	<u>\$ 2,822</u>	<u>\$ 3,803</u>
Amount classified as current	\$ 2,597	\$ 3,532
Amount classified as long-term	225	271
Total warranty liability	<u>\$ 2,822</u>	<u>\$ 3,803</u>

**Note 9. Restructuring Charges**

In the first quarter of 2016, due to changes in customer service contracts resulting from a consolidation in our customer base, the Company had severance and other costs related to a reduction in force. Changes in the Company's restructuring liability, which consist primarily of payments made on obligations of severance and related costs (which obligations are included in amounts reported as other current liabilities), are as follows:

	(in thousands)
Balance at December 31, 2015	\$ —
Severance and, related costs	282
Cash payments	(267)
Balance at September 30, 2016	<u>\$ 15</u>

**Note 10. Fair Value Measurements**

Certain of the assets and liabilities on the Company's balance sheets are reported at their "fair value." Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date.

**(a) Fair Value Hierarchy**

The accounting guidance for fair value measurement requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The standard establishes a fair value hierarchy based on the level of independent, objective evidence surrounding the inputs used to measure fair value. A financial instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The fair value hierarchy is as follows:

Level 1 - applies to assets or liabilities for which there are quoted prices in active markets for identical assets or liabilities.

Level 2 - applies to assets or liabilities for which there are inputs other than quoted prices that are observable for the asset or liability, such as quoted prices for similar assets or liabilities in active markets; quoted prices for identical assets or liabilities in markets with insufficient volume or infrequent transactions (less active markets); or model-derived valuations in which significant inputs are observable or can be derived principally from, or corroborated by, observable market data.

Level 3 - applies to assets or liabilities for which there are unobservable inputs to the valuation methodology that are significant to the measurement of the fair value of the assets or liabilities.

**(b) Fair Value Measurements**

The Company's money market funds are included in cash and cash equivalents in the consolidated balance sheets and are considered a level 1 investment as they are valued at quoted market prices in active markets. The Company's sale leaseback obligation relating to the sale of our corporate headquarters is carried at amortized cost, which approximates fair value based on an implied borrowing rate of 10.65%. The underlying cash flow associated with our lease payments is being applied to both an interest and principal component using the effective interest method over the associated lease term. The liability is categorized as level 3 within the fair value hierarchy.

The following table sets forth the Company's assets and liabilities by level within the fair value hierarchy:

September 30, 2016				
Fair Value Measurements				
	Level 1	Level 2	Level 3	Total
(in thousands)				
<b>Assets</b>				
Cash equivalents:				
Money market funds	\$ 54,722	\$ —	\$ —	\$ 54,722
<b>Liabilities</b>				
Sale leaseback obligation	\$ —	\$ —	\$ 47,586	\$ 47,586

December 31, 2015				
Fair Value Measurements				
	Level 1	Level 2	Level 3	Total
(in thousands)				
<b>Assets</b>				
Cash equivalents:				
Money market funds	\$ 65,327	\$ —	\$ —	\$ 65,327
<b>Liabilities</b>				
Sale leaseback obligation	\$ —	\$ —	\$ 47,586	\$ 47,586

**(c) Other Financial Instruments**

The carrying amounts reflected in the consolidated balance sheets for cash and cash equivalents (which are comprised primarily of deposit and investment accounts), accounts receivable, prepaid expenses and other current and non-current assets, accounts payable and accrued expenses approximate fair value due to their short-term maturities.

**Note 11. Financing Arrangements**

**Sale Leaseback Obligation**

On January 30, 2015, the Company sold its corporate headquarters facility to Beverly Property Owner LLC, an affiliate of Middleton Partners, based in Northbrook, Illinois, for the purchase price of \$48.9 million. As part of the sale, the Company also entered into a 22-year lease agreement with Beverly Property Owner LLC. The sale leaseback is accounted for as a financing arrangement for financial reporting and, as such, the Company has recorded a financing obligation of \$47.6 million as of September 30, 2016. The associated lease payments are deemed to include both an interest component and payment of principal, with the underlying liability being extinguished at the end of the original lease term. The Company posted a collateralized security deposit of \$5.9 million in the form of an irrevocable letter of credit at the time of the closing. This letter of credit is cash collateralized and is classified as restricted cash as of September 30, 2016.

**Note 12. Income Taxes**

Income tax expense relates principally to operating results of foreign entities in jurisdictions, primarily in Europe and Asia, where the Company earns taxable income. The Company has significant net operating losses in the United States and certain other tax jurisdictions and, as a result, does not pay significant income taxes in those jurisdictions.

At December 31, 2015, the Company had \$124.2 million of deferred tax assets worldwide relating to net operating loss carryforwards, tax credit carryforwards and other temporary differences, which are available to reduce income taxes in future years. The Company maintains a 100% domestic valuation allowance, reducing the carrying value of the deferred tax assets in the United States to zero. The Company will continue to maintain a full valuation allowance

for those tax assets until accounting principles require the release of the allowance based on expectations of continuing profitability.

During the first quarter of 2016, the statute of limitations associated with a tax position previously taken by the Company expired. The related tax reserve of \$0.6 million and accrued interest of \$0.3 million that had been recorded were reversed during the nine months ended September 30, 2016.

See Note 15 for the effect of the adoption of Accounting Standards Update No. 2015-17.

#### **Note 13. Concentration of Risk**

For the three months ended September 30, 2016, three customers accounted for 16.0%, 12.0% and 11.7% of consolidated revenue, respectively. For the nine months ended September 30, 2016, two customers accounted for 12.3% and 10.1% of total revenue, respectively.

For the three months ended September 30, 2015, two customers accounted for 32.8% and 16.1%, of consolidated revenue, respectively. For the nine months ended September 30, 2015, one customer accounted for 33.0% of consolidated revenue.

At September 30, 2016, two customers accounted for 27.0% and 16.0% consolidated accounts receivable, respectively. At December 31, 2015, three customers accounted for 22.9%, 12.7% and 11.6% of accounts receivable, respectively.

#### **Note 14. Contingencies**

##### **(a) Litigation**

The Company is, from time to time, a party to litigation that arises in the normal course of its business operations. The Company is not presently a party to any litigation that it believes might have a material adverse effect on its business operations.

##### **(b) Indemnifications**

The Company's system sales agreements typically include provisions under which the Company agrees to take certain actions, provide certain remedies and defend its customers against third-party claims of intellectual property infringement under specified conditions and to indemnify customers against any damage and costs awarded in connection with such claims. The Company has not incurred any material costs as a result of such indemnifications and has not accrued any liabilities related to such obligations in the accompanying consolidated financial statements.

#### **Note 15. Recent Accounting Guidance**

##### Accounting Standards or Updates Recently Adopted

In November 2015, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2015-17, "*Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes*." The amendments in this ASU require entities that present classified statements of financial position to classify deferred tax liabilities and assets as noncurrent. They apply to all entities that present a classified statement of financial position. For public business entities, the amendments in this ASU are effective for financial statements issued for annual periods beginning after December 15, 2016, and interim periods within those annual periods. The Company adopted ASU No. 2015-17

early, effective June 30, 2016, on a prospective basis. As a result, we have presented all deferred tax assets and liabilities as noncurrent on our consolidated balance sheet as of September 30, 2016, reducing current deferred tax assets by \$0.2 million, long-term deferred tax assets by \$0.3 million and short-term deferred tax liabilities by \$0.5 million. The current deferred tax assets and liabilities on our consolidated balance sheet as of December 31, 2015, have not been reclassified.

Accounting Standards or Updates Not Yet Effective

In May 2014, the FASB issued ASU No. 2014-09, “*Revenue from Contracts with Customers*,” which provides guidance for revenue recognition. The standard’s core principle is that a company will 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 April 2016, the FASB issued ASU 2016-10, “*Revenue from Contracts with Customers*” (Topic 606): *Identifying Performance Obligations and Licensing*, which further clarifies performance obligations in a contract with a customer. In May 2016, the FASB issued ASU 2016-12, “*Revenue from Contracts with Customers*” (Topic 606): *Narrow-Scope Improvements and Practical Expedients*, which provides a more narrow interpretation of ASU No. 2014-09. These ASUs are effective for annual reporting periods beginning after December 15, 2017 and interim periods within those annual periods. We are currently assessing the potential impact the adoption of these standards will have on our financial statements.

In July 2015, the FASB issued ASU No. 2015-11, “*Simplifying the Measurement of Inventory*,” which changes the inventory measurement principles for entities using the first-in, first-out (FIFO) or average cost methods. For entities utilizing one of these methods, the inventory measurement principle will change from lower of cost or market to the lower of cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less the reasonably predictable costs of completion, disposal and transportation. The amendments are effective for annual and interim periods beginning after December 15, 2016. The adoption of this ASU will not have a material impact on our financial statements and disclosures.

In February 2016, the FASB issued ASU No. 2016-02 “*Leases*.” The ASU requires lessees to recognize the rights and obligations created by most leases as assets and liabilities on their balance sheet and continue to recognize expenses on their income statement over the lease term. It will also require disclosures designed to give financial statement users information on the amount, timing, and uncertainty of cash flows arising from leases. The guidance is effective for annual reporting periods beginning after December 15, 2018, and interim periods within those years. Early adoption is permitted for all entities. We are currently evaluating the impact of ASU 2016-02 on the consolidated financial statements and disclosures.

In March 2016, the FASB issued ASU No. 2016-09 “*Compensation — Stock Compensation*,” which changes the accounting for stock-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. For public business entities, the amendments in this ASU are effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted for all entities and any entity that elects early adoption must adopt all of the amendments in the same period. The adoption of this ASU will not have a material impact on our financial statements and disclosures.

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

*Certain statements in "Management's Discussion and Analysis of Financial Condition and Results of Operations" are forward-looking statements that involve risks and uncertainties. Words such as may, will, should, would, anticipates, expects, intends, plans, believes, seeks, estimates and similar expressions identify such forward-looking statements. The forward-looking statements contained herein are based on current expectations and entail various risks and uncertainties that could cause actual results to differ materially from those expressed in such forward-looking statements. Factors that might cause such a difference include, among other things, those set forth under "Liquidity and Capital Resources" and under "Risk Factors" in Part II, Item 1A to our annual report on Form 10-K for the year ended December 31, 2015, which discussion is incorporated herein by reference. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect management's analysis only as of the date hereof. We assume no obligation to update these forward-looking statements to reflect actual results or changes in factors or assumptions affecting forward-looking statements, except as may be required by law.*

### **Overview**

Axcelis is a worldwide producer of ion implantation and other processing equipment used in the fabrication of semiconductor chips in the United States, Europe and Asia. In addition, the Company provides extensive aftermarket service and support, including spare parts, equipment upgrades and maintenance services to the semiconductor industry worldwide. Consolidation and partnering within the semiconductor manufacturing industry has resulted in a small number of customers representing a substantial portion of our business. Our ten largest customers accounted for 69.0% of total revenue for the nine months ended September 30, 2016.

Our product development and manufacturing activities occur primarily in the United States. Axcelis' equipment and service products are highly technical and are sold primarily through a direct sales force in the United States, Europe and Asia.

Demand for semiconductor manufacturing equipment and services has historically been subject to cyclical industry conditions reflecting our customers' responses to changes in the nature and timing of technological advances in fabrication processes, supply and demand for chips, and global economic and market conditions. Separately from overall market demand, Axcelis' results are also impacted by our customers' decisions to purchase our products rather than our competitors' systems. Our financial results in 2015 reflected increased sales of our innovative Purion ion implantation systems over 2014. Purion sales in the first three quarters of 2016 as compared to the same period in 2015 have declined as a result of a decrease in purchasing by dynamic random access memory (DRAM) sector customers. In 2015 and throughout 2016, we have continued to invest in research and development programs related to our Purion products. We expect to continue to grow Purion system sales, gain market share and improve gross margins.

In light of these conditions, Axcelis' results can vary significantly year-over-year, as well as quarter-over-quarter.

### **Critical Accounting Estimates**

Management's discussion and analysis of our financial condition and results of operations included herein and in our Annual Report on Form 10-K for the year ended December 31, 2015 are based upon Axcelis' consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates and assumptions. Management's estimates are based on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

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Management has not identified any need to make any material change in, and has not changed, any of our critical accounting estimates and judgments as described in Management's Discussion and Analysis of Financial Conditions and Results of Operations included in our Annual Report on Form 10-K for the year ended December 31, 2015.

**Results of Operations**

The following table sets forth our results of operations as a percentage of total revenue:

	Three months ended September 30,		Nine months ended September 30,	
	2016	2015	2016	2015
<b>Revenue:</b>				
Product	90.3 %	93.0 %	91.3 %	92.7 %
Services	9.7	7.0	8.7	7.3
Total revenue	100.0	100.0	100.0	100.0
<b>Cost of revenue:</b>				
Product	55.4	57.6	56.3	59.5
Services	7.9	5.6	6.9	6.0
Total cost of revenue	63.3	63.2	63.2	65.5
Gross profit	36.7	36.8	36.8	34.5
<b>Operating expenses:</b>				
Research and development	12.9	10.8	13.0	10.7
Sales and marketing	9.1	8.0	9.0	7.7
General and administrative	9.1	8.3	9.2	8.2
Restructuring charges	—	—	0.1	—
Total operating expenses	31.1	27.1	31.3	26.6
Income from operations	5.6	9.7	5.5	7.9
<b>Other (expense) income:</b>				
Interest income	0.1	—	0.1	—
Interest expense	(2.0)	(1.6)	(1.9)	(1.6)
Other, net	(0.1)	(0.2)	(0.2)	(0.2)
Total other expense	(2.0)	(1.8)	(2.0)	(1.8)
Income before income taxes	3.6	7.9	3.5	6.1
Income tax provision (benefit)	0.2	0.2	(0.1)	0.1
Net income	3.4 %	7.7 %	3.6 %	6.0 %

**Revenue**

The following table sets forth our revenue:

	Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
(dollars in thousands)								
<b>Revenue:</b>								
Product	\$59,302	\$ 73,795	\$ (14,493)	(19.6)%	\$180,336	\$ 214,073	\$ (33,737)	(15.8)%
Percentage of revenue	90.3 %	93.0 %			91.3 %	92.7 %		
Services	6,348	5,522	826	15.0 %	17,286	16,964	322	1.9 %
Percentage of revenue	9.7 %	7.0 %			8.7 %	7.3 %		
Total revenue	<u>\$65,650</u>	<u>\$ 79,317</u>	<u>\$ (13,667)</u>	<u>(17.2)%</u>	<u>\$197,622</u>	<u>\$ 231,037</u>	<u>\$ (33,415)</u>	<u>(14.5)%</u>

Three Months Ended September 30, 2016 Compared with Three Months Ended September 30, 2015

*Product*

Product revenue, which includes system sales, sales of spare parts, product upgrades and used systems was \$59.3 million, or 90.3%, of revenue during the three months ended September 30, 2016, compared with \$73.8 million, or 93.0% of revenue for the three months ended September 30, 2015. The \$14.5 million decrease in product revenue for the three month period ending September 30, 2016, in comparison to the same period in 2015, was primarily driven by a decrease in the number of Purion systems sold.

A portion of our revenue from system sales is deferred until installation and other services related to future deliverables are performed. The total amount of deferred revenue at September 30, 2016 and December 31, 2015 was \$7.9 million and \$8.5 million, respectively. The decrease in deferred revenue is primarily due to the timing of the acceptance of system sales.

*Services*

Services revenue, which includes the labor component of maintenance and service contracts and fees for service hours provided by on-site service personnel, was \$6.3 million, or 9.7% of revenue for the three months ended September 30, 2016, compared with \$5.5 million, or 7.0% of revenue for the three months ended September 30, 2015. Although services revenue typically increases with the expansion of the installed base of systems, it can fluctuate from period to period based on capacity utilization at customers' manufacturing facilities, which affects the need for equipment service.

Nine Months Ended September 30, 2016 Compared with Nine Months Ended September 30, 2015

*Product*

Product revenue was \$180.3 million, or 91.3% of revenue for the nine months ended September 30, 2016, compared with \$214.1 million, or 92.7% of revenue for the nine months ended September 30, 2015. The \$33.7 million decrease in product revenue was primarily driven by a decrease in the number of Purion systems sold.

*Services*

Services revenue was \$17.3 million, or 8.7% of revenue for the nine months ended September 30, 2016, compared with \$17.0 million, or 7.3% of revenue for the nine months ended September 30, 2015.

**Revenue Categories used by Management**

As an alternative to the line item revenue categories discussed above, management also uses revenue categorizations which divide revenue into new systems sales and "aftermarket," meaning sales of spare parts, product upgrades and used systems, combined with the sale of maintenance labor and service contracts and services hours.

Three Months Ended September 30, 2016 Compared with Three Months Ended September 30, 2015

*Systems*

Included in total revenue of \$65.7 million during the three months ended September 30, 2016 is revenue from sales of new systems of \$30.9 million, or 47.1% of total revenue, compared with \$47.0 million, or 59.3%, of total revenue for the three months ended September 30, 2015. The decrease was due to lower sales of our Purion systems sold in the recent quarter.

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*Aftermarket*

Included in total revenue of \$65.7 million during the three months ended September 30, 2016 is revenue from our aftermarket business of \$34.8 million, compared to \$32.3 million for the three months ended September 30, 2015. Aftermarket revenue fluctuates from period to period based on capacity utilization at customers' manufacturing facilities, which affects the sale of spare parts and demand for equipment service. Aftermarket revenue can also fluctuate from period to period based on the demand for system upgrades or used tools.

*Nine Months Ended September 30, 2016 Compared with Nine Months Ended September 30, 2015*

*Systems*

Included in total revenue of \$197.6 million during the nine months ended September 30, 2016 is revenue from sales of new systems of \$101.6 million, or 51.4% of total revenue, compared with \$131.1 million, or 56.7% of total revenue of \$231.0 million for the nine months ended September 30, 2015. The decrease was due to lower sales of our Purion systems in the recent period.

*Aftermarket*

Included in total revenue of \$197.6 million during the nine months ended September 30, 2016 is revenue from our aftermarket business of \$96.0 million, or 48.6%, compared to \$99.9 million, or 43.3% for the nine months ended September 30, 2015.

**Gross Profit / Gross Margin**

The following table sets forth our gross profit / gross margin.

	Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
(dollars in thousands)								
<b>Gross Profit:</b>								
Product	\$22,942	\$ 28,097	\$ (5,155)	(18.3)%	\$69,074	\$ 76,630	\$ (7,556)	(9.9)%
<i>Product gross margin</i>	38.7 %	38.1 %			38.3 %	35.8 %		
Services	1,162	1,082	80	7.4 %	3,577	\$ 3,103	474	15.3 %
<i>Services gross margin</i>	18.3 %	19.6 %			20.7 %	18.3 %		
Total gross profit	<u>\$24,104</u>	<u>\$ 29,179</u>	<u>\$ (5,075)</u>	(17.4)%	<u>\$72,651</u>	<u>\$ 79,733</u>	<u>\$ (7,082)</u>	(8.9)%
Gross margin	36.7 %	36.8 %			36.8 %	34.5 %		

*Three Months Ended September 30, 2016 Compared with Three Months Ended September 30, 2015*

*Product*

Gross margin from product revenue was 38.7% for the three months ended September 30, 2016, compared to 38.1% for the three months ended September 30, 2015. The increase in gross margin of 0.6 percentage points resulted from improved margins on Purion systems combined with an increased mix of higher margin parts and upgrades.

*Services*

Gross margin from services revenue was 18.3% for the three months ended September 30, 2016, compared to 19.6% for the three months ended September 30, 2015. The decrease in gross margin in the recent period is attributable to changes in the mix of service contracts compared with the prior period.

*Nine Months Ended September 30, 2016 Compared with Nine Months Ended September 30, 2015*

*Product*

Gross margin from product revenue was 38.3% for the nine months ended September 30, 2016, compared to 35.8% for the nine months ended September 30, 2015. The increase in gross margin of 2.5 percentage points resulted from improved margins on Purion systems, combined with an increased mix of higher margin parts and upgrades.

*Services*

Gross margin from services revenue was 20.7% for the nine months ended September 30, 2016, compared to 18.3% for the nine months ended September 30, 2015. The increase in gross margin in the recent period is attributable to an increased share of higher margin service revenue compared with the prior period and lower service costs.

**Operating Expenses**

The following table sets forth our operating expenses:

	Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
	(dollars in thousands)							
Research and development	\$ 8,493	\$ 8,581	\$ (88)	(1.0)%	\$25,607	\$ 24,679	\$ 928	3.8 %
Percentage of revenue	12.9 %	10.8 %			13.0 %	10.7 %		
Sales and marketing	5,992	6,322	(330)	(5.2)%	17,742	17,808	(66)	(0.4)%
Percentage of revenue	9.1 %	8.0 %			9.0 %	7.7 %		
General and administrative	5,988	6,584	(596)	(9.1)%	18,262	18,916	(654)	(3.5)%
Percentage of revenue	9.1 %	8.3 %			9.2 %	8.2 %		
Restructuring charges	—	—	—	— %	282	18	264	1,466.7 %
Percentage of revenue	0.0 %	0.0 %			0.1 %	0.0 %		
Total operating expenses	\$20,473	\$ 21,487	\$ (1,014)	(4.7)%	\$61,893	\$ 61,421	\$ 472	0.8 %
Percentage of revenue	31.1 %	27.1 %			31.3 %	26.6 %		

Our operating expenses consist primarily of personnel costs, including salaries, commissions, expected incentive plan payouts, stock-based compensation and related benefits and taxes; project material costs related to the design and development of new products and enhancement of existing products; and professional fees, travel and depreciation expenses.

Personnel costs, exclusive of our restructuring charge, are our largest expense, representing \$12.1 million and \$35.3 million, or 59.1% and 57.0%, of our total operating expenses for the three and nine month periods ended September 30, 2016, respectively. For the three and nine month periods ended September 30, 2015, personnel costs were \$13.2 million and \$36.4 million, respectively, or 61.4% and 59.3%, respectively, of our total operating expenses. The lower personnel costs for the three and nine months ended September 30, 2016 are primarily due to lower incentive based pay expense.

**Research and Development**

	Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
	(dollars in thousands)							
Research and development	\$ 8,493	\$ 8,581	\$ (88)	(1.0)%	\$ 25,607	\$ 24,679	928	3.8 %
Percentage of revenue	12.9 %	10.8 %			13.0 %	10.7 %		

Our ability to remain competitive depends largely on continuously developing innovative technology, with new and enhanced features and systems and introducing them at competitive prices on a timely basis. Accordingly, based on our strategic plan, we establish annual R&D budgets to fund programs that we expect will drive competitive advantages.

Three Months Ended September 30, 2016 Compared with Three Months Ended September 30, 2015

Research and development expense was \$8.5 million during the three months ended September 30, 2016, relatively flat compared with \$8.6 million during the three months ended September 30, 2015.

Nine Months Ended September 30, 2016 Compared with Nine Months Ended September 30, 2015

Research and development expense was \$25.6 million during the nine months ended September 30, 2016; an increase of \$0.9 million, or 3.8%, compared with \$24.7 million during the nine months ended September 30, 2015. The increase was primarily due to increased personnel costs incurred in the current year compared to the same period last year to work on product extensions and differentiators for Purion platform products.

**Sales and Marketing**

	Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
	(dollars in thousands)							
Sales and marketing	\$ 5,992	\$ 6,322	\$ (330)	(5.2)%	\$ 17,742	\$ 17,808	\$ (66)	(0.4)%
Percentage of revenue	9.1 %	8.0 %			9.0 %	7.7 %		

Our sales and marketing expenses result primarily from the sale of our equipment and services through our direct sales force.

Three Months Ended September 30, 2016 Compared with Three Months Ended September 30, 2015

Sales and marketing expense was \$6.0 million during the three months ended September 30, 2016; a decrease of \$0.3 million, or 5.2%, relatively flat compared with \$6.3 million during the three months ended September 30, 2015.

Nine Months Ended September 30, 2016 Compared with Nine Months Ended September 30, 2015

Sales and marketing expense was \$17.7 million during the nine months ended September 30, 2016, relatively flat compared with \$17.8 million during the nine months ended September 30, 2015.

**General and Administrative**

	Three months ended September 30,		Period-to-Period Change		Nine months ended September 30,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
	(dollars in thousands)							
General and administrative	\$ 5,988	\$ 6,584	\$ (596)	(9.1)%	\$ 18,262	\$ 18,916	(654)	(3.5)%
Percentage of revenue	9.1 %	8.3 %			9.2 %	8.2 %		

Our general and administrative expenses result primarily from the costs associated with our executive, finance, information technology, legal and human resource functions.

Three Months Ended September 30, 2016 Compared with Three Months Ended September 30, 2015

General and administrative expense was \$6.0 million during the three months ended September 30, 2016; a decrease of \$0.6 million, or 9.1%, compared to \$6.6 million during the three months ended September 30, 2015. The decrease is primarily due to a reduction in incentive plan expense.

Nine Months Ended September 30, 2016 Compared with Nine Months Ended September 30, 2015

General and administrative expense was \$18.3 million during the nine months ended September 30, 2016, a decrease of \$0.6 million, or 3.5%, compared to \$18.9 million during the nine months ended September 30, 2015. The decrease is primarily due to a reduction in incentive plan expense.

**Restructuring Charges**

	Three months ended September 30,		Period-to-period change		Nine months ended September 30,		Period-to-period change	
	2016	2015	\$	%	2016	2015	\$	%
	(dollars in thousands)							
Restructuring charges	\$ —	\$ —	\$ —	— %	\$ 282	\$ 18	\$ 264	1,466.7 %
Percentage of revenue	0.0 %	0.0 %			0.1 %	0.0 %		

In the first quarter of 2016, due to changes in customer service contracts resulting from a consolidation in our customer base, we had severance and other costs related to a reduction in force.

**Other (Expense) Income**

	Three months ended September 30,		Period-to-period change		Nine months ended September 30,		Period-to-period change	
	2016	2015	\$	%	2016	2015	\$	%
	(dollars in thousands)				(dollars in thousands)			
Other (expense) income	\$ (1,344)	\$ (1,434)	\$ 90	6.3 %	\$ (3,918)	\$ (4,162)	\$ 244	5.9 %
Percentage of revenue	(2.0)%	(1.8)%			(2.0)%	(1.8)%		

Other (expense) income consists primarily of foreign exchange gains and losses attributable to fluctuations against local currencies of the countries in which we operate, interest earned on our invested cash balances, bank fees associated with our financing arrangements and interest expense related to financing arrangements. Other expense was \$1.3 million for the three months ended September 30, 2016, relatively flat compared with \$1.4 million for the three months ended September 30, 2015. During both of the three month periods ended September 30, 2016 and 2015, the

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Company recorded \$1.3 million in deemed interest expense associated with the sale leaseback of our headquarters in Beverly, which is being accounted for as a financing obligation.

Other expense was \$3.9 million for the nine months ended September 30, 2016, compared to \$4.2 million for the nine months ended September 30, 2015. The \$0.3 million decrease in other expense in the current period was primarily due to an expense in 2015 for the prepayment charge associated with the satisfaction of a term loan.

During the three and nine month periods ended September 30, 2016 and 2015, with the exception of operating lease agreements entered into by the Company, we had no significant off-balance-sheet risk such as exchange contracts, option contracts or other foreign hedging arrangements.

### Income Tax Provision (Benefit)

	Three months ended September 30,		Period-to-period change		Nine months ended September 30,		Period-to-period change	
	2016	2015	\$	%	2016	2015	\$	%
	(dollars in thousands)				(dollars in thousands)			
Income tax	\$ 136	\$ 157	\$ (21)	(13.4)%	\$ (196)	\$ 298	\$ (494)	(165.8)%
Percentage of revenue	0.2 %	0.2 %			(0.1)%	0.1 %		

We incur income tax expense relating principally to operating results of foreign entities in Europe and Asia, where we earn taxable income. We have significant net operating loss carryforwards in the United States and certain European tax jurisdictions and, as a result, we do not currently pay significant income taxes in those jurisdictions. Additionally, we do not recognize the tax benefit for such losses in the United States and certain European taxing jurisdictions, and will not do so until we have sufficient income such that these tax benefits can be utilized. The Company will continue to maintain a full valuation allowance for these tax assets until accounting principles require the release of the allowance based on expectations of continuing profitability.

During the first quarter of 2016, the statute of limitations associated with a tax position previously taken by the Company expired. The related tax reserve of \$0.6 million and accrued interest of \$0.3 million that had been recorded were reversed during the nine months ended September 30, 2016.

### Liquidity and Capital Resources

The Company had \$65.6 million in unrestricted cash and cash equivalents at September 30, 2016, in addition to \$6.9 million in restricted cash, primarily comprised of the \$5.9 million security deposit under the lease on our headquarters. Management believes that maintaining a strong cash balance is necessary to provide funding for potential ramps in our business, which can require significant cash investment to meet sudden demand.

Our liquidity is affected by many factors. Some of these relate specifically to the operations of our business, for example, the rate of sale of our products, and others relate to the uncertainties of global economies, including the availability of credit and the condition of the overall semiconductor equipment industry. Our established cost structure, other than cost of goods sold, does not vary significantly with changes in volume. We experience fluctuations in operating results and cash flows depending on these factors.

During the nine months ended September 30, 2016, the Company used \$13.0 million of cash in operating activities. This use of cash was predominately driven by system orders from customers and is reflected in increases in accounts receivable, inventories and other assets and liabilities as well as an increase to accounts payable over the period. In comparison, during the nine months ended September 30, 2015, the Company generated \$12.4 million of cash from operating activities.

Investing activities for the nine months ended September 30, 2016 and 2015 generated cash outflows of \$2.3 million and \$1.3 million, respectively, used for capital expenditures.

Financing activities for the nine months ended September 30, 2016 provided net cash of \$1.7 million, primarily relating to the proceeds from the exercise of stock options. In comparison, financing activities for the nine months ended September 30, 2015 provided net cash of \$37.7 million, primarily due to a net cash inflow of \$48.5 million from the sale and leaseback of our corporate headquarters building in Beverly, Massachusetts. This cash inflow from the sale and leaseback was reduced by \$0.8 million of related financing costs and the \$14.5 million discharge of a term loan secured by a mortgage on the property. Cash provided by financing activities in the nine month period of 2015 also included \$3.8 million in proceeds from the exercise of stock options and from stock purchases under the Employee Stock Purchase Plan as well as a \$0.8 million decrease in our restricted cash balance.

We believe that based on our current market, revenue, expense and cash flow forecasts, our existing cash and cash equivalents will be sufficient to satisfy our anticipated cash requirements for the short and long-term. We currently have no credit facility but management believes we would be able to borrow on reasonable terms if needed.

#### **Commitments and Contingencies**

Significant commitments and contingencies at September 30, 2016 are consistent with those discussed in Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and Note 17 to the consolidated financial statements in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015.

#### **Item 3. Quantitative and Qualitative Disclosures about Market Risk.**

As of September 30, 2016, there have been no material changes to the quantitative information about market risk disclosed in Item 7A to our annual report on Form 10-K for the year ended December 31, 2015.

#### **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 (the “Exchange Act”) as of the end of the period covered by this report (the “Evaluation Date”). Based on this evaluation, our principal executive officer and principal financial officer concluded that, as of the Evaluation Date, these disclosure controls and procedures are effective.

##### **Changes in Internal Control over Financial Reporting**

There was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) identified in connection with the evaluation of our internal control that occurred during the three months ended September 30, 2016 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

**PART II—OTHER INFORMATION**

**Item 1. Legal Proceedings.**

The Company is, from time to time, a party to litigation that arises in the normal course of its business operations. The Company is not presently a party to any litigation that it believes might have a material adverse effect on its business operations.

**Item 1A. Risk Factors.**

As of September 30, 2016, there have been no material changes to the risk factors described in Item 1A to our annual report on Form 10-K for the year ended December 31, 2015.

**Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.**

None.

**Item 3. Defaults Upon Senior Securities.**

None.

**Item 4. Mine Safety Disclosures.**

Not Applicable.

**Item 5. Other Information.**

None.

**Item 6. Exhibits.**

The following exhibits are filed herewith:

<b>Exhibit No</b>	<b>Description</b>
3.1	Amended and Restated Certificate of Incorporation of the Company adopted May 6, 2009. Incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K filed with the Commission on May 11, 2009.
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Axcelis Technologies, Inc., effective June 30, 2016, as filed with the Secretary of State of the State of Delaware. Incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K filed with the Commission on July 5, 2016.
3.3	Bylaws of the Company, as amended as of May 13, 2014. Incorporated by reference to Exhibit 3.2 of the Company's Form 8-K filed with the Commission on May 19, 2014.
31.1	Certification of the Principal Executive Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated November 3, 2016. Filed herewith.
31.2	Certification of the Principal Financial Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated November 3, 2016. Filed herewith.
32.1	Certification of the Principal Executive Officer pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code (Section 906 of the Sarbanes-Oxley Act), dated November 3, 2016. Filed herewith.
32.2	Certification of the Principal Financial Officer pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code (Section 906 of the Sarbanes-Oxley Act), dated November 3, 2016. Filed herewith.
101	The following materials from the Company's Form 10-Q for the quarter ended September 30, 2016, formatted in eXtensible Business Reporting Language (XBRL): (i) Consolidated Statements of Operations, (ii) Consolidated Statements of Comprehensive Income (Loss), (iii) Consolidated Balance Sheets, (iv) Consolidated Statements of Cash Flows and (v) Notes to Consolidated Financial Statements (Unaudited). Filed herewith.

**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.

DATED: November 3, 2016

AXCELIS TECHNOLOGIES, INC.

By: /s/ KEVIN J. BREWER

Kevin J. Brewer  
*Executive Vice President and Chief Financial Officer*  
*Duly Authorized Officer and Principal Financial Officer*

**CERTIFICATION  
of the Principal Executive Officer  
Pursuant to Rule 13a-14(a)/15d-14(a) (implementing Section 302 of the Sarbanes-Oxley Act)**

I, Mary G. Puma, certify that:

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

Date: November 3, 2016

/s/ MARY G. PUMA

Mary G. Puma,  
*President and Chief Executive Officer*

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**CERTIFICATION  
of the Principal Financial Officer  
Pursuant to Rule 13a-14(a)/15d-14(a) (implementing Section 302 of the Sarbanes-Oxley Act)**

I, Kevin J. Brewer, certify that:

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

Date: November 3, 2016

/s/ KEVIN J. BREWER

Kevin J. Brewer,  
*Executive Vice President and Chief Financial Officer*

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**AXCELIS TECHNOLOGIES, INC.**  
**Certification of the Principal Executive Officer**  
**Pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code**

The undersigned Chief Executive Officer of Axcelis Technologies, Inc., a Delaware corporation, hereby certifies, for the purposes of Section 1350 of Chapter 63 of title 18 of the United States Code (as implemented by Section 906 of the Sarbanes-Oxley Act of 2002) as follows:

This Form 10-Q quarterly report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and the information contained herein fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, the undersigned has executed this Certification as of November 3, 2016.

/s/ MARY G. PUMA

Mary G. Puma  
*President and Chief Executive Officer of Axcelis  
Technologies, Inc.*

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**AXCELIS TECHNOLOGIES, INC.**  
**Certification of the Principal Financial Officer**  
**Pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code**

The undersigned Chief Financial Officer of Axcelis Technologies, Inc., a Delaware corporation, hereby certifies, for the purposes of Section 1350 of Chapter 63 of title 18 of the United States Code (as implemented by Section 906 of the Sarbanes-Oxley Act of 2002) as follows:

This Form 10-Q quarterly report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and the information contained herein fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, the undersigned has executed this Certification as of November 3, 2016.

/s/ KEVIN J. BREWER

Kevin J. Brewer  
*Executive Vice President and Chief Financial Officer of  
Axcelis Technologies, Inc.*

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