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, 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: 0-12853

ELECTRO SCIENTIFIC INDUSTRIES, INC.

Oregon	**93-0370304**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
13900 N.W. Science Park Drive, Portland, Oregon	**97229**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: 503-641-4141

Registrant's web address: www.esi.com

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

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

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

Large accelerated filer	☐	Accelerated filer	☒	Non-accelerated filer	☐
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 ☒

The number of shares outstanding of the Registrant's Common Stock as of November 3, 2017 was 33,491,734 shares.

ELECTRO SCIENTIFIC INDUSTRIES, INC. AND SUBSIDIARIES

2018 FORM 10-Q QUARTERLY REPORT

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ELECTRO SCIENTIFIC INDUSTRIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited)

(In thousands)	Sep 30, 2017	Apr 1, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 47,973	$ 56,642
Short-term investments	32,802	5,743
Trade receivables, net of allowances of $474 and $603	47,565	40,494
Inventories, net	61,423	58,942
Shipped systems pending acceptance	7,765	5,713
Other current assets	5,309	6,180
Total current assets	202,837	173,714
Non-current assets:		
Property, plant and equipment, net of accumulated depreciation of $80,860 and $112,075, (PP&E)	18,874	21,619
Goodwill	2,626	3,027
Acquired intangible assets, net of accumulated amortization of $22,676 and $21,994	5,883	6,564
Other assets	17,819	19,821
Total assets	$ 248,039	$ 224,745
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 24,378	$ 21,213
Accrued liabilities	32,050	22,186
Deferred revenue	15,782	14,712
Total current liabilities	72,210	58,111
Non-current liabilities:		
Long-term debt	12,982	13,489
Income taxes payable	1,285	1,036
Other liabilities	7,956	7,578
Total liabilities	94,433	80,214
Commitments and contingencies (See Note 12: Commitments & Contingencies)		
Shareholders' equity:		
Preferred stock, without par value; 1,000 shares authorized; no shares issued	—	—
Common stock, without par value; 100,000 shares authorized; 34,067 and 33,260 issued and outstanding	208,670	207,152
Accumulated deficit	(54,246)	(61,407)
Accumulated other comprehensive loss	(818)	(1,214)
Total shareholders' equity	153,606	144,531
Total liabilities and shareholders' equity	$ 248,039	$ 224,745

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

ELECTRO SCIENTIFIC INDUSTRIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)

	Fiscal quarter ended		Two fiscal quarters ended	
(In thousands, except per share amounts)	Sep 30, 2017	Oct 1, 2016	Sep 30, 2017	Oct 1, 2016
Net sales:				
Systems	$ 60,316	$ 21,442	$ 122,409	$ 59,642
Services	10,651	8,216	21,242	17,684
Total net sales	70,967	29,658	143,651	77,326
Cost of sales:				
Systems	38,179	14,146	79,605	36,568
Services	6,256	4,532	11,094	8,970
Total cost of sales	44,435	18,678	90,699	45,538
Gross profit	26,532	10,980	52,952	31,788
Operating expenses:				
Selling, general and administrative	11,648	12,766	24,456	25,637
Research, development and engineering	8,274	7,760	17,208	15,390
Restructuring costs	2,162	—	3,373	—
Acquisition and integration costs	—	335	—	335
Total operating expenses	22,084	20,861	45,037	41,362
Operating income (loss)	4,448	(9,881)	7,915	(9,574)
Non-operating (expense) income:				
Interest and other (expense) income, net	(229)	206	(413)	128
Total non-operating (expense) income	(229)	206	(413)	128
Income (loss) before income taxes	4,219	(9,675)	7,502	(9,446)
(Benefit from) provision for income taxes	(41)	—	340	347
Net income (loss)	$ 4,260	$ (9,675)	$ 7,162	$ (9,793)
Net income (loss) per share - basic	$ 0.13	$ (0.30)	$ 0.21	$ (0.30)
Net income (loss) per share - diluted	$ 0.12	$ (0.30)	$ 0.21	$ (0.30)
Weighted average number of shares - basic	33,861	32,396	33,647	32,109
Weighted average number of shares - diluted	34,874	32,396	34,716	32,109

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

ELECTRO SCIENTIFIC INDUSTRIES, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Unaudited)

	Fiscal quarter ended		Two fiscal quarters ended	
(In thousands)	**Sep 30, 2017**	**Oct 1, 2016**	**Sep 30, 2017**	**Oct 1, 2016**
Net income (loss)	$ 4,260	$ (9,675)	$ 7,162	$ (9,793)
Other comprehensive income (loss):				
Foreign currency translation adjustment, net of taxes of $0, $0, $0 and $0	180	47	388	(139)
Accumulated other comprehensive income related to benefit plan obligation, net of taxes of $(3), $2, $(5) and $(2)	5	5	9	9
Net unrealized loss on available-for-sale securities, net of taxes of $0, $0, $0 and $0	—	(1)	(1)	(4)
Other comprehensive income (loss):	185	51	396	(134)
Comprehensive income (loss)	$ 4,445	$ (9,624)	$ 7,558	$ (9,927)

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

ELECTRO SCIENTIFIC INDUSTRIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

	Two fiscal quarters ended	
(In thousands)	**Sep 30, 2017**	**Oct 1, 2016**
CASH FLOWS FROM OPERATING ACTIVITIES		
Net income (loss)	$ 7,162	$ (9,793)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Non-cash restructuring charges	13,858	—
Depreciation and amortization	3,469	3,592
Share-based compensation expense	2,797	3,136
Amortization of acquired intangible assets	657	554
Provision for (benefit from) doubtful accounts	371	(235)
Loss on disposal of property and equipment, net	—	40
Impairment of inventory	—	1,170
(Increase) decrease in deferred income taxes	(31)	87
Changes in operating accounts, net of acquisitions:		
Increase (decrease) in accounts payable and accrued liabilities	12,392	(6,100)
(Increase) decrease in trade receivables, net	(7,094)	13,373
Increase in inventories	(7,874)	(3,669)
Increase in shipped systems pending acceptance	(2,051)	(2,712)
Increase in deferred revenue	1,070	4,577
Decrease (increase) in other current assets	970	(43)
Net cash provided by operating activities	25,696	3,977
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of investments	(38,336)	(228,921)
Proceeds from sales and maturities of investments	10,861	240,209
Purchase of property, plant and equipment	(1,445)	(2,710)
Proceeds from sale of property, plant and equipment	37	7
Cash paid for business acquisitions, net of cash acquired	—	(2,010)
Increase in other assets	(4,503)	(71)
Net cash (used in) provided by investing activities	(33,386)	6,504
CASH FLOWS FROM FINANCING ACTIVITIES		
Repayment of debt	(212)	—
Payment of withholding taxes on stock-based compensation	(1,684)	(793)
Proceeds from issuance of common stock	665	654
Net cash used in financing activities	(1,231)	(139)
Effect of exchange rate changes on cash	260	(70)
NET CHANGE IN CASH, CASH EQUIVALENTS AND RESTRICTED CASH	(8,661)	10,272
CASH, CASH EQUIVALENTS AND RESTRICTED CASH AT BEGINNING OF PERIOD	57,732	42,413
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH AT END OF PERIOD	$ 49,071	$ 52,685
SUPPLEMENTAL CASH FLOW INFORMATION		
Cash paid for interest	$ (331)	$ (25)
Cash paid for income taxes	(500)	(251)
Income tax refunds received	67	6
Net (decrease) increase in PP&E and other assets related to transfers from inventory	(2,052)	3,128
Non-cash additions to PP&E	112	270

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

ELECTRO SCIENTIFIC INDUSTRIES, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

1. Basis of Presentation

These unaudited interim condensed consolidated financial statements have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission. Certain information and footnote disclosures normally included in annual financial statements prepared in accordance with United States generally accepted accounting principles (U.S. GAAP) have been condensed or omitted in these interim statements. Accordingly, these condensed consolidated financial statements should be read in conjunction with the financial statements and notes included in Electro Scientific Industries, Inc.'s (the Company) Annual Report on Form 10-K for its fiscal year ended April 1, 2017. These interim statements include all adjustments (consisting of only normal recurring adjustments and accruals) necessary for a fair presentation of results for the interim periods presented. The results for interim periods are not necessarily indicative of the results of operations for the entire year.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of commitments and contingencies at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results may differ from those estimates.

Management believes that the estimates used are reasonable. Significant estimates made by management include: revenue recognition; inventory valuation; accrued restructuring costs; share-based compensation; income taxes, including the valuation of deferred tax assets; valuation of long-lived assets, including intangibles; valuation of goodwill and acquisition accounting.

There have been no significant changes to the Company's significant accounting policies from those presented in *Note 2: Recent Accounting Pronouncements* to the consolidated financial statements included in the Company's Annual Report on Form 10-K for its fiscal year ended April 1, 2017. All references to years or quarters relate to fiscal years or fiscal quarters unless otherwise noted. The fiscal quarters ended September 30, 2017 and October 1, 2016 each consisted of 13-week periods. Similarly, the two quarters ended September 30, 2017 and the two quarters ended October 1, 2016 each consisted of 26-week periods.

2. Recent Accounting Pronouncements

Adopted accounting pronouncements:

In March 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2016-09, "Compensation – Stock Compensation – Improvements to Employee Share-Based Payment Accounting." ASU 2016-09 simplifies the accounting for several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, classification on the statement of cash flows, and the accounting for forfeitures. ASU 2016-09 was effective for the Company as of April 2, 2017, the beginning of fiscal 2018. Adopting ASU 2016-09 increased diluted weighted average shares outstanding by approximately 40 thousand shares in the first quarter of 2018 due to the change in recognition of excess tax benefits in the calculation. The ASU is expected to increase the volatility of the Company's diluted shares outstanding on a go-forward basis.

In July 2015, the FASB issued ASU 2015-11, "Simplifying the Measurement of Inventory." ASU 2015-11 simplifies the measurement of inventory by requiring companies to measure inventory at the lower of cost and net realizable value as opposed to measuring the lower of cost of market where the market value was determined based off of three different measures. ASU 2015-11 was effective for the Company as of April 2, 2017, the beginning of fiscal 2018. Adopting ASU 2015-11 has not had a material effect on the Company's inventory valuation.

Recently issued accounting pronouncements not yet adopted

In August 2017, the FASB issued ASU 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities*, in order to (i) improve disclosures related to an entity's risk management activities through better transparency and understandability and (ii) simplify and reduce the complexity of hedge accounting by preparers. ASU 2017-12 is effective for annual periods beginning after December 15, 2018, and interim periods within those annual periods, which would be the Company's fiscal year ending March 28, 2020. Early adoption is permitted, including adoption in any interim period, for public business entities for reporting periods for which financial statements have not yet been issued. While the Company does not expect the adoption of ASU 2017-12 to have a material effect on its business, the Company is still evaluating any potential impact that adoption of ASU 2017-12 may have on its financial position, results of operations or cash flows.

In May 2017, the FASB issued ASU 2017-09, *Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting*, which amends the scope of modification accounting surrounding share-based payment arrangements as issued in ASU 2016-09 by providing guidance on the various types of changes which would trigger modification accounting for share-based payment awards, specifically an entity would not apply modification accounting under ASC 718 if the fair value, vesting conditions, and classification of the awards are the same immediately before and after the modification. ASU 2017-09 is effective for annual periods beginning after December 15, 2017, and interim periods within those annual periods, which would be the Company's fiscal year ending March 30, 2019. Early adoption is permitted, including adoption in any interim period, for public business entities for reporting periods for which financial statements have not yet been issued. While the Company does not expect the adoption of ASU 2017-09 to have a material effect on its business, the Company is still evaluating any potential impact that adoption of ASU 2017-09 may have on its financial position, results of operations or cash flows.

In March 2017, the FASB issued ASU 2017-07, *Compensation—Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*, which requires companies to disaggregate the current-service-cost component from other components of net benefit cost and provides specific guidance for presentation in the income statement. ASU 2017-07 is effective for annual periods beginning after December 15, 2017, and interim periods within those annual periods, which would be the Company's fiscal year ending March 30, 2019. Early adoption is permitted as of the beginning of an annual period for which financial statements (interim or annual) have not been issued or made available for issuance. While the Company does not expect the adoption of ASU 2017-07 to have a material effect on its business, the Company is still evaluating any potential impact that adoption of ASU 2017-07 may have on its financial position, results of operations or cash flows.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers: Topic 606 (ASU 2014-09)*, to supersede nearly all existing revenue recognition guidance under U.S. GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration that is expected to be received for those goods or services. In August 2015, the FASB issued ASU 2015-14, *Revenue from Contracts with Customers: Deferral of the Effective Date*, which deferred the effective date for implementation of ASU 2014-09 by one year, making the new guidance effective for annual reporting periods beginning after December 15, 2017, with early adoption permitted no earlier than the original effective date. The FASB has continued to issue ASU topics to further clarify ASU 2014-09. These have included ASU 2016-08, ASU 2016-10, ASU 2016-12, and ASU 2016-20. The effective date and transition requirements of these ASU topics are the same as the effective date and transition requirements of ASU 2015-14. The new standards are effective for the Company's fiscal year ending March 30, 2019, beginning with the first quarter of that fiscal year.

The new standard permits adoption by using either (i) a full retrospective approach for all periods presented in the period of adoption or (ii) a modified retrospective approach with the cumulative effect of initially applying the new standard recognized at the date of initial application and providing certain additional disclosures. The Company has not yet finalized which transition method will be used; however, at this time it expects to adopt the modified retrospective approach. The final determination of the transition method depends on a number of factors including the impact on comparability, the ability to support related disclosures, and the overall nature and significance of the associated changes to the financial statements. The Company has developed an implementation plan and assigned cross-functional internal resources to perform a comprehensive assessment of the new standard and its impact on the financial statements of the Company. This assessment is ongoing and includes identification, consideration, and quantification of the impact of the new standard on the Company's financial statements, accounting policies, processes, control environment and systems. The outcome of this evaluation will be the implementation of supporting processes and systems that enable timely and accurate reporting under the new standard as well as the determination of which transition method is most appropriate.

While the Company continues to assess all potential impacts under the new standard, a preliminary assessment would indicate that the new standard is unlikely to drive a significant change to the amount or timing of revenue recognition related to system sales or service contracts, the Company's major revenue streams. There may be some impact related to the allocation of value and timing of recognition in situations where service contracts, which the Company expects to be recognized over time, are sold together with systems, which it expects to be primarily recognized at a point in time. The Company believes that certain aspects of the new guidance will require significant judgment, including identification of relevant performance obligations and quantification of the consideration to which the entity expects to be entitled in exchange for those goods or services. Further, in connection with the adoption of the standard, there is a requirement to capitalize certain costs, which for the Company primarily comprises commission expenses for sales representatives. Any such costs required to be capitalized would amortize over the period of performance for the underlying contracts. The Company is still evaluating the impact of capitalizing costs to execute a contract, however the primary potential impact is expected to relate to commissions on service contracts with a duration approximating or exceeding one year. The impact related to contracts with a duration over one year is not expected to be significant and the Company expects to elect the practical expedient under the new standard for costs with a duration less than one year and expense those items as incurred. This preliminary assessment is based on the Company's analysis of actual historical revenue transactions under the new guidance and presumes certain conclusions as it relates to accounting policies under the new standard. Due to the complexity of certain of the Company's contracts, the actual revenue recognition treatment required under the new standard for these arrangements may be dependent on contract-specific terms and may vary from this overall expectation. The Company currently expects that necessary operational changes will be implemented prior to the adoption date. As the Company’s assessment of the new standard’s impacts is ongoing, including the areas described above, the Company cannot reasonably provide further estimates of the quantitative impacts to its financial statements at this time.

In October 2016, the FASB issued ASU 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory*, to improve and simplify the accounting for the income tax consequences of intra-entity transfers of assets other than inventory, requiring companies to recognize income tax consequences upon the transfer of the asset to a third party. ASU 2016-16 is effective for annual periods beginning after December 15, 2017, and interim periods within those annual periods, which would be the Company's fiscal year ending March 30, 2019. While the Company does not expect the adoption of ASU 2016-16 to have a material effect on its business, the Company is still evaluating any potential impact that adoption of ASU 2016-16 may have on its financial position, results of operations or cash flows.

In February 2016, the FASB issued ASU 2016-02, *Leases*. ASU 2016-02 increases transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and requires disclosing key information about leasing arrangements. ASU 2016-02 is effective for annual periods beginning after December 15, 2018 and interim periods within those annual periods, which would be the Company's fiscal year ending March 28, 2020. The Company is still evaluating any potential impact that adoption of ASU 2016-02 may have on its financial position, results of operations or cash flows.

3. Fair Value Measurements

Financial Assets and Liabilities Measured at Fair Value

ASC Topic 820 establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value. These tiers include the following:

- *Level 1*, defined as observable inputs such as quoted prices in active markets for identical assets or liabilities;
- *Level 2*, defined as inputs that are observable either directly or indirectly such as quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active and other inputs that can be corroborated by observable market data; and
- *Level 3*, defined as unobservable inputs for which little or no market data exists, therefore requiring an entity to develop its own assumptions.

The Company’s fair value hierarchy for its financial assets and liabilities measured at fair value on a recurring basis as of September 30, 2017 and April 1, 2017 was as follows (in thousands):

September 30, 2017	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market securities	$ 2,182	$ —	$ —	$ 2,182
U.S. treasury fund	5,997	—	—	5,997
Commercial paper	—	4,796	—	4,796
Repurchase agreements	—	5,000	—	5,000
Total cash equivalents	$ 8,179	$ 9,796	$ —	$ 17,975
Short term investments - available for sale:				
U.S. treasury fund	$ 1,504	$ —	$ —	$ 1,504
Commercial paper	—	29,097	—	29,097
Corporate bonds	—	2,201	—	2,201
Total short-term investments - available for sale	$ 1,504	$ 31,298	$ —	$ 32,802
Forward purchase or (sale) contracts:				
Japanese Yen	$ —	$ 54	$ —	$ 54
New Taiwan Dollar	—	(18)	—	(18)
Korean Won	—	(21)	—	(21)
Euro	—	47	—	47
British Pound	—	81	—	81
Chinese Renminbi	—	14	—	14
Total forward contracts	$ —	$ 157	$ —	$ 157
Deferred compensation plan assets:*				
Mutual funds and exchange traded funds	$ 2,519	$ —	$ —	$ 2,519
Money market securities	954	—	—	954
Total deferred compensation plan assets	$ 3,473	$ —	$ —	$ 3,473

April 1, 2017	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market securities	$ 22,395	$ —	$ —	$ 22,395
Commercial paper	—	4,945	—	4,945
Total cash equivalents	$ 22,395	$ 4,945	$ —	$ 27,340
Short term investments - available for sale:				
Commercial paper	$ —	$ 5,743	$ —	$ 5,743
Total short-term investments - available for sale	$ —	$ 5,743	$ —	$ 5,743
Forward purchase or (sale) contracts:				
Japanese Yen	$ —	$ 9	$ —	$ 9
New Taiwan Dollar	—	20	—	20
Korean Won	—	39	—	39
Euro	—	(96)	—	(96)
British Pound	—	16	—	16
Chinese Renminbi	—	(5)	—	(5)
Singapore Dollar	—	(1)	—	(1)
Total forward contracts	$ —	$ (18)	$ —	$ (18)
Deferred compensation plan assets:*				
Mutual funds and exchange traded funds	$ 845	$ —	$ —	$ 845
Money market securities	2,213	—	—	2,213
Total deferred compensation plan assets	$ 3,058	$ —	$ —	$ 3,058

*These investments represent assets held in trust for the deferred compensation plan

For Level 1 assets, the Company utilized quoted prices in active markets for identical assets.

For Level 2 assets, exclusive of forward contracts, the Company utilized quoted prices in active markets for similar assets. For forward contracts, spot prices at September 30, 2017 and April 1, 2017 were utilized to calculate fair values.

During the first two quarters of 2018 and 2017, there were no transfers between Level 1, 2 or 3 assets.

Investments

The Company's investments, other than money market securities for which there is no unrealized gain or loss, at September 30, 2017 and April 1, 2017 were as follows (in thousands):

September 30, 2017	Cost	Unrealized Gain	Unrealized Loss	Fair Value
Available-for-sale securities (current):				
U.S. treasury fund	$ 7,501	$ —	$ —	$ 7,501
Commercial paper	33,893	—	—	33,893
Corporate Bonds	2,202	—	(1)	2,201
Repurchase Agreements	5,000	—	—	5,000
Total investments (current)	$ 48,596	$ —	$ (1)	$ 48,595
Available-for-sale securities (non-current):				
Mutual funds, exchange traded funds and money market securities*	$ 3,247	$ 226	$ —	$ 3,473
Total investments (non-current)	$ 3,247	$ 226	$ —	$ 3,473

April 1, 2017	Cost	Unrealized Gain	Unrealized Loss	Fair Value
Available-for-sale securities (current):				
Commercial paper	$ 10,688	$ —	$ —	$ 10,688
Total investments (current)	$ 10,688	$ —	$ —	$ 10,688
Available-for-sale securities (non-current):				
Mutual funds, exchange traded funds and money market securities*	$ 2,974	$ 84	$ —	$ 3,058
Total investments (non-current)	$ 2,974	$ 84	$ —	$ 3,058

*These investments represent assets held in trust for the deferred compensation plan

For purposes of determining gross realized gains and losses and reclassification out of accumulated other comprehensive income (loss), the cost of securities sold is based on specific identification. Net unrealized holding gains and losses on current available-for-sale securities included in accumulated other comprehensive income (loss) were insignificant as of September 30, 2017 and April 1, 2017.

4. Trade Accounts Receivable

Trade accounts receivable consisted of the following:

(In thousands)	Sep 30, 2017	Apr 1, 2017
Current trade accounts receivable, net	$ 47,565	$ 40,494
Non-current trade accounts receivable	194	489
	$ 47,759	$ 40,983

Non-current trade accounts receivable are included in Other assets in the Condensed Consolidated Balance Sheets.

5. Inventories

Inventories are principally valued at standard cost, which approximates the lower of cost and net realizable value on a first-in, first-out basis. Components of inventories were as follows:

(In thousands)	Sep 30, 2017	Apr 1, 2017
Raw materials and purchased parts	$ 43,824	$ 41,383
Work-in-process	13,753	13,829
Finished goods	3,846	3,730
	$ 61,423	$ 58,942

6. Other Assets

Other assets consisted of the following:

(In thousands)	Sep 30, 2017	Apr 1, 2017
Demo and leased equipment, net	$ 8,353	$ 11,011
Long term deposits	3,755	2,872
Non-current restricted cash	1,098	1,090
Non-current deferred income taxes, net	844	890
Other non-current assets	3,769	3,958
	$ 17,819	$ 19,821

Depreciation expense for demo and leased equipment totaled $0.1 million in the second quarter of 2018 and $0.1 million in the second quarter of 2017. For the two fiscal quarters ended September 30, 2017 depreciation expense for demo and leased equipment totaled $0.2 million compared to $0.2 million for the two fiscal quarters ended October 1, 2016. Of the total $8.4 million and $11.0 million of demo and leased equipment at September 30, 2017 and April 1, 2017, $4.8 million and $1.1 million were leased assets at customer sites generating revenue.

Included in Other non-current assets are long-term investments held in a trust for the deferred compensation plan, non-current trade accounts receivable and other items.

7. Accrued Liabilities

Accrued liabilities consisted of the following:

(In thousands)	Sep 30, 2017	Apr 1, 2017
Payroll-related liabilities	$ 10,318	$ 6,335
Customer deposits	6,221	1,242
Product warranty accrual	4,929	3,394
Purchase order commitments and receipts	3,631	2,522
Restructuring costs payable	2,466	4,996
Professional fees payable	1,024	734
Current portion, long-term debt	410	434
Other current liabilities	3,051	2,529
	$ 32,050	$ 22,186

Included in other current liabilities above are accrued amounts for value-added taxes, income taxes, freight, and other similar items.

8. Product Warranty

The following is a reconciliation of the changes in the aggregate product warranty accrual:

	Fiscal quarter ended		Two fiscal quarters ended	
(In thousands)	Sep 30, 2017	Oct 1, 2016	Sep 30, 2017	Oct 1, 2016
Product warranty accrual, beginning	$ 6,538	$ 5,947	$ 5,474	$ 5,734
Warranty charges incurred, net	(2,666)	(1,263)	(5,111)	(3,314)
Provision for warranty charges	3,284	837	6,793	3,101
Product warranty accrual, ending	$ 7,156	$ 5,521	$ 7,156	$ 5,521

Net warranty charges incurred include labor charges and costs of replacement parts for system repairs under warranty. These costs are recorded net of any estimated cost recoveries resulting from either successful repair of damaged parts or from warranties offered by the Company’s suppliers for defective components. The provision for warranty charges reflects the estimate of future anticipated net warranty costs to be incurred for all products under warranty at quarter end and is recorded to cost of sales. Of the total of $7.2 million and $5.5 million of product warranty accruals as of September 30, 2017 and October 1, 2016, $2.3 million and $1.0 million were non-current and were included in Other liabilities on the Condensed Consolidated Balance Sheets.

9. Deferred Revenue

Generally, revenue is recognized upon fulfillment of acceptance criteria at the Company's factory and transfer of risk and title. Revenue is deferred whenever title transfer is pending, risk has not transferred, and/or acceptance criteria have not yet been fulfilled. Deferred revenue arises from, among other factors, sales to Japanese customers, shipments of substantially new products and shipments with custom specifications and other acceptance criteria where the Company cannot demonstrate a track record of acceptance. For sales involving multiple element arrangements, the relative selling price of any undelivered elements, including installation services and similar items, is deferred until the elements are delivered and acceptance criteria are met. Revenue related to maintenance and service contracts is deferred and recognized ratably over the duration of the contracts.

The following is a reconciliation of the changes in deferred revenue:

	Fiscal quarter ended		Two fiscal quarters ended	
(In thousands)	Sep 30, 2017	Oct 1, 2016	Sep 30, 2017	Oct 1, 2016
Deferred revenue, beginning	$ 15,616	$ 9,757	$ 15,397	$ 7,685
Revenue deferred	31,182	9,119	46,652	19,472
Revenue recognized	(30,429)	(7,293)	(45,680)	(15,574)
Deferred revenue, ending	$ 16,369	$ 11,583	$ 16,369	$ 11,583

Of the total of $16.4 million and $11.6 million of deferred revenue at September 30, 2017 and April 1, 2017, $0.6 million and $0.6 million were non-current and were included in Other liabilities on the Condensed Consolidated Balance Sheets.

10. Long-term Debt

On January 9, 2017, ESI Leasing, LLC (ESI Leasing), a wholly owned subsidiary of the Company, entered into a loan agreement (Loan Agreement) with First Technology Federal Credit Union (Lender). The Loan Agreement provides for a term loan from the Lender to ESI Leasing in the principal amount of $14 million (Loan). The interest rate of the Loan is fixed at 4.75% per annum, except that it may be increased if certain covenants under the Loan Agreement are not satisfied and after and during the continuation of an “Event of Default” as defined in the Loan Agreement. The Loan amortizes over a period of approximately 20 years, but the maturity date of the loan is January 1, 2027, meaning that, if ESI Leasing does not prepay or refinance the Loan, the balance of the principal of the Loan will become due on January 1, 2027. ESI Leasing will pay monthly principal and interest payments on the Loan totaling annual amounts of $1.1 million through the maturity of the loan. The Company unconditionally guarantees the loan to ESI Leasing.

The principal maturities for each of the upcoming twelve month periods ending on September 30 are as follows:

(In thousands)	2018	2019	2020	2021	2022
Principal maturities	$ 444	$ 466	$ 487	$ 512	$ 537

Total debt currently outstanding on the Loan Agreement at the end of fiscal 2017 was:

(In thousands)	Sep 30, 2017	Apr 1, 2017
Total debt outstanding	$ 13,392	$ 13,923
Less: Current portion, long-term debt	(410)	(434)
Long-term debt	$ 12,982	$ 13,489

Deferred debt issuance costs related to the above long-term debt as of September 30, 2017 and April 1, 2017 were $320 thousand and $337 thousand, respectively.

11. Revolving Credit Facility

The Company is party to a loan and security agreement (Credit Facility) with Silicon Valley Bank (SVB), which was initially entered into on March 20, 2015 and amended on July 12, 2016. The Credit Facility provides for a senior secured asset-based revolving facility with availability up to $30 million, including a $15 million sublimit for letters of credit. In the fourth quarter of 2017, the Company amended and extended the Credit Facility by one year. With this extension, the Credit Facility expires March 20, 2019. At September 30, 2017, the Company had no amounts outstanding under the Credit Facility, was in compliance with all covenants, and was not in default under the agreement. The commitment fee on the amount of unused credit was 0.3 percent. As amended, the Credit Facility allows for a greater level of EBITDA losses, but reduces the level of permitted acquisitions and purchases of capital equipment. If the Company fails to meet the covenants in its Credit Facility or its lenders fail to fund, access to the facility may be limited or the facility may become unavailable altogether.

12. Commitments & Contingencies

The Company mitigates credit risk by transacting with highly rated counterparties for foreign exchange contracts, letters of credit and other transactions where counterparty risk is a factor. The Company has evaluated the non-performance risks associated with the Company's lenders and other parties and believes them to be insignificant.

From time to time the Company may be party to litigation arising in the normal course of business. Currently, the Company is not party to any litigation it believes would have a material adverse effect on the Company's financial position, results of operations or cash flows.

13. Shareholders’ Equity

Share Repurchase Program

In December 2011, the Board of Directors authorized a share repurchase program totaling $20.0 million to acquire shares of the Company's outstanding common stock. The repurchases are to be made at management’s discretion in the open market or in privately negotiated transactions in compliance with applicable securities laws and other legal requirements and are subject to market conditions, share price and other factors. The Company did not repurchase any shares during the first two quarters of 2018 or 2017. There is no expiration date for the repurchase program.

14. Accumulated Other Comprehensive Income

The following is a reconciliation of the changes in accumulated other comprehensive income (AOCI):

	Foreign currency translation adjustment	Accumulated other comprehensive income related to benefit plan obligation	Net unrealized loss on available-for-sale securities	Total
Balance at April 1, 2017	$ (1,242)	$ 45	$ (17)	$ (1,214)
Other comprehensive income (loss) before reclassifications and taxes	388	14	(1)	401
Amounts reclassified from AOCI	—	—	—	—
Tax effect	—	(5)	—	(5)
Other Comprehensive income (loss)	388	9	(1)	396
Balance at September 30, 2017	$ (854)	$ 54	$ (18)	$ (818)

15. Share-Based Compensation

The Company's share-based compensation consists of stock-settled stock appreciation rights (SARs), restricted stock unit awards with a service condition (time-based RSUs), restricted stock unit awards with a performance condition (performance-based RSUs), restricted stock unit awards with a market performance condition (market-based RSUs) and an employee stock purchase plan.

The Company recognizes expense related to the fair value of SARs and the 1990 Employee Stock Purchase Plan (ESPP) using the Black-Scholes model to estimate the fair value of awards on the date of grant. The fair value of time-based and performance-based restricted stock units (RSUs) are measured on the grant date based on the market value of the Company's common stock. The market-based RSUs must achieve the total shareholder return (TSR) measures in order for the awards to vest, and the grant date fair value of the awards is calculated using a Monte Carlo simulation model.

Except for performance-based RSUs, the Company recognizes compensation expense for all share-based compensation awards, net of estimated forfeitures, on a straight-line basis over the requisite service period of the award. Expense for performance-based RSUs is recognized based on the probability of achievement of the performance criteria. The compensation cost for market-based RSUs is recognized over the related service period, even if the market condition is never satisfied.

The Company granted a total of 396,400 time-based RSUs and 197,400 market-based RSUs during the first two quarters of 2018, but did not grant any SARs or performance-based RSUs. Grants for the second quarter of 2018 consisted of 70,800 time-based RSUs.

Share-based compensation expense under the stock incentive plans is included in the Company’s Condensed Consolidated Statements of Operations as follows:

	Fiscal quarter ended		Two fiscal quarters ended	
(In thousands)	Sep 30, 2017	Oct 1, 2016	Sep 30, 2017	Oct 1, 2016
Cost of sales	$ 77	$ 136	$ 144	$ 256
Selling, general and administrative	1,070	1,205	2,131	2,182
Research, development and engineering	183	177	333	371
Total share-based compensation expense	$ 1,330	$ 1,518	$ 2,608	$ 2,809

The Company does not have any capitalizable share-based compensation costs for the two fiscal quarters ended September 30, 2017 and October 1, 2016, respectively. As of September 30, 2017, the Company had $9.6 million of total unrecognized share-based compensation costs, net of estimated forfeitures, which are expected to be recognized over a weighted average period of 2.4 years.

16. Product and Geographic Information

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance. The Company's chief operating decision maker (CODM) is its Chief Executive Officer (CEO).

The Company operates in a single segment, defined as a manufacturer of high-technology microfabrication and related equipment. This segment, which also represents the consolidated entity, sells products into a variety of end markets that are grouped into four major categories for the purpose of providing an understanding of the principal end markets for the products manufactured by the Company, specifically: 1) Printed Circuit Board (PCB), 2) Component Test, 3) Semiconductor, and 4) Industrial Machining.

The following table presents net sales information by the four major market categories addressed by the Company's single segment:

	Fiscal quarter ended		Two fiscal quarters ended	
(In thousands)	Sep 30, 2017	Oct 1, 2016	Sep 30, 2017	Oct 1, 2016
Printed Circuit Board	$ 43,541	$ 13,527	$ 95,859	$ 44,445
Component Test	7,677	4,990	15,858	9,592
Semiconductor	12,028	7,222	18,765	14,831
Industrial Machining	7,721	3,919	13,169	8,458
Net Sales	$ 70,967	$ 29,658	$ 143,651	$ 77,326

Net sales by geographic area, based on the location of the end user, were as follows:

	Fiscal quarter ended		Two fiscal quarters ended	
(In thousands)	Sep 30, 2017	Oct 1, 2016	Sep 30, 2017	Oct 1, 2016
Asia	$ 64,053	$ 25,721	$ 130,616	$ 66,169
Americas	2,936	2,236	7,106	5,254
Europe	3,978	1,701	5,929	5,903
Net Sales	$ 70,967	$ 29,658	$ 143,651	$ 77,326

17. Restructuring and Cost Management Plans

2017 Corporate Restructuring:

In the fourth quarter of 2017, the Company initiated a restructuring plan to improve business effectiveness and streamline operations to achieve a stated target profit level for the Company as a whole. As a part of the restructuring plan, the management team was reorganized from a business unit to a functional structure; the Company closed facilities in Montreal, Canada; Napa, California; and Sunnyvale, California; the Company discontinued certain products; and the Company made select reductions in headcount across the Company. Actions under this plan are largely completed as of the end of the second fiscal quarter of 2018, except facilities charges and other costs which will extend beyond that time, with an estimated future cost of approximately $0.4 million and $0.2 million, of which the majority is expected to be paid in cash.

Total expenses related to the plan were $16.5 million in the first two quarters of 2018 and $7.6 million in the fourth quarter of 2017. Included in the 2018 expenses are approximately $13.3 million of charges impacting gross margins primarily related to impairment of other assets and inventory stemming from the product portfolio program reviews. Operating expense charges included $2.5 million of facilities and fixed assets charges related to abandoned facilities and discontinued products and $0.6 million of employee severance and related costs. The change in total estimated costs primarily related to inventory and other asset write-offs stemming from the product portfolio program reviews that occurred during the first two quarters of 2018. Product portfolio reviews are ongoing.

The following table presents the total expected restructuring costs as of September 30, 2017 (in thousands):

	Total Expected Costs for the Plan	Costs Recognized from inception of the plan through the Quarter ended Sep 30, 2017	Remaining Costs to be Recognized Subsequent to Sep 30, 2017
Employee severance and related personnel costs	$ 4,165	$ 4,165	$ —
Site closure costs	2,090	1,690	400
Current asset impairments and other gross profit charges(1)	14,947	14,947	—
Non-current asset impairments	3,032	3,032	—
Other Costs	427	227	200
Total	$ 24,661	$ 24,061	$ 600

(1) Current asset impairments include inventory charges recorded in cost of sales.

The following table presents the amounts payable related to the 2017 Corporate Restructuring (in thousands):

	Employee severance and related personnel costs	Site closure costs	Current asset impairments and other gross profit charges[(1)]	Non-current asset impairments	Other Costs	Total
Balance as of April 2, 2016	$ —	$ —	$ —	$ —	$ —	$ —
Costs incurred	3,588	888	1,669	1,376	66	7,587
Cash payments	(341)	—	—	—	(66)	(407)
Non-cash items	—	—	(1,669)	(1,376)	—	(3,045)
Balance as of April 1, 2017	$ 3,247	$ 888	$ —	$ —	$ —	$ 4,135
Costs incurred	577	800	13,278	1,657	163	16,475
Cash (payments) receipts	(3,672)	(863)	(1,750)	32	(163)	(6,416)
Non-cash items	—	—	(10,876)	(1,689)	—	(12,565)
Balance as of September 30, 2017	$ 152	$ 825	$ 652	$ —	$ —	$ 1,629

(1) Asset and facilities costs include inventory charges recorded in cost of sales.

Other restructuring plans:

The Company's previously disclosed restructuring plans are largely complete, except for facilities charges and legal entity closure charges which are expected to be incurred through the end of December 2018. Please see Note 26: Restructuring and Cost Management Plans to the Company’s financial statements included in its Annual Report on Form 10-K for the fiscal year ending April 1, 2017. Net restructuring costs related to these plans were $0.4 million in 2018 and $0.4 million in 2017. The Company does not expect to incur any future expenses on these plans. The amounts payable of $0.8 million at September 30, 2017 are expected to be future cash outflows, primarily relating to facility expenses.

The following table presents the amounts related to restructuring costs payable (in thousands):

Restructuring & cost management amounts payable as of April 2, 2016	$ 757
Cash payments and other adjustments	(297)
Costs incurred	401
Restructuring & cost management amounts payable as of April 1, 2017	861
Cash payments and other adjustments	(380)
Costs incurred	356
Restructuring & cost management amounts payable as of September 30, 2017	$ 837

Overall restructuring reserve:

As of September 30, 2017, and April 1, 2017, the amount of unpaid restructuring costs included in accrued liabilities on the Consolidated Balance Sheets were $2.5 million and $5.0 million, respectively. Included in the payable balance are amounts for severance and employee benefits, asset retirement obligation and net lease commitments.

18. Earnings (Loss) Per Share

The following is a reconciliation of weighted average shares outstanding used in the calculation of basic and diluted earnings (loss) per share:

	Fiscal quarter ended		Two fiscal quarters ended	
(In thousands, except per share data)	Sep 30, 2017	Oct 1, 2016	Sep 30, 2017	Oct 1, 2016
Net income (loss)	$ 4,260	$ (9,675)	$ 7,162	$ (9,793)
Weighted average shares used for basic earnings per share	33,861	32,396	33,647	32,109
Incremental diluted shares	1,013	—	1,069	—
Weighted average shares used for diluted earnings per share	34,874	32,396	34,716	32,109
Net income (loss) per share:				
Basic	$ 0.13	$ (0.30)	$ 0.21	$ (0.30)
Diluted	$ 0.12	$ (0.30)	$ 0.21	$ (0.30)

Awards of options, SARs and RSUs representing an additional 0.3 million and 2.7 million shares of stock for the second quarter of 2018 and 2017, respectively, and 0.6 million and 2.4 million shares of stock for the first two quarters of 2018 and 2017, respectively, were not included in the calculation of diluted net earnings per share because their effect would have been antidilutive.

19. Business Acquisitions

Fiscal 2017

On August 1, 2016, the Company acquired all of the outstanding shares of Visicon Technologies, Inc. (Visicon), a leading supplier of high-accuracy and high-throughput measurement and defect detection systems based in Napa, California. The consideration under the merger agreement is subject to adjustment for indebtedness, seller's transaction expenses, working capital and other items.

Based on closing working capital levels and other adjustments, the Company paid $2.0 million in cash and issued 603,939 shares of ESI common stock, valued at approximately $4.2 million. The value of the common stock is based on the closing price of stock on August 1, 2016. A portion of the shares issued in connection with the agreement were reserved in escrow to serve as a source of payment for any purchase price adjustments or indemnity claims by the Company. The sellers have contractually agreed to limitations on the sale of the shares of common stock they received in connection with the sale of Visicon; specifically, no shares could be sold for six months following closing, after which twenty-five percent of the shares become salable each quarter thereafter. The shares issued as a part of this merger represented a non-cash investing activity of $4.2 million.

The Company finalized the valuation of assets acquired, liabilities assumed, and consideration in the first quarter of 2018. The amounts shown below represent the fair value of the associated assets acquired, liabilities assumed and consideration transferred as of the acquisition date. The total estimated purchase price of $6.2 million, net of cash acquired, was allocated to the underlying assets acquired and liabilities assumed based on estimated fair value, as shown in the following table:

(In thousands)	
Accounts receivable	$ 391
Inventory	982
Prepaid expense and other current assets	116
Property, plant and equipment	737
Acquired intangibles	3,300
Goodwill	2,626
Other assets	26
Accounts payable and other accrued liabilities	(1,952)
Total purchase price, net of cash acquired	$ 6,226

The acquisition provided the Company with a portfolio of standalone defect detection systems for the medical device and consumer electronics markets. In addition to a standalone product portfolio and associated value streams, the acquisition provided complementary technology for integrated verification of laser machining, to allow the Company to expand its presence into the medical device market, present an opportunity for enhanced vertical integration and result in synergies with the Company's current consumer electronics customer base.

None of the goodwill is deductible for tax purposes. The acquired intangible assets consisted primarily of approximately $2.1 million of developed technology. Identified intangible assets are expected to be amortized over their useful lives of one to six years.

The operating results of the acquired entity are included in the Company's results of operations since the date of acquisition. Pro forma financial information has not been provided for the acquisition of Visicon as it is not material to the Company's operations and financial position.

Fiscal 2015

The Company acquired all of the outstanding shares of Wuhan Topwin Optoelectronics Technology Co., Ltd. (Topwin), a Chinese manufacturer of laser-based systems. In connection with this acquisition, the Company issued 145,442 shares and treated that as compensation to an employee of the Company who was previously an owner of Topwin. The compensation expense was recognized over the service period and from acquisition through the second quarter of fiscal 2018, the Company has recognized $1.7 million in share-based compensation expense related to this acquisition.

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

The statements contained in this report that are not statements of historical fact, including without limitation statements containing the words "believes", "expects", "projects", "anticipates," "plan," "continue," "could," "estimates," "intends," "should," "will," "may" and similar words, constitute forward-looking statements that are subject to a number of risks and uncertainties. Forward looking statements include any statements regarding anticipated sales, gross margins, our profitability in future periods, sources of our future revenue, the effect of new guidance on revenue recognition, the effect of our adoption of accounting pronouncements or standards, our ability to complete our corporate restructuring in a timely manner and implement our new functional structure, our expectation of restructuring costs, the expected benefits of our acquisition of Visicon, future impairment of goodwill, future anticipated net warranty costs, our products' ability to satisfy the needs of manufacturers, our relationships with suppliers and customers, trends that drive increases in applications for laser processing, the size and growth of our markets, our growth of foreign operations, our intent to reinvest foreign earnings, our customer concentrations, our ability to leverage our differentiated capability in the market, overseas production capabilities, our ability to maintain and expand our core technologies and product applications, future payments of cash dividends, the adequacy of our liquidity and financing, our ability to resolve legal proceedings, our expectation that we will invest in new product development and enhancements, and working capital requirements and resources. From time to time, we may make other forward-looking statements. Investors are cautioned that such forward-looking statements involve estimates, assumptions, risks, and uncertainties and are subject to an inherent risk that actual results may differ materially. Factors that may cause or contribute to differences include those discussed below in *Item 1A Risk Factors**.*

Overview of Business

Electro Scientific Industries, Inc. and its subsidiaries (ESI, we, our, or the Company) is a leading supplier of innovative laser-based microfabrication solutions for industries reliant on microtechnologies. ESI's integrated solutions allow industrial designers and process engineers to control the power of laser light to transform materials in ways that differentiate their consumer electronics, wearable devices, semiconductor circuits and high-precision components for market advantage. Founded in 1944, ESI is headquartered in Portland, Oregon, with global operations and subsidiaries in Asia, Europe and North America.

Laser microfabrication is comprised of a set of precise micron-level processes, including drilling, scribing, dicing, singulation, cutting, ablating, trimming, and precision marking on multiple types of materials. These processes require application-specific laser systems that are able to meet our customers' exacting performance and productivity requirements. Our laser-based systems are utilized in the production of flexible and rigid printed circuit board (PCB), semiconductor devices, advanced semiconductor packaging, consumer electronics, electronic sensors, touch-panel glass, flat panel liquid crystal displays (LCDs), applications within the automotive, aerospace, medical and display end markets as well as other high-value components and devices to enable functionality, increase performance and improve production yields.

Additionally, we produce high-capacity test and inspection equipment that is critical to the quality control process during the production of multilayer ceramic capacitors (MLCCs). Our equipment ensures that each component meets the electrical and physical tolerances required to perform properly.

The second quarter of 2018 ended September 30, 2017, the first quarter of 2018 ended July 1, 2017, and the second quarter of 2017 ended October 1, 2016 were all 13-week periods. Similarly, the two quarters ended September 30, 2017 and the two quarters ended October 1, 2016 each consisted of 26-week periods.

Results of Operations

Second Quarter 2018 Highlights:

- Orders in the second quarter of 2018 were $128.9 million, growing 360% versus the second quarter of 2017. It was the highest order level in over ten years. The order levels reflected a healthy environment, strong technology and market drivers, and seasonal strength in several of our markets. Orders from our PCB customers more than tripled versus a year ago as flexible PCB manufacturers ramped up capacity to meet the demand from consumer electronics manufacturers. Flexible circuit demand is growing due to unit growth in consumer electronics devices, more flexible circuits per device, plus new materials, technologies and applications utilizing complex flexible circuits. Demand for our semiconductor products was also above the level from a year ago, reflecting a healthy semiconductor capital spending environment. Orders for our new Ultrus™ wafer scribing tool were driven by initial high volume production orders associated with a trend toward new manufacturing technologies and thinner wafers. The healthy capacity investment environment also drove higher demand for our semiconductor trim, wafer marking, and legacy memory repair tools. Component Test (CT) product demand was up more than double compared to last year, reflecting increased capacity spend on the part of MLCC manufacturers. This market has recently been capacity constrained driven by increased in consumer electronics, automotive and radio frequency (RF) end markets. Demand for our Industrial Machining (IM) products grew year-over-year primarily due to orders for our Garnet™ micromachining systems.
- Total net sales increased by 139% year-over-year to $71.0 million in the second quarter of 2018, due primarily to the higher order levels in the prior quarter compared to the year-ago period. Backlog increased by $47.0 million during the quarter.
- Operating expenses of $22.1 million increased by $1.2 million year-over-year on higher variable expenses related to higher revenues and improved profitability and $2.2 million of restructuring costs, partially offset by lower fixed expenses as a result of our restructuring program announced in February 2017.
- Net income was $0.12 per diluted share, compared to a loss of $0.30 per share a year ago, on higher sales and gross profit, partially offset by higher operating and restructuring expenses.
- Operating cash flow was $18.3 million, compared to a cash use of $7.5 million in the second quarter of 2017, on higher net income.
- Significant progress was made on the restructuring announced in February 2017, and these actions are largely completed as of the end of the second quarter of 2018. We are now operating fully within our new lower fixed cost structure as of the end of the second quarter of 2018.

Second Quarter 2018 Ended September 30, 2017 Compared to Second Quarter 2017 Ended October 1, 2016

The following table presents results of operations data as a percentage of net sales:

	Fiscal quarter ended	
	Sep 30, 2017	**Oct 1, 2016**
Net sales	100.0 %	100.0 %
Cost of sales	62.6	63.0
Gross profit	37.4	37.0
Selling, general and administrative	16.5	43.0
Research, development and engineering	11.7	26.2
Acquisition and integration costs	—	1.1
Restructuring costs	3.0	—
Operating income (loss)	6.2	(33.3)
Interest and other (expense) income, net	(0.3)	0.7
Total non-operating (expense) income	(0.3)	0.7
Income (loss) before income taxes	5.9	(32.6)
Provision for income taxes	(0.1)	—
Net income (loss)	6.0 %	(32.6)%

Net Sales

The following table presents net sales information by product group:

	Fiscal quarter ended			
	Sep 30, 2017		Oct 1, 2016	
(In thousands, except percentages)	Net Sales	% of Net Sales	Net Sales	% of Net Sales
Printed Circuit Board	$ 43,541	61.4%	$ 13,527	45.6%
Component Test	7,677	10.8	4,990	16.8
Semiconductor	12,028	16.9	7,222	24.4
Industrial Machining	7,721	10.9	3,919	13.2
Net Sales	$ 70,967	100.0%	$ 29,658	100.0%

Net sales for the second quarter of 2018 increased $41.3 million or 139.3% from net sales for the second quarter of 2017.

Sales of products into the PCB market for the second quarter of 2018 increased $30.0 million or 221.9% compared to the second quarter of 2017. This was primarily driven by increased sales of our flex circuit drilling systems. The higher demand for flex drilling systems reflected an unusually healthy market environment in 2018 compared to the very weak environment in the second quarter of 2017. The strong environment was driven by unit growth in consumer electronics and associated capacity additions plus new materials, technologies and applications that require increase level of complex flexible circuits.

Sales of products into the CT market for the second quarter of 2018 increased $2.7 million or 53.8% compared to second quarter of 2017, primarily driven by stronger capacity buying by MLCC manufacturers, particularly for consumer electronics and automotive applications.

Sales of products into semiconductor applications for second quarter of 2018 increased $4.8 million or 66.5% compared to second quarter of 2017. This increase was primarily driven by sales of legacy memory repair systems into the semiconductor industry, which had not occurred in the second quarter of 2017, as well as an increase in sales of our wafer mark and wafer trim products.

Sales of products into IM applications for the second quarter of 2018 increased $3.8 million or 97.0% compared to the second quarter of 2017. This was primarily due to incremental sales of our Garnet™ micromachining system, higher sales of our laser ablation products into the research and materials science industries, and increased service revenue.

The following table presents net sales information by geographic region:

	Fiscal quarter ended			
	Sep 30, 2017		Oct 1, 2016	
(In thousands, except percentages)	Net Sales	% of Net Sales	Net Sales	% of Net Sales
Asia	$ 64,053	90.3%	$ 25,721	86.7%
Americas	2,936	4.1	2,236	7.5
Europe	3,978	5.6	1,701	5.7
Net Sales	$ 70,967	100.0%	$ 29,658	100.0%

Net sales to Asia increased by $38.3 million or 149.0% primarily due to higher sales of flex via drilling products and memory repair products. Net sales to Americas increased due principally to higher sales of Visicon inspection products and laser ablation products. Europe sales increased due to higher wafer trim and circuit trim product sales.

Gross Profit

	Fiscal quarter ended			
	Sep 30, 2017		Oct 1, 2016	
(In thousands, except percentages)	Gross Profit	% of Net Sales	Gross Profit	% of Net Sales
Gross Profit	$ 26,532	37.4%	$ 10,980	37.0%

Gross profit was $26.5 million for the second quarter of 2018, an increase of $15.6 million compared to $11.0 million in the second quarter of 2017. The gross profit increase was primarily driven by higher net sales, while the slight gross margin increase was primarily driven by the leveraged effect of higher sales volume, partially offset by $6.1 million of inventory and other asset impairment charges.

Operating Expenses

	Fiscal quarter ended			
	Sep 30, 2017		Oct 1, 2016	
(In thousands, except percentages)	Expense	% of Net Sales	Expense	% of Net Sales
Selling, general and administrative	$ 11,648	16.5%	$ 12,766	43.0%
Research, development and engineering	8,274	11.7	7,760	26.2
Restructuring costs	2,162	3.0	—	—
Acquisition and integration costs	—	—	335	1.1
Operating Expenses	$ 22,084	31.2%	$ 20,861	70.3%

Selling, general and administrative

Selling, general and administrative (SG&A) expenses primarily consist of labor and other employee-related expenses, including share-based compensation expense, travel expenses, professional fees, sales commissions and facilities costs. SG&A expenses for the second quarter of 2018 decreased $1.1 million compared to the second quarter of 2017. The decrease was primarily due to lower labor and facilities costs due to the corporate restructuring, partially offset by increased variable expenses due to higher revenues and improved profitability.

Research, Development and Engineering

Research, development and engineering (RD&E) expenses primarily comprise labor and other employee-related expenses, including share-based compensation expense, professional fees, project materials costs, equipment costs and facilities costs. RD&E expenses for the second quarter of 2018 increased $0.5 million compared to the second quarter of 2017, primarily due to increased variable expenses on higher corporate sales and improved profitability.

Restructuring and cost management plans

In the fourth quarter of 2017, we initiated a restructuring plan to improve business effectiveness, streamline operations and achieve a stated target profit level for the Company as a whole. Restructuring costs of $2.2 million incurred in the second quarter of 2018 consisted primarily of $1.2 million of fixed asset write-offs, $0.5 million of severance and related benefits charges, and $0.5 million of facilities lease obligations, and . See *Note 17: Restructuring and Cost Management Plans* for further discussion.

Non-operating Income and Expense

	Fiscal quarter ended			
	Sep 30, 2017		Oct 1, 2016	
(In thousands, except percentages)	Non-Operating (Expense) Income	% of Net Sales	Non-Operating (Expense) Income	% of Net Sales
Interest and other (expense) income, net	$ (229)	(0.3)%	$ 206	0.7%
Total non-operating (expense) income	$ (229)	(0.3)%	$ 206	0.7%

Non-operating income and expense, net, consists of interest income and expense, market gains and losses on assets held in employees' deferred compensation accounts, realized and unrealized foreign exchange gains and losses, bank charges, investment management fees, and other miscellaneous non-operating items, such as investment impairment. Net non-operating expense was $229 thousand in the second quarter of 2018 compared to income of $206 thousand in the second quarter of 2017. The increased expense in the second quarter of 2018 was due primarily to interest on term loan executed in January 2017.

Income Taxes

	Fiscal quarter ended			
	Sep 30, 2017		Oct 1, 2016	
(In thousands, except percentages)	Income Tax Benefit	Effective Tax Rate	Income Tax Provision	Effective Tax Rate
(Benefit from) provision for income taxes	$ (41)	(1.0)%	$ —	—%

The income tax benefit for the second quarter of 2018 was $41 thousand on pretax income of $4.2 million, an effective tax rate of (1.0)%. For the second quarter of 2017, the income tax provision was zero on pretax loss of $9.7 million, an effective rate of zero. The change in provision for taxes primarily relates to the timing of income between quarters given changes in full year income projections. Additionally, provision for taxes has not increased in proportion to the increase in pretax income due to the utilization of deferred tax assets arising from historical net operating losses.

Two Quarters Ended September 30, 2017 Compared to Two Quarters Ended October 1, 2016

Results of Operations

The following table presents results of operations data as a percentage of net sales:

	Two fiscal quarters ended	
	Sep 30, 2017	Oct 1, 2016
Net sales	100.0 %	100.0 %
Cost of sales	63.1	58.9
Gross profit	36.9	41.1
Selling, general and administrative	17.1	33.2
Research, development and engineering	12.0	19.9
Acquisition and integration costs	—	0.4
Restructuring costs	2.3	—
Operating income (loss)	5.5	(12.4)
Interest and other (expense) income, net	(0.3)	0.2
Total non-operating (expense) income	(0.3)	0.2
Income (loss) before income taxes	5.2	(12.2)
Provision for income taxes	0.2	0.4
Net income (loss)	5.0 %	(12.7)%

Net Sales

The following table presents net sales information by product group:

	Two fiscal quarters ended			
	Sep 30, 2017		Oct 1, 2016	
(In thousands, except percentages)	Net Sales	% of Net Sales	Net Sales	% of Net Sales
Printed Circuit Board	$ 95,859	66.7%	$ 44,445	57.5%
Component Test	15,858	11.0	9,592	12.4
Semiconductor	18,765	13.1	14,831	19.2
Industrial Machining	13,169	9.2%	8,458	10.9%
Net Sales	$ 143,651	100.0%	$ 77,326	100.0%

Net sales for the first two quarters of 2018 increased $66.3 million or 85.8% from net sales for the first two quarters of 2017.

Sales of products into the PCB market for the first two quarters of 2018 increased $51.4 million or 115.7% compared to the first two quarters of 2017. This was primarily driven by increased system sales in our flex drilling systems. The higher demand for flex drilling systems reflected a generally healthy environment, as well as strong technology and market drivers, primarily in consumer electronics, compared to the unusually weak environment in the first two quarters of 2017.

Sales of products into the CT market for the first two quarters of 2018 increased $6.3 million or 65.3% compared to the first two quarters of 2017, primarily driven by stronger capacity buying by MLCC manufacturers, particularly for consumer electronics and automotive applications.

Sales of products into semiconductor applications for the first two quarters of 2018 increased $3.9 million or 26.5% compared to the first two quarters of 2017. The increase was primarily driven by higher sales of legacy memory repair systems in 2018 compared to 2017, reflecting strength in the memory semiconductor market, and increased sales of semiconductor trim products.

Sales of products into IM applications for the first two quarters of 2018 increased $4.7 million or 55.7% compared to the first two quarters of 2017. This was primarily due to incremental system sales related to our Visicon acquisition, higher Garnet™ system sales and increased service revenue.

The following table presents net sales information by geographic region:

	Two fiscal quarters ended			
	Sep 30, 2017		Oct 1, 2016	
(In thousands, except percentages)	Net Sales	% of Net Sales	Net Sales	% of Net Sales
Asia	$ 130,616	90.9%	$ 66,169	85.6%
Americas	7,106	4.9	5,254	6.8
Europe	5,929	4.1	5,903	7.6
Net Sales	$ 143,651	100.0%	$ 77,326	100.0%

Net sales in Asia increased to $130.6 million in the first two quarters of 2018, an increase of $64.4 million compared to $66.2 million in the first two quarters of 2017 primarily due to higher flex via drilling sales. Americas increased to $7.1 million in the first two quarters of 2018, an increase of $1.8 million compared to $5.3 million in the first two quarters of 2017. This was primarily due to higher sales of systems associated with our Visicon acquisition, and higher sales of semiconductor trim products.

Gross Profit

	Two fiscal quarters ended			
	Sep 30, 2017		Oct 1, 2016	
(In thousands, except percentages)	Gross Profit	% of Net Sales	Gross Profit	% of Net Sales
Gross Profit	$ 52,952	36.9%	$ 31,788	41.1%

Gross profit was $53.0 million for the first two quarters of 2018, an increase of $21.2 million compared to the first two quarters of 2017. Gross profit increased primarily due to higher net sales and production volumes. Gross margin was 36.9% and 41.1% for the first two quarters of 2018 and 2017, respectively. Gross margins in 2018 were negatively impacted by $13.3 million of charges for the impairment of inventory and other assets related to discontinued products, as a result of our portfolio review process, partially offset by favorable absorption of fixed costs due to higher production volumes.

Operating Expenses

	Two fiscal quarters ended			
	Sep 30, 2017		Oct 1, 2016	
(In thousands, except percentages)	Expense	% of Net Sales	Expense	% of Net Sales
Selling, general and administrative	$ 24,456	17.1%	$ 25,637	33.2%
Research, development and engineering	17,208	12.0	15,390	19.9
Restructuring costs	3,373	2.3	—	—
Acquisition and integration costs	—	—	335	0.4
Operating Expenses	$ 45,037	31.4%	$ 41,362	53.5%

Selling, general and administrative

SG&A expenses primarily consist of labor and other employee-related expenses including share-based compensation expense, travel expenses, professional fees, sales commissions and facilities costs. SG&A expenses for the first two quarters of 2018 decreased $1.2 million compared to the first two quarters of 2017. This decrease primarily relates to lower labor-related expenses resulting from the corporate restructuring. The $2.9 million decrease in labor expense was partially offset by a $1.5 million increase in variable compensation expenses.

Research, Development and Engineering

RD&E expenses primarily comprise labor and other employee-related expenses including share-based compensation expense, professional fees, project materials costs, equipment costs and facilities costs. RD&E expenses for the first two quarters of 2018 increased $1.8 million compared to the first two quarters of 2017. This increase was primarily driven by a $1.7 million increase in variable compensation expenses.

Acquisition and Integration Costs

2017

Acquisition and integration costs consisted mainly of consulting, legal and travel expenses associated with the acquisition and integration of Visicon, which was acquired on August 1, 2016 (see *Note 19: Business Acquisitions*). The Visicon acquisition charges were partially offset by $0.2 million of Topwin escrow cash settlement received in the second quarter of 2017.

Restructuring Costs

In the fourth quarter of 2017, we initiated a restructuring plan to improve business effectiveness, streamline operations and achieve a stated target profit level for the Company as a whole. Restructuring costs of $3.4 million incurred in the first two quarters of 2018 primarily consisted of $1.7 million of fixed asset write-offs, $0.5 million of facilities lease obligations, and $0.7 million of severance and related benefits charges. See *Note 17: Restructuring and Cost Management Plans* for further discussion.

Non-operating Income and Expense

Non-operating income and expense, net, consists of interest income and expense, market gains and losses on assets held in employees' deferred compensation accounts, realized and unrealized foreign exchange gains and losses, bank charges, investment management fees, and other miscellaneous non-operating items, such as investment impairment.

Non-operating income and expense were as follows:

	Two fiscal quarters ended			
	Sep 30, 2017		Oct 1, 2016	
(In thousands, except percentages)	Non-Operating (Expense) Income	% of Net Sales	Non-Operating (Expense) Income	% of Net Sales
Interest and other (expense) income, net	$ (413)	(0.3)%	$ 128	0.2%
Total non-operating (expense) income	$ (413)	(0.3)%	$ 128	0.2%

Interest and other income (expense), net

Net interest and other (expense) income, net, was expense of $413 thousand in the first two quarters of 2018 compared to income of $128 thousand in the first two quarters of 2017. The change in non-operating income was primarily due to the recovery of escrow funds related to the Topwin acquisition in 2017 which did not repeat in 2018 and increased interest expense due to our facilities loan in 2018 as compared to 2017.

Income Taxes

	Two fiscal quarters ended			
	Sep 30, 2017		Oct 1, 2016	
(In thousands, except percentages)	Income Tax Provision	Effective Tax Rate	Income Tax Provision	Effective Tax Rate
Provision for income taxes	$ 340	4.5%	$ 347	(3.7)%

The income tax provision for the first two quarters of 2018 was $340 thousand on pretax income of $7.5 million, an effective tax rate of 4.5%. For the first two quarters of 2017, the income tax provision was $0.3 million on pretax loss of $9.4 million, an effective rate of (3.7)%. The provision for taxes has not increased in proportion to the increase in pretax income due to the utilization of deferred tax assets arising from historical net operating losses. The provision is relatively flat compared to the prior year and relates to taxes arising in foreign jurisdictions.

Financial Condition and Liquidity

At September 30, 2017, our principal sources of liquidity were cash and cash equivalents of $48.0 million, short-term investments of $32.8 million, current accounts receivable of $47.6 million and up to $30.0 million from our credit facility (see *Note 11. Revolving Credit Facility*). At September 30, 2017, we had a current ratio of 2.81 with long-term debt outstanding of $13.0 million (see *Note 10. Long-term Debt*). Working capital of $130.6 million increased $15.0 million compared to the April 1, 2017 balance of $115.6 million, driven primarily by higher asset amounts due to improved business levels while maintaining low relative growth across all current liabilities. Total cash, cash equivalents, investments and restricted cash increased $18.4 million as compared to April 1, 2017.

Sources and Uses of Cash

Net cash provided by operating activities of $25.7 million for the two quarters ended September 30, 2017 was primarily a result of $7.2 million in net income, non-cash adjustments of $21.1 million, and an increase in accounts payable and accrued liabilities of $12.4 million. Increase in accrued liabilities consisted primarily of $6.2 million in customer deposits and $10.3 million in payroll-related liabilities. These were partially offset by an increase in trade receivables by $7.1 million, inventories by $7.9 million, and shipped systems pending by $2.1 million.

For the two quarters ended September 30, 2017, net cash used in investing activities was $33.4 million, primarily due to $27.5 million of net purchases of investments. For the two quarters ended September 30, 2017, net cash used in financing activities of $1.2 million related primarily to issuances from employee stock plans, net of payments of associated withholding taxes.

The Company has a loan agreement with First Technology Federal Credit Union that provides for a ten-year term loan with a principal amount of $14 million and with an interest rate fixed at 4.75% per annum, which will come due January 1, 2027. The Company is also party to a loan and security agreement (Credit Facility) with Silicon Valley Bank (SVB) that provides for a senior secured asset-based revolving facility with availability up to $30 million, including a $15 million sublimit for letters of credit. The Credit Facility expires March 20, 2019. If we fail to meet the covenants in our credit facility or our lenders fail to fund, access to the facility may be limited or the facility may become unavailable altogether. Refer to Notes 10 and 11 of the Company's condensed consolidated financial statements for further information.

As a result of restructuring activities, we have incurred and will continue to incur costs, some of which will be paid in cash. Actions under this plan are largely completed as of the end of the second fiscal quarter of 2018, except facilities charges and other costs which will extend beyond that time, with an estimated future cost of approximately $0.4 million and $0.2 million, of which the majority is expected to be paid in cash.

We believe that our existing cash, cash equivalents and short-term investments are adequate to fund our operations and contractual obligations for at least the next twelve months.

Critical Accounting Policies and Estimates

We reaffirm the “Critical Accounting Policies and Estimates” in Part II Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations reported in our Form 10-K for the year ended April 1, 2017.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

There have been no material changes in the market risk disclosure contained in our Form 10-K for the year ended April 1, 2017.

Item 4. Controls and Procedures

Attached to this quarterly report as Exhibits 31.1 and 31.2 are the certifications of our President and Chief Executive Officer (CEO) and our Chief Financial Officer (CFO) required by Section 302 of the Sarbanes-Oxley Act of 2002 (the Section 302 Certifications). This portion of our quarterly report on Form 10-Q is our disclosure of the conclusions of our management regarding the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report based on management's evaluation of those disclosure controls and procedures. This disclosure should be read in conjunction with the Section 302 Certifications for a more complete understanding of the topics presented.

Disclosure Controls and Procedures

Our management has evaluated, under the supervision and with the participation of our CEO and CFO, the effectiveness of our disclosure controls and procedures, as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (Exchange Act) as of the end of the period covered by this report pursuant to Rule 13a-15(b) under the Exchange Act. Based on that evaluation, our CEO and CFO have concluded that, as of the end of the period covered by this report, our disclosure controls and procedures are effective in ensuring that information required to be disclosed in our Exchange Act reports is (1) recorded, processed, summarized and reported in a timely manner, and (2) accumulated and communicated to our management, including our CEO and CFO, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control Over Financial Reporting

There has been no change in our internal control over financial reporting during the second quarter of 2018 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

In the ordinary course of business, we are involved in various routine legal matters, either asserted or unasserted, and investigations incidental to the business. In the opinion of management, ultimate resolution of these matters will not have a material effect on our consolidated financial position, results of operations or cash flows.

Item 1A. Risk Factors

The following risks and uncertainties should be read carefully with the other information included in this quarterly report. If any of the risks described below occur, our business, financial condition, operating results and cash flows could be materially and adversely affected. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations and financial results. All references to years are to fiscal years.

Risks Related to Our Competition and Customers

Volatility in our customers' industries and capital spending can have a direct and material impact on our business.

Our business depends upon the capital equipment expenditures of manufacturers of microelectronics, PCB's, semiconductors, computers, wireless communications and other electronic products. The capital equipment market for the production of those products has historically been characterized by cyclical variations in capital equipment supply and demand. These sometimes sudden and severe cycles may result from a number of factors, including overall consumer and industrial spending and demand for electronic products that drive manufacturer production, as well as their capacity utilization, timing of new product introductions and demand for customers' products, inventory levels relative to demand and access to affordable capital. The timing, severity and duration of these market cycles are difficult to predict. As a result, our business can vary significantly from quarter to quarter or year to year, as evidenced, for example, by the recent second quarter of 2018 compared to the second quarter of 2017.

Downturns particularly affect our profitability given the relative fixed cost structure of our business and the need to continually invest in product technology and support and service our products. For example, in the first and second quarters of fiscal 2017, we experienced a significant decline in orders due to reduced demand from PCB manufacturers that significantly impacted our results in the second and third fiscal quarters.

Our future success depends on our ability to expand into new markets.

Our future success depends in large part on our successful entry into new markets adjacent to our existing markets, such as high density interconnect, IC packaging, advanced wafer scribing, and other industrial and consumer electronics markets, including automotive, aerospace, medical and display. These markets are new to us and our success depends on our displacing entrenched competitors who are familiar with these markets and are known to customers. In many cases, we are attempting to enter or expand our presence in these new markets with newly introduced products that are not yet proven in the industry. In addition, in some cases we need to develop or expand our sales channels and customer relationships in order to execute on this strategy. We cannot provide assurance that we will succeed in gaining significant, or any, market share in these new markets. If we fail to successfully expand into these markets, we will have difficulty growing our business and may lose business to our competitors.

Substantial competition in markets in which we operate may result in price reductions, reduced profit margins and loss of market share.

We face substantial competition from established competitors throughout the world, some of which have greater financial, engineering, manufacturing and marketing resources than we do. Competitors with greater resources may better withstand periodic downturns, compete more effectively on the basis of price and technology, utilize better established sales channels and customer relationships, or more quickly enhance or develop new generations of products that compete with our products, in addition to other advantages. New companies may enter the markets in which we compete, or industry consolidation may occur, further increasing competition in those markets. We have also experienced new entrants to our markets offering aggressive price and payment terms in an attempt to gain market share. Some competitors, particularly in China, also develop low-cost products employing processes or technology developed by us. In addition, because we frequently price our products in U.S. dollars, a strong U.S. dollar can make our products less price-competitive outside of the United States to products priced in other currencies. We believe that to be competitive, we must continue to expend significant financial resources in order to invest in new product development and enhancements, among other things. We may not be able to compete successfully in the future and increased competition may result in price reductions, reduced profit margins and loss of market share.

Because our revenues largely depend on few customers, we have a greater degree of risk if we lose one of those customers or fail to win on new product cycles.

We depend on a few significant customers for a large portion of our revenues. In 2017, our top ten customers accounted for approximately 47% of total net sales. We anticipate that sales of our products to a relatively small number of customers will continue to account for a significant portion of our revenues. Consolidation between customers, changes in technologies or solutions used by customers, changes in products manufactured by customers or in end-user demand for those products, selection of suppliers other than us, customer bankruptcies or customer departures from their respective industries all may result in even fewer customers accounting for a high percentage of our revenue and reduced demand from any single major customer. Also, our level of sales to several of our top customers depends on our winning new designs and features each product cycle, and there is no guarantee of future business based on past design wins. Furthermore, none of our customers have any long-term obligation to continue to buy our products or services and may therefore delay, reduce or cease ordering our products or services at any time. The cancellation, reduction or deferral of purchases of our products by even a single customer could significantly reduce our revenues in any particular quarter. If we lose any of our significant customers, including as a result of any shipment delays due to heightened production levels, or suffer a material reduction in their purchase orders, revenue could decline and our business, financial condition and results of operations could be materially and adversely affected.

Increased pressure on price may result in pricing concessions, extended payment terms and decreased margins.

We have experienced and continue to experience pricing pressure from both competitors and customers in the sale of our products. Pricing pressures typically have become more intense during cyclical downturns when competitors seek to maintain or increase market share, reduce inventory or introduce more technologically advanced or lower-cost products. In addition, we may agree to pricing concessions or extended payment terms with our customers in connection with expanding into new markets or gaining volume orders, or to improve our customer cost of ownership in highly competitive applications. Our business, financial condition, margins or results of operations may be materially and adversely affected by competitive pressure and price-based competition.

Because our revenues are largely based on the sale of a small quantity of product units, our operating results could fluctuate significantly from quarter to quarter.

We derive a substantial portion of our revenue from the sale of a relatively small quantity of products. Accordingly, our revenues, margins and other operating results could fluctuate significantly from quarter to quarter depending upon a variety of factors in addition to those described above, including:

- the timing of orders and terms or acceptance of product shipments by our customers;
- the mix of products and services that we sell in a given quarter;
- timing and market acceptance of our new product introductions; and
- delays or problems in the planned introduction of new products, or in the performance of any such products following delivery to customers.

As a result of these risks, we believe that quarter-to-quarter comparisons of our revenue and operating results may not be meaningful, and that these comparisons may not be an accurate indicator of our future performance.

Risks Related to Our Supply Chain and Production

Limitations on our ability to rapidly change our production capacity in a cost effective manner could result in lower gross margins during sudden downturns and an inability to meet demand in sudden upturns.

To meet rapid changes in demand, such as we have experienced in the second quarter of 2017, we must effectively manage our resources and production capacity. During periods of decreasing demand for our products, we must be able to appropriately align our cost structure with prevailing market conditions and effectively manage our supply chain. Our ability to timely and effectively reduce our costs in response to rapid downturns is limited by the fixed nature of many of our expenses in the near term, by our need to continue investing in product technology and support and service our products, and by our need to have sufficient production capacity and supply available to respond to sudden increases in demand. Conversely, when upturns occur, we may have difficulty rapidly and effectively increasing our manufacturing capacity or procuring sufficient materials to meet sudden increases in customer demand, which could result in shipping delays or the loss of business to our competitors and harm to our relationships with our customers. If we are not able to timely and cost effectively adapt to changes in our business environment, our business, financial condition or results of operations may be materially and adversely affected.

Our reliance on critical suppliers for key components could lead to production and service interruptions and shortages.

We use a wide range of components from numerous suppliers in the manufacture of our products, including custom electronic, laser, optical and mechanical components. We generally do not have guaranteed supply arrangements with our suppliers. We seek to reduce the risk of production and service interruptions and shortages of key parts by selecting and qualifying alternative suppliers for key parts, monitoring the financial stability of key suppliers and maintaining appropriate inventories of key parts. However, some key parts are available only from a single supplier or a limited group of suppliers in the short term. In addition, some of the lasers we use in our products are difficult to manufacture, and as a result we may not receive an adequate supply of lasers in a timely fashion to fill orders. Operations at our suppliers' facilities are subject to disruption or discontinuation for a variety of reasons, including changes in business relationships, competition, financial difficulties, work stoppages, fire, natural disasters, customer prioritization or other causes. Any such disruption or discontinuation to our suppliers' operations could interrupt or reduce our manufacturing activities and delay delivery of our products, any or all of which could materially and adversely affect our results of operations. This risk is particularly acute when we rely on a single or a limited group of suppliers. In addition, during periods of increased demand for our products, there is a heightened risk that one or more of our suppliers may not meet our increased demand requirements, adversely affecting our ability to fulfill orders and win business with our customers.

We may be unable to timely deliver certain products made by contract manufacturers.

We have arrangements with contract manufacturers to complete the manufacturing of certain of our product subcomponents. Any significant interruption in our contract manufacturers' ability to provide quality manufacturing services to us as a result of contractual disputes with us or another party, labor disruptions, financial difficulties, natural disasters, delay or interruption in the receipt of inventory, or other causes could result in reduced manufacturing quality or delayed deliveries for certain of our products, any or all of which could materially and adversely affect our business. Additionally, should a contract manufacturer no longer be able to perform for any reason or we need to add a contract manufacturer, it may require substantial time and resources, including the potential of incurring substantial cost, to replace or add the associated manufacturing capabilities, which could materially and adversely affect our business.

We may incur charges for excess or obsolete inventory as a result of having to forecast product demand without firm orders.

To effectively compete, we must deliver products on schedules required by our customers. Management forecasts demand, both in type and amount of products, for us to timely meet customer delivery schedules. We use these forecasts to purchase inventory in advance of our receiving firm customer orders. We also order materials based on our technology roadmap, which represents management's assessment of technology we will utilize in new product developments. Certain types of inventory, such as lasers and optical equipment, are particularly expensive and may only be used in the production of a single type of product. If actual demand is lower than forecast, we may have excessive working capital and slow-turning inventory. In addition, we may incur material charges for excess and obsolete inventory if we cannot sell the inventory. Also, if we alter our technology or product development strategy, we may have unusable inventory, which may also result in material accounting charges. For example, during the first quarter of 2018, we recorded approximately $6.0 million of charges in cost of sales for inventory written off associated with discontinued products.

Increasing regulations or environmental requirements on our product components could negatively affect our ability to sell our products or source materials.

Many countries, including the United States, China and those in the European Union, have implemented directives that restrict the sale of new electrical and electronic equipment containing certain hazardous substances and require disclosures if certain metals used in products are not from a conflict-free source. The directives could restrict our ability to sell our products in certain countries and affect sourcing at competitive prices and availability in sufficient quantities of certain minerals used in the manufacture of our products. In addition, our reputation could suffer if we are required to disclose that metals in our products are not from conflict-free sources.

Risks Related to Our Organization

Our significant international trade subjects us to greater risks.

International shipments accounted for 90% of net shipments in 2017, with 84% of our net shipments to customers in Asia. We expect that international shipments will continue to represent a significant percentage of net sales in the future. In addition, we obtain supplies through an international supply chain. Our non-U.S. sales and purchases are subject to risks inherent in international trade, many of which are outside our control and include the following:

- periodic local or geographic economic downturns;
- price and currency exchange controls;

- fluctuation in the relative values of currencies;
- difficulty in repatriating money, whether as a result of tax laws or otherwise;
- difficulties protecting intellectual property;
- shipping delays and disruptions, including as a result of border controls;
- changes in trading policies, regulatory requirements, export control regulations, tariffs and other barriers, or the termination or renegotiation of existing trade agreements; and
- difficulties in managing a global enterprise, including staffing, collecting accounts receivable, and managing suppliers, distributors and representatives.

Our success could be negatively impacted if we fail to effectively control, oversee and direct foreign subsidiaries and their operations.

We have significant foreign operations and subsidiaries, including manufacturing facilities in Singapore and China, research and application development facilities in France, China and Korea, and sales and service offices in various countries. Under our globalization strategy, we intend to increase our foreign operations in the future. Operating in multiple countries requires us to understand and comply with many different laws, infrastructures, ways of doing business, cultural customs and language. We are also more exposed to local labor disputes, potential corruption, and noncompliance with labor laws and other laws governing employees. Additionally, the human resources and the systems our foreign entities use can be vastly different. Having substantial international operations also increases the complexity of managing our financial reporting and internal controls and procedures, and effective communications across time zones. If we are unable to manage these risks effectively, it could negatively affect our operating performance and our reputation.

The complications associated with the implementation and modification of our globalization strategy may result in a substantial amount of management effort, cost and uncertainty.

We continue to implement and expand our globalization strategy, in which we are moving certain operational resources and capabilities to countries in Asia. As part of this strategy, we opened a manufacturing facility in Singapore in 2010, which is now our primary system manufacturing facility. We also acquired Topwin, a Chinese manufacturer of laser-based systems, in January 2015. In 2016, we opened an applications development center in Korea in order to increase responsiveness and access to local customers.

Our globalization strategy subjects us to a variety of complexities and risks, many of which may divert a substantial amount of management’s time. These risks include:

- designing facilities we can scale for future expansion, replicating current processes and bringing new facilities up to full operation;
- unpredictable costs, redundancy costs and cost overruns for developing facilities and acquiring equipment;
- building local management teams, technical personnel and other staff for functions that we have not previously conducted outside of the United States;
- technical obstacles such as poor production or process yield and loss of quality control during the ramp of a new facility;
- re-qualifications and other procedures that our customers may require;
- our ability to bring up local suppliers to meet our quality and cycle-time needs;
- our ability to ship timely or incur costs associated with export control restrictions of certain of our technologies;
- our ability to reduce costs in the United States;
- rapidly changing business conditions that may require us to change or abandon plans before we fully implement them; and
- challenges posed by distance and differences in language and culture.

These and other factors could delay the continuing development, expansion and implementation of our strategy, as well as decrease our gross margins, delay shipments and deliveries, cause us to lose sales, require us to write off investments already made, damage our reputation and harm our business, financial condition and results of operations. If we decide to change our globalization strategy, we may incur charges for certain costs incurred. For example, we announced restructuring plans in 2015 and 2017 that led to the impairment of associated leasehold improvements and other assets for several of our facilities. The estimated future liability associated with these lease commitments was accrued net of estimated sublease rental income. However, to the extent the property is vacated or payments are not made by the sublessee, we will incur the full amounts of the ongoing lease obligation.

Our global operations expose us to a greater variety of natural disasters and political and social strife, each of which could directly impact our properties, operations and personnel.

Our business and operating results could be impacted, directly or indirectly, by natural disasters, outbreaks of infectious disease, military action, international conflicts, terrorist activities, civil unrest and associated political instability and policy changes. Many of our facilities, including our Portland, Oregon headquarters, are in areas with known earthquake risk. Some of these events or circumstances may also result in heightened security concerns with respect to domestic and international travel and commerce, which may further affect our business and operating results. In particular, we are subject to the following additional risks:

- recent and potential future tightening of immigration and travel controls may adversely affect the residence status of non-U.S. engineers and other key technical employees in our U.S. facilities, our ability to attract, hire and retain new non-U.S. employees in such facilities or our ability to bring our non-U.S. employees into the United States for business related activities;
- more frequent instances of shipping delays; and
- our customers or suppliers may experience financial difficulties or cease operations.

Our acquisition activities could result in operational disruptions, integration difficulties and other complications.

We may acquire or make significant investments in other businesses with complementary products, services or technologies, such as our January 2015 acquisition of Topwin and our August 2016 acquisition of Visicon. Acquisitions involve numerous risks, many of which are unpredictable and beyond our control, including:

- increased costs in connection with integration of personnel, operations, technologies and products of the acquired businesses;
- difficulties in implementation of our enterprise resource planning (ERP) system into the acquired company's operations;
- diversion of management's attention from other operational matters;
- the potential loss of key employees of the acquired company;
- lack of synergy or inability to realize expected synergies resulting from the acquisition;
- the inability to successfully enter new markets expected to result from the acquisition;
- acquired assets becoming impaired as a result of technological advancements or worse-than-expected performance by the acquired company;
- establishing satisfactory internal controls and accounting practices at the acquired company;
- difficulties implementing internal manufacturing processes at the acquired company;
- achieving our anticipated financial and operational performance for the acquired company or the performance of the combined company following the transaction; and
- acquiring unanticipated liabilities for which we will not be indemnified.

Furthermore, the accounting for an acquisition could result in significant charges resulting from amortization or write-off of intangible assets and goodwill we acquire. Our inability to effectively manage these risks or lower levels of revenue, profitability or cash flows for acquired businesses and assets could result in our inability to realize the anticipated benefits of an acquisition on a timely basis, or at all, and materially and adversely affect our business, financial condition and results of operations. In addition, all acquisition transaction costs must be expensed as incurred rather than capitalized, which may have a material adverse effect on our results of operations. For example, in Q4 2017 we recognized an impairment charge of $9 million related to goodwill and acquired intangibles.

The means by which we finance an acquisition may also significantly affect our business or the value of our common stock. If we issue common stock to pay for an acquisition, the ownership percentage of our existing shareholders will be diluted and the value of the shares held by our existing shareholders could decrease. If we use cash on hand to pay for an acquisition, the payment could significantly reduce the cash that would be available to fund our operations or to use for other purposes. If we borrow funds in connection with an acquisition, we would be required to use cash to service the debt and to comply with financial and other covenants, which may reduce our flexibility.

Our business and reputation could be negatively impacted by cyber-attacks and other security breaches.

We electronically store sensitive data, including intellectual property, and our customers', suppliers' and business partners' proprietary business information, and our employees' personally identifiable information. The secure maintenance and transmission of this information is critical to our operations and business strategy. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other actions. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, disrupt our operations and damage our reputation, which could adversely affect our business, revenues and competitive position.

Our success depends, in part, on hiring and retaining key personnel.

Our continued success depends in part upon the services of our key managerial, financial and technical personnel. The loss of key personnel, or our inability to attract, assimilate and retain qualified personnel, could result in the loss of customers, inhibit our ability to operate and grow our business and otherwise have a material adverse effect on our business and results of operations. We have previously had to, and may in the future have to, impose salary reductions on employees during economic downturns in an effort to maintain our financial position. On several occasions in recent years, executives and other employees have received limited or no annual bonuses due to our financial performance relative to the performance parameters in our annual bonus plans. These events may have an adverse effect on employee loyalty and may make it more difficult for us to attract and retain key personnel. Competition for qualified personnel in the industries and locations in which we compete for talent is intense, and we may not be successful in attracting and retaining qualified personnel. We may incur significant costs in our efforts to recruit and retain key personnel, which could affect our financial position and results of operations.

In February 2016, we announced a reorganization and restructuring, which resulted in site closures in Montreal, Canada, Napa and Sunnyvale, California, and reductions in headcount in all functions and geographies. Additionally, we replaced key executives. These events may adversely disrupt operating activities, may negatively affect employee morale and loyalty, and may make it more difficult to retain or rehire key personnel.

Risks Related to Technology

We may be unable to keep up with rapid technological changes in our markets, which could result in customers purchasing less of our products.

The markets for our products are characterized by rapid technological change and innovation, frequent new product introductions, changes in customer requirements and evolving industry standards. Our future performance will depend on the successful development, introduction and market acceptance of new and enhanced products that address technological changes and the requirements of current and potential customers. The development of new, technologically advanced products is a complex and uncertain process, requiring high levels of innovation and highly skilled engineering and development personnel, as well as the accurate anticipation of technological and market trends. We may not be able to identify, develop, manufacture, market or support new or enhanced products on a timely basis, if at all. If our competitors introduce new or enhanced products, or alternative technologies, our customers may defer, change or cancel orders for our existing products or cease purchasing our products altogether. Further, our new products may not gain timely market acceptance, and we may not be able to respond effectively to product announcements by competitors, technology changes or emerging industry standards. If we are unable to develop new or enhanced products to address customer requirements, technology changes or new industry standards on a timely basis, if our new or enhanced products are not accepted by the market, or if our customers adopt alternative technologies, our business, financial condition and results of operations may be adversely affected due to loss of market share or due to concentrations in impacted areas.

Our industry requires continued investment in research and development, and we may fail to optimally allocate our resources in this area.

The intense competition in our industry requires us to continue to invest in research and development. If we fail to invest sufficiently in research and development, our products could become obsolete or less attractive to our current and potential customers. Because of our need to maintain our research and development spending levels, our operating margins could be materially decreased if our net sales decline. In addition, our emphasis on research and development and technological innovation could cause our operating costs to increase in the future, and research and development expenses to increase as a percentage of total operating expenses and as a percentage of net sales.

We may be unable to realize growth opportunities if we cannot strengthen our marketing and channel capabilities.

The laser microfabrication industry is comprised of broad sets of markets and applications and presents significant opportunities for growth. In order to access these growth opportunities, we are strengthening our approach from customer-centric to market-based. We have reorganized into a functional structure and hired a Vice President of Marketing to drive improved process and disciplines across the organization. We believe our ability to successfully access and compete in these broader markets partially depends on our successful development of new marketing capabilities, sales and distribution channel access and customer relationships. Our inability to do so would limit our growth opportunities and profitability. In addition, any new strategy may cause disruption and ultimately prove unsuccessful.

Because our products are highly complex, we may experience quality control issues that could result in decreased sales and harm our reputation.

Our products are highly complex, and our extensive product development, manufacturing and testing processes may not be adequate to detect all defects, errors, failures and quality issues that could impact customer satisfaction or result in claims against us. Our strategy to leverage proprietary laser technology to create competitive advantage may increase the probability and impact of this risks. As a result, we may have to replace certain components or provide remediation in response to the discovery of defects in products after they are shipped. The occurrence of any defects, errors, failures or quality issues could result in cancellation of orders, product returns, diversion of our resources, legal actions by our customers and other losses to us or to our customers. These occurrences could also result in the loss of, or delay in, market acceptance of our products, loss of sales and increased expenses and warranty costs.

Risks Related to Legal Matters

Our business depends on proprietary rights that may be difficult to protect, and the loss of any proprietary rights could affect our ability to compete effectively.

Our success depends significantly upon the protection of our proprietary rights. We attempt to protect our proprietary rights through patents, copyrights, trademarks, maintenance of trade secrets and other measures, including entering into confidentiality agreements. Although we incur substantial costs to obtain and maintain patents and to defend our intellectual property rights, we may be unsuccessful in protecting these rights. Additionally, our proprietary rights may not provide the competitive advantages we expect, or other parties may challenge, invalidate or circumvent these rights.

We rely upon the laws of the United States and foreign countries where we develop, manufacture or sell our products to protect our proprietary rights. However, our efforts to protect our intellectual property may be less effective in some foreign countries where intellectual property rights are not as well protected as in the United States. For example, the patent prosecution and enforcement system within China is less mature than the systems in other jurisdictions and therefore we may be limited in our ability to enforce our rights. This disadvantage would likely be compounded by the challenge of any enforcement attempts by us as a foreign entity seeking protection against a Chinese company infringing on our proprietary rights in China. If we fail to adequately protect our intellectual property abroad, it could be easier for our competitors to sell competing products in foreign countries, which could result in reduced sales and gross margins.

Our products may subject us to intellectual property infringement claims that could increase our costs and restrict our ability to do business.

Several of our competitors hold patents covering a variety of technologies, applications and methods of use similar to some of those used in our products. Competitors or others have asserted in the past, and may assert in the future, infringement claims against our customers or us with respect to current or future products or uses. These assertions may result in costly litigation, and if claims of infringement are asserted against our customers, those customers may seek indemnification from us for damages or expenses they incur.

If we become subject to infringement claims, we will evaluate our position and consider the available alternatives, which may include seeking licenses to use the technology in question. These licenses, however, may not be available on satisfactory terms or at all. If we are not able to negotiate the necessary licenses on commercially reasonable terms, or successfully defend our position, our financial condition and results of operations could be materially and adversely affected.

As a global company, we are subject to adverse fluctuations in our effective taxes due to tax audits, changes in tax law, certain preferential tax concessions, and other regulatory requirements.

Our tax liabilities may fluctuate from one period to the next because we operate in numerous tax jurisdictions with a broad range of income tax rates and regulations. Further, we are also periodically under audit by United States and foreign tax authorities and may have exposure to additional tax liabilities as a result. Although we believe our tax estimates are reasonable, the final outcome of tax audits and the impact of changes in tax laws or the interpretation of tax laws could result in material differences from what is reflected in historical income tax accruals. If additional taxes are assessed as a result of an examination, a material effect on our financial results, tax positions or cash flows could occur in the period or periods in which the determination is made.

We have tax losses and tax credits that with remaining lives between 5 and 20 years that may expire. Due to a history of losses, we have recorded a valuation allowance against these items. Changes in statutory rates could impact any potential future realizable value associated with these attributes.

We benefit from a tax incentive program in Singapore pursuant to which we paid no Singapore income tax with respect to our manufacturing income. The initial incentive period ended on June 30, 2016 and we applied for and received a 5-year extension of the incentive program through June 2021 of its Singapore Pioneer incentive. The incentive is conditioned on achieving certain business and investment levels. If we do not achieve these criteria, we may lose the incentive benefits. We are subject to laws in various jurisdictions related to export/import compliance. Failure to comply or inconsistency in application could have an adverse impact on our ability to timely serve customers and/or results from operations.

Risks Related to Financial Matters

If we cannot meet our liquidity needs, we may not have sufficient working capital to continue our business operations.

We may require greater working capital to operate than similar size businesses in many other industries. At September 30, 2017, we had working capital of $130.6 million, including $80.8 million in cash, cash equivalents and short-term investments. Our operating cash flows were negative for most quarters since September 2013. If we have continued decreases in cash, increases in production levels, an increase in slow-moving or obsolete inventory, or a combination of these circumstances, among others, we may need additional working capital for receivables and inventory. In addition, most of our contracts to acquire inventory represent purchase commitments. As a result, if we experience lower than anticipated demand for our products, in many cases we could not avoid the cost of purchasing the associated inventory.

We have made an election to permanently reinvest foreign earnings related to manufacturing operations in Singapore and China. While there is no intent to do so, should these funds be required to be repatriated, a tax liability related to these earnings may be incurred, which could be significant.

While we have a credit facility in place, if we fail to meet the covenants in our credit facility or our lenders fail to fund, access to the facility may be limited or the facility may become unavailable altogether. Losses, such as those experienced in the second and third quarters of 2017, negatively impact our ability to maintain compliance with these covenants.

We have initiated restructuring activities, and as a result we have incurred and will continue to incur costs, some of which require cash outlays. To the extent actual costs exceed estimated costs, liquidity and results of operations could be materially and adversely affected.

If we have a material decrease in working capital, or require additional working capital to operate or require additional liquidity, and we do not have available credit or other funds and are unable to obtain financing on acceptable terms, or at all, our business and our ability to fully fund operations could be materially and adversely affected.

Our existing indebtedness may limit our business opportunities.

In the fourth quarter of 2017, we incurred $14.0 million of long-term indebtedness. This indebtedness is secured by our headquarters in Portland, Oregon. We also have a credit facility under which we may borrow up to a maximum of $30 million, subject to meeting certain availability requirements. This credit facility is secured by our non-real estate assets and nothing was outstanding under this agreement at September 30, 2017. We are required to comply with certain financial covenants under the debt agreements, including maintaining a certain level of earnings, a stated debt service coverage ratio and a specified level of certain types of liquid assets, as well as limiting our discretion to make capital expenditures or acquisitions. If we are unable to comply with the covenants in our debt agreements or make payments when due and the lender declares an event of default, the outstanding indebtedness would likely be immediately due and owing and the lenders could foreclose upon the collateral securing the debt.

Unfavorable currency exchange rate fluctuations could reduce our net sales abroad or cause us to incur losses on our forward exchange contracts.

Unfavorable currency fluctuations could require us to increase prices to foreign customers, which could result in lower net sales by us to those customers. Alternatively, if we do not adjust the prices for our products in response to unfavorable currency fluctuations, we could be forced to sell our products at a lower margin or at a net loss. A weak dollar may lead to impairment of inventories if costs begin to exceed selling prices as translated to the functional currency. In addition, some of our foreign sales are denominated in the currency of the country in which these products are sold and that currency could be less valuable at the time of receipt as a result of exchange rate fluctuations. From time to time, we enter into forward exchange contracts to hedge the value of accounts receivable primarily denominated in euros and other currencies. However, our efforts may not be adequate to protect us against significant currency fluctuations and such efforts may expose us to additional exchange rate risks, which could adversely affect our results of operations.

Impairment of Goodwill, Intangible and Long-Lived Assets

We held a total of $5.9 million in acquired intangible assets, net of accumulated amortization, and $2.6 million in goodwill at September 30, 2017. Consistent with the impairment recognized in the fourth quarter of 2017, events may occur or circumstances change such that the carrying value is not recoverable or it becomes more likely than not that the fair value of long-lived assets is reduced below the carrying value of the reporting unit, which could result in a further write-down of the fair-value of our assets. For example, the performance of our Topwin reporting unit did not meet expectations and, as a result, an impairment of goodwill and intangibles associated with that reporting unit was triggered in 2017, impacting consolidated earnings.

In addition, certain of our long-lived assets such as leasehold improvements, machinery, equipment, and loan and demo assets may experience impairment as a result of events such as the closure of sites, introduction of new products, decisions to exit certain products or markets, and changes in technology or changes in customer demand patterns. We depreciate long-lived assets and amortize intangible assets at levels we believe are adequate; however, an impairment of these assets could have a material adverse impact on our business, financial condition and results of operations. For example, due to the 2017 restructuring action, $3.0 million of leasehold improvements and related assets were impaired, impacting consolidated earnings.

An impairment of our investments could reduce our available liquidity.

Our investment portfolio is primarily comprised of commercial paper, debt securities issued by U.S. governmental agencies and money market securities. These investments are intended to be highly liquid and low risk. If the markets for these securities deteriorated for any reason, including as a result of a downgrade in the credit rating of U.S. government securities, the liquidity and value of these investments could be negatively affected, which could result in impairment charges and a material impact to our financial condition and results of operations. In addition, if our investments become illiquid or materially decrease in value, we may not have access to sufficient cash to meet or working capital and liquidity needs.

If we fail to maintain an effective system of internal controls, we may not be able to accurately report our financial results or prevent fraud and our stock price may be adversely affected.

Effective internal controls are necessary for us to provide reliable financial reports and effectively prevent fraud. If we cannot provide reliable financial reports or prevent fraud, our operating results could be harmed.

Although we are committed to continue to improve our internal control processes and we will continue to diligently and vigorously review our internal control over financial reporting in order to ensure compliance with the Section 404 requirements, any control system, regardless of how well designed, operated and evaluated, can provide only reasonable, not absolute, assurance that its objectives will be met. Therefore, we cannot be certain that in the future additional material weaknesses or significant deficiencies will not exist or otherwise be discovered. If such weaknesses or deficiencies occur, they could result in misstatements of our results of operations, additional restatements of our consolidated financial statements, a decline in our stock price and investor confidence, or other material effects on our business, reputation, financial condition or liquidity.

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

Not Applicable.

Item 4. Mine Safety Disclosures

Not Applicable.

Item 5. Other Information

Not Applicable.

Item 6. Exhibits

This list is intended to constitute the exhibit index.

3.1	Third Restated Articles of Incorporation, as amended. Incorporated by reference to Exhibit 3.1 of the Company's Annual Report on Form 10-K, filed on June 15, 2010.
3.2	2009 Amended and Restated Bylaws, as amended. Incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K filed on March 26, 2015
31.1	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document *
101.SCH	XBRL Taxonomy Extension Schema Document *
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document *
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document *
101.LAB	XBRL Taxonomy Extension Label Linkbase Document *
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document *

* Pursuant to Rule 406T of Regulation S-T, these interactive data files are deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933 or Section 18 of the Securities and Exchange Act of 1934, and otherwise are not subject to liability under those sections.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

Date:	November 7, 2017	ELECTRO SCIENTIFIC INDUSTRIES, INC.	
		By:	/s/ Michael D. Burger
			Michael D. Burger
			President and Chief Executive Officer
			(Principal Executive Officer)
		By:	/s/ Paul Oldham
			Paul Oldham
			Senior Vice President of Administration, Chief Financial Officer and Corporate Secretary
			(Principal Financial Officer)

EXHIBIT 31.1

CERTIFICATION PURSUANT TO
SECTION 302(a) OF THE SARBANES-OXLEY ACT OF 2002

I, Michael D. Burger, certify that:

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

Date: November 7, 2017

/s/ Michael D. Burger

Michael D. Burger
President and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION PURSUANT TO
SECTION 302(a) OF THE SARBANES-OXLEY ACT OF 2002

I, Paul Oldham, certify that:

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

Date: November 7, 2017

/s/ Paul Oldham

Paul Oldham
Senior Vice President of Administration,
Chief Financial Officer and Corporate Secretary

EXHIBIT 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with this quarterly report on Form 10-Q of Electro Scientific Industries, Inc. (the Company) for the quarterly period ended September 30, 2017 as filed with the Securities and Exchange Commission on the date hereof (the Report), I, Michael D. Burger, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Michael D. Burger

Michael D. Burger
President and Chief Executive Officer

November 7, 2017

This certification is made solely for the purpose of 18 U.S.C. Section 1350, and not for any other purpose. A signed original of this written statement required by Section 906 has been provided to Electro Scientific Industries, Inc. and will be retained by Electro Scientific Industries, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with this quarterly report on Form 10-Q of Electro Scientific Industries, Inc. (the Company) for the quarterly period ended September 30, 2017 as filed with the Securities and Exchange Commission on the date hereof (the Report), I, Paul Oldham, Vice President of Administration, Chief Financial Officer, and Corporate Secretary of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Paul Oldham

Paul Oldham
Senior Vice President of Administration,
Chief Financial Officer and Corporate Secretary

November 7, 2017

This certification is made solely for the purpose of 18 U.S.C. Section 1350, and not for any other purpose. A signed original of this written statement required by Section 906 has been provided to Electro Scientific Industries, Inc. and will be retained by Electro Scientific Industries, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.