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 AND EXCHANGE ACT OF 1934
For the quarterly period ended December 31, 2016

or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES AND EXCHANGE ACT OF 1934
For the transition period from __________ to __________

Commission File Number: 0-02382

MTS SYSTEMS CORPORATION

(Exact name of Registrant as specified in its charter)

Minnesota	**41-0908057**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
14000 Technology Drive Eden Prairie, Minnesota	**55344**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: (952) 937-4000

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

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

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

Large accelerated filer ☒	Accelerated filer ☐
Non-accelerated filer ☐ (Do not check if smaller reporting company)	Smaller reporting company ☐

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

As of April 6, 2017, there were 16,740,351 shares of Common Stock outstanding.

MTS Systems Corporation
Quarterly Report on Form 10-Q
For the Three Months Ended December 31, 2016

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EXPLANATORY NOTE

We were not able to file this Quarterly Report on Form 10-Q for the period ended December 31, 2016 by its due date or the applicable extension period provided under the Securities Exchange Act of 1934, as amended (the Exchange Act). Since November 2016, with the assistance of independent external counsel, we have been conducting a voluntary investigation into apparent violations of the Company's Code of Conduct involving certain employees in our China operations. As of March 2017, substantial investigative work was completed on this matter and we have initiated remedial actions to strengthen our compliance program and monitoring to ensure adherence to our Code of Conduct, including the removal of certain persons formerly employed in, or involved with our business in China. A description of the investigation into our China operations is included in Part II, Item 1 of this Quarterly Report on Form 10-Q.

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PART I – FINANCIAL INFORMATION
Item 1. Financial Statements

MTS SYSTEMS CORPORATION
Consolidated Balance Sheets
(in thousands, except per share data)

	December 31, 2016	October 1, 2016
	(Unaudited)	(Note)
Assets		
Current assets		
Cash and cash equivalents	$ 95,949	$ 84,780
Accounts receivable, net of allowance for doubtful accounts of $4,257 and $3,923, respectively	114,804	133,500
Unbilled accounts receivable	74,900	76,626
Inventories, net	122,670	132,566
Prepaid expenses and other current assets	21,711	12,793
Total current assets	430,034	440,265
Property and equipment, net	98,665	100,789
Goodwill	369,093	369,700
Intangible assets, net	263,469	266,789
Other long-term assets	4,583	5,061
Deferred income taxes	4,944	5,416
Total assets	$ 1,170,788	$ 1,188,020
Liabilities and Shareholders' Equity		
Current liabilities		
Current maturities of long-term debt, net	$ 10,032	$ 9,850
Accounts payable	44,902	46,383
Accrued payroll and related costs	31,982	45,505
Advance payments from customers	87,233	72,728
Accrued warranty costs	5,402	5,718
Accrued income taxes	2,365	3,445
Accrued dividends	4,953	4,942
Other accrued liabilities	24,873	27,550
Total current liabilities	211,742	216,121
Long-term debt, less current maturities, net	452,424	455,001
Deferred income taxes	84,008	86,020
Non-current accrued income taxes	6,387	6,232
Defined benefit pension plan obligation	12,695	13,744
Other long-term liabilities	5,311	5,642
Total liabilities	772,567	782,760
Shareholders' Equity		
Common stock, $0.25 par value; 64,000 shares authorized: 16,712 and 16,660 shares issued and outstanding as of December 31, 2016 and October 1, 2016, respectively	4,178	4,165
Additional paid-in capital	156,053	154,879
Retained earnings	253,280	256,589
Accumulated other comprehensive income (loss)	(15,290)	(10,373)
Total shareholders' equity	398,221	405,260
Total liabilities and shareholders' equity	$ 1,170,788	$ 1,188,020

Note: The Consolidated Balance Sheet as of October 1, 2016 has been derived from the audited consolidated financial statements at that date.

The accompanying Notes to Consolidated Financial Statements are an integral part of these consolidated financial statements.

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MTS SYSTEMS CORPORATION
Consolidated Statements of Income (Unaudited)
(in thousands, except per share data)

	Three Months Ended	
	December 31, 2016	January 2, 2016
Revenue		
Product	$ 176,595	$ 119,301
Service	22,684	21,200
Total Revenue	199,279	140,501
Cost of Sales		
Product	112,778	74,664
Service	13,037	13,326
Total Cost of Sales	125,815	87,990
Gross Profit	73,464	52,511
Operating Expenses		
Selling and marketing	30,470	20,654
General and administrative	24,023	12,962
Research and development	8,681	5,294
Total Operating Expenses	63,174	38,910
Income From Operations	10,290	13,601
Interest income (expense), net	(7,280)	(201)
Other income (expense), net	(829)	(310)
Income Before Income Taxes	2,181	13,090
Provision for income taxes	476	1,316
Net Income	$ 1,705	$ 11,774
Earnings Per Share		
Basic		
Earnings per share	$ 0.09	$ 0.79
Weighted average common shares outstanding	18,969	14,861
Diluted		
Earnings per share	$ 0.09	$ 0.78
Weighted average common shares outstanding	19,074	14,999
Dividends declared per share	$ 0.30	$ 0.30

The accompanying Notes to Consolidated Financial Statements are an integral part of these consolidated financial statements.

MTS SYSTEMS CORPORATION
Consolidated Statements of Comprehensive Income (Unaudited)
(in thousands)

	Three Months Ended	
	December 31, 2016	January 2, 2016
Net income	$ 1,705	$ 11,774
Other comprehensive income (loss), net of tax		
Foreign currency translation gain (loss) adjustments	(9,802)	(2,418)
Derivative instruments		
Unrealized net gain (loss)	4,158	135
Net (gain) loss reclassified to earnings	(268)	(95)
Defined benefit pension plan		
Unrealized net gain (loss)	128	123
Net (gain) loss reclassified to earnings	170	101
Currency exchange rate gain (loss)	697	150
Other comprehensive income (loss)	(4,917)	(2,004)
Comprehensive income (loss)	$ (3,212)	$ 9,770

The accompanying Notes to Consolidated Financial Statements are an integral part of these consolidated financial statements.

MTS SYSTEMS CORPORATION

Consolidated Statements of Cash Flows (Unaudited)

(in thousands)

	Three Months Ended	
	December 31, 2016	January 2, 2016
Cash Flows from Operating Activities		
Net income	$ 1,705	$ 11,774
Adjustments to reconcile net income to net cash provided by (used in) operating activities		
Stock-based compensation	1,721	1,718
Excess tax benefits from stock-based compensation	(4)	(68)
Fair value adjustment to acquired inventory	7,724	—
Net periodic pension benefit cost	433	280
Depreciation and amortization	8,392	4,945
Amortization of debt issuance costs	907	40
Deferred income taxes	(1,823)	989
Bad debt provision (recovery), net	554	89
Changes in operating assets and liabilities		
Accounts and unbilled contracts receivable	13,788	(6,735)
Inventories	227	(4,924)
Prepaid expenses	(2,908)	(2,355)
Accounts payable	130	343
Accrued payroll and related costs	(12,586)	(2,222)
Advance payments from customers	15,252	13,272
Accrued warranty costs	(297)	(390)
Other assets and liabilities	(4,287)	(5,910)
Net Cash Provided by (Used in) Operating Activities	28,928	10,846
Cash Flows from Investing Activities		
Purchases of property and equipment	(4,654)	(6,662)
Proceeds from sale of property and equipment	25	—
Net Cash Provided by (Used in) Investing Activities	(4,629)	(6,662)
Cash Flows from Financing Activities		
Payment of long-term debt	(1,150)	—
Payment of debt issuance costs for long-term debt	(186)	—
Payment of debt component of tangible equity units	(2,080)	—
Payment of debt issuance costs for revolving credit facility	(49)	—
Receipts under short-term borrowings	—	19,758
Excess tax benefits from stock-based compensation	4	68
Cash dividends	(5,003)	(4,450)
Proceeds from exercise of stock options and employee stock purchase plan	652	1,199
Payments to purchase and retire common stock	(922)	(12,356)
Net Cash Provided by (Used in) Financing Activities	(8,734)	4,219
Effect of Exchange Rate Changes on Cash and Cash Equivalents	(4,396)	(884)
Cash and Cash Equivalents		
Increase (decrease) during the period	11,169	7,519
Balance, beginning of period	84,780	51,768
Balance, end of period	$ 95,949	$ 59,287

Supplemental Disclosures of Cash Flows		
Cash paid during the period for		
Interest	$ 10,436	$ 154
Income taxes	$ 5,984	$ 2,681
Non-cash financing activities		
Dividends declared not yet paid recorded in accrued dividends	$ 4,953	$ —

The accompanying Notes to Consolidated Financial Statements are an integral part of these consolidated financial statements.

MTS SYSTEMS CORPORATION
Notes to Consolidated Financial Statements (Unaudited)
(Dollars and shares in thousands, unless otherwise noted)

NOTE 1 BASIS OF PRESENTATION

The consolidated financial statements include the accounts of MTS Systems Corporation and its wholly owned subsidiaries. Significant intercompany account balances and transactions have been eliminated.

We have prepared the interim unaudited consolidated financial statements included herein pursuant to the rules and regulations of the United States (U.S.) Securities and Exchange Commission (SEC). The information furnished in these consolidated financial statements includes normal recurring adjustments and reflects all adjustments that are, in our opinion, necessary for a fair presentation of such financial statements. The consolidated financial statements are prepared in accordance with U.S. Generally Accepted Accounting Principles (U.S. GAAP). U.S. GAAP requires us to make estimates and assumptions that affect amounts reported. Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted pursuant to SEC rules and regulations. The accompanying consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in our Annual Report on Form 10-K for the fiscal year ended October 1, 2016 filed with the SEC. Interim results of operations for the first fiscal quarter ended December 31, 2016 are not necessarily indicative of the results to be expected for the full fiscal year.

We have a 5-4-4 week accounting cycle with the fiscal year ending on the Saturday closest to September 30. Fiscal year 2017 ending on September 30, 2017 will consist of 52 weeks. Fiscal year 2016 ended on October 1, 2016 and consisted of 52 weeks.

NOTE 2 RECENTLY ISSUED ACCOUNTING PRONOUNCEMENTS

Revenue Recognition
In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, and in August 2015, issued ASU No. 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of Effective Date*, which amended ASU No. 2014-09 as to the effective date of the standard. The guidance, as amended, clarifies the principles for revenue recognition in transactions involving contracts with customers. The new revenue recognition guidance provides a five-step analysis to determine when and how revenue is recognized. The new guidance will require revenue recognition to depict the transfer of promised goods or services to a customer in an amount that reflects the consideration a company expects to receive in exchange for those goods or services. The guidance, as amended, defers the mandatory effective date of the new revenue recognition standard by one year.

In March 2016, the FASB issued ASU No. 2016-08, *Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net)*, which amends ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, to clarify principal versus agent guidance in situations in which a revenue transaction involves a third party in providing goods or services to a customer. In such circumstances, an entity must determine whether the nature of its promise to the customer is to provide the underlying goods or services (i.e., the entity is the principal in the transaction) or to arrange for the third party to provide the underlying goods or services (i.e., the entity is the agent in the transaction). To determine the nature of its promise to the customer, the entity must first identify each specified good or service to be provided to the customer and then (before transferring it) assess whether it controls each specified good or service. The new guidance clarifies how an entity should identify the unit of accounting (the specified good or service) for the principal versus agent evaluation, and how it should apply the control principle to certain types of arrangements, such as service transactions, by explaining what a principal controls before the specified good or service is transferred to the customer.

In April 2016, the FASB issued ASU No. 2016-10, *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing*, to amend ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, on identifying performance obligations to allow entities to disregard items that are immaterial in the context of the contract, clarify when a promised good or service is separately identifiable from other promises in the a contract and allow an entity to elect to account for the cost of shipping and handling performed after control of a good has been transferred to the customer as a fulfillment cost or an expense. The updated guidance also clarifies how an entity would evaluate the nature of its promise in granting a license of intellectual property, which determines whether the entity recognizes revenue over time or at a point in time, and other aspects relative to licensing.

In May 2016, the FASB issued ASU No. 2016-11, *Revenue Recognition (Topic 605) and Derivatives and Hedging (Topic 815): Rescission of SEC Guidance Because of Accounting Standards Updates 2014-09 and 2014-16 Pursuant to Staff Announcements* *at the March 3, 2016 EITF Meeting (SEC Update)*, which rescinds previous guidance on revenue and expense recognition for freight services in process, accounting for shipping and handling fees and costs and accounting for consideration given by a vendor to a customer.

In May 2016, the FASB issued ASU No. 2016-12, *Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients*, which amends ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, to clarify that, for a contract to be considered completed at transition, all (or substantially all) of the revenue must have been recognized under legacy U.S. GAAP. The amendment also added an expedient to ease transition for contracts that were modified prior to adoption of the new revenue standard, clarifies how an entity should evaluate the collectibility threshold and when an entity can recognize nonrefundable considerations received as revenue if the arrangement does not meet the standard's contract criteria. The amendment clarifies that fair value of noncash considerations should be measured at contract inception when determining the transaction price and allows an entity to make an accounting policy election to exclude from the transaction price certain types of taxes collected from a customer if it discloses the policy.

In December 2016, the FASB issued ASU No. 2016-20, *Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*, which amends ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*, providing thirteen corrections and improvements to the new revenue standard.

The aforementioned revenue standards and amendments are required to be adopted for annual periods beginning after December 15, 2017, including interim periods within that annual period, which is our fiscal year 2019. The new standards and amendments may be adopted retrospectively for all periods presented, or adopted using a modified retrospective approach. Early adoption is permitted for annual reporting periods beginning after December 15, 2016, and interim periods within that annual period, which is our fiscal year 2018. We intend to adopt the aforementioned revenue standards and amendments for our fiscal year 2019 and are modeling the transition alternatives, but have not finalized our decision regarding the method of implementation. We are currently reviewing our sales contracts, policies and practices as compared to the new guidance and are working through implementation steps. We continue to evaluate our procedureal and related system requirements related to the provisions of this standard. In fiscal year 2017, we intend to further analyze our sales contracts and rewrite our revenue recognition accounting policy as needed to reflect the requirements of this standard. In fiscal year 2018, we expect to draft our new revenue disclosures. We are currently evaluating the impact that this guidance will have on our consolidated financial statements.

Other
In July 2015, the FASB issued ASU No. 2015-11, *Inventory (Topic 330): Simplifying the Measurement of Inventory*, which modifies existing requirements regarding measuring inventory at the lower of cost or market. Under current inventory standards, the market value requires consideration of replacement cost, net realizable value and net realizable value less an approximately normal profit margin. The new guidance replaces market with net realizable value defined as estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. This eliminates the need to determine and consider replacement cost or net realizable value less an approximately normal profit margin when measuring inventory. The standard is required to be adopted for annual periods beginning after December 15, 2016, including interim periods within that annual period, which is our fiscal year 2018. The amendment is to be applied prospectively with early adoption permitted. We have not yet evaluated the impact, if any, the adoption of this guidance may have on our financial condition, results of operations or disclosures.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 824)*, which requires lessees to recognize a right-of-use asset, representing the right to use the underlying asset for the lease term, and a lease liability on the balance sheet for all leases with terms greater than 12 months. Lessees can forgo recognizing a right-of-use asset and lease liability with lease terms of 12 months or less on the balance sheet through accounting policy elections as long as the lease does not include options to purchase the underlying assets that is reasonably certain to be exercised. The new guidance also requires certain qualitative and quantitative disclosures designed to assess the amount, timing and uncertainty of cash flows arising from leases, along with additional key information about leasing arrangements. The standard is required to be adopted for annual periods beginning after December 15, 2018, including interim periods within that annual period, which is our fiscal year 2020. The amendment is to be applied using a modified retrospective approach, which includes a number of optional practical expedients. Early adoption is permitted. We are currently evaluating the impact the adoption of this guidance will have on our financial condition, results of operations or disclosures.

In March 2016, the FASB issued ASU No. 2016-04, *Liabilities—Extinguishments of Liabilities (Subtopic 405-20): Recognition of Breakage for Certain Prepaid Stored-Value Products*, which amends existing guidance on extinguishing financial liabilities for certain prepaid stored-value products. The new standard requires recognition of the expected breakage amount or the value that is ultimately not redeemed either proportionally in earnings as redemption occurs or when redemption is remote, if issuers are not entitled to breakage. The standard is required to be adopted for annual periods beginning after December 15, 2017, including interim periods within that annual period, which is our fiscal year 2019. The amendment is to be applied either using a modified retrospective approach by recognizing a cumulative-effect adjustment to retained earnings as of the beginning of the year or retrospectively to each period presented. Early adoption is permitted. We are currently evaluating the impact, if any, the adoption of this guidance may have on our financial condition, results of operations or disclosures.

In March 2016, the FASB issued ASU No. 2016-09, *Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*, which is intended to simplify certain aspects of accounting for share-based compensation arrangements, including modifications to the accounting for income taxes upon vesting or settlement of awards, employer tax withholding on share-based compensation, classification on the statement of cash flows and forfeitures. The standard is required to be adopted for annual periods beginning after December 15, 2016, including interim periods within that annual period, which is our fiscal year 2018. Certain aspects of the amendment are to be applied using a retrospective transition method, while others are to be applied either prospectively or retrospectively. Early adoption is permitted, but all amendments must be adopted in the same period and must be reflected as of the beginning of the fiscal year that includes the interim period. We have not yet evaluated the impact the adoption of this guidance will have on our financial condition, results of operations or disclosures.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which changes the accounting for credit losses on instruments measured at amortized cost by adding an impairment model that is based on expected losses rather than incurred losses. An entity will recognize as an allowance its estimate of expected credit losses, which is believed to result in more timely recognition of such losses as the standard eliminates the probable initial recognition threshold. The standard is required to be adopted for annual periods beginning after December 15, 2019, including interim periods within that annual period, which is our fiscal year 2021. The amendment is to be applied using a modified-retrospective approach as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which adopted. Early adoption is permitted for annual periods beginning after December 15, 2018, including interim periods within that annual period, which is our fiscal year 2020. We have not yet evaluated the impact the adoption of this guidance will have on our financial condition, results of operations or disclosures.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*, which provides guidance on the classification of certain cash receipts and cash payments with the objective of reducing diversity in practice. The standard is required to be adopted for annual periods beginning after December 15, 2017, including interim periods within that annual period, which is our fiscal year 2019. The amendment is to be applied retrospectively, but if impracticable to do so, the amendments related to that issue would be applied prospectively. Early adoption is permitted. We have not yet evaluated the impact the adoption of this guidance will have on our financial condition, results of operations or disclosures.

In October 2016, the FASB issued ASU No. 2016-16, *Income Taxes (Topic 740), Intra-Entity Transfers of Assets Other Than Inventory*, which requires companies to account for the income tax effects of intercompany sales and transfers of assets other than inventory when the transfer occurs. Current guidance requires companies to defer the income tax effects of intercompany transfers of assets until the asset has been sold to an outside party or otherwise recognized. The standard is required to be adopted for annual periods beginning after December 15, 2017, including interim periods within that annual period, which is our fiscal year 2019. The amendment is to be applied using a modified retrospective approach. Early adoption is permitted as of the beginning of an annual period. We have not yet evaluated the impact of adoption of this guidance will have on our financial condition, results of operations or disclosures.

In January 2017, the FASB issued ASU No. 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business*, which changes the definition of a business to assist entities with evaluating when a set of transferred assets and activities is a business. The new guidance clarifies that a business must also include at least one substantive process and narrows the definition of outputs by more closely aligning it with how outputs are described in ASC 606, *Revenue from Contracts with Customers*. The standard is required to be adopted for annual periods beginning after December 15, 2017, including interim periods within that annual period, which is our fiscal year 2019. The amendment is to be applied prospectively with early adoption permitted. We do not expect the adoption of this standard to have a material effect on our financial condition, results of operations or disclosures as the standard only applies to businesses acquired after the adoption date.

In March 2017, the FASB issued ASU No. 2017-07, *Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost,* which changes how employers that sponsor defined benefit pension or other postretirement benefit plans present the net periodic benefit cost in the income statement. The new guidance requires the service cost component of net periodic benefit cost to be presented in the same income statement line item(s) as other employee compensation costs arising from services rendered during the period with only the service cost component eligible for capitalization in assets. Other components of the net periodic benefit cost are to be stated separately from the line item(s) that includes the service cost and outside of operating income. These components are not eligible for capitalization in assets. The standard is required to be adopted for annual periods beginning after December 15, 2017, including interim periods within that annual period, which is our fiscal year 2019. The amendment is to be applied retrospectively. Early adoption is permitted as of the beginning of an annual period. We have not yet evaluated the impact of adoption of this guidance will have on our financial condition, results of operations or disclosures.

Adopted for Fiscal Year Ended October 1, 2016
In April 2015, the FASB issued ASU No. 2015-03, *Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs,* which modifies existing requirements regarding classification of debt issuance costs. The new guidance requires debt issuance costs related to a recognized liability to be presented in the balance sheet as a direct deduction from the corresponding debt liability rather than as an asset. This change will make the presentation of debt issuance costs consistent with the presentation of debt discounts or premiums. The standard is required to be adopted for annual periods beginning after December 15, 2015, including interim periods within that annual period, which is our fiscal year 2017. The amendment is to be applied retrospectively with early adoption permitted.

We early adopted ASU No. 2015-03 effective April 3, 2016, or beginning with our third quarter of fiscal year 2016, due to the issuance of our 8.75% tangible equity units (TEUs) in a registered public offering. The adoption was applied retrospectively, but did not have a material impact on the financial condition, results of operations and disclosures of our prior fiscal year or prior quarters as no debt issuance costs outside of those associated with our credit facility existed. The debt issuance costs associated with the debt component of the TEUs issued in the third quarter of fiscal year 2016 have been recognized as a direct deduction from the corresponding debt on the Consolidated Balance Sheets and Consolidated Statements of Cash Flows. See Note 8 for updated debt disclosures and Note 12 for more information on our TEUs.

In November 2015, the FASB issued ASU No. 2015-17, Income Taxes (Topic 740): Balance Sheet Classification of Deferred *Taxes*, which requires deferred tax liabilities and assets to be classified as non-current in the Consolidated Balance Sheet. The standard is required to be adopted for annual periods beginning after December 15, 2016, including interim periods within that annual period, which is our fiscal year 2018. The amendment may be applied either prospectively to all deferred tax liabilities and assets or retrospectively to all periods presented. Early adoption is permitted. We early adopted ASU No. 2015-17 on a prospective basis effective for the annual period ended October 1, 2016. The adoption resulted in all deferred tax assets and deferred tax liabilities being classified as non-current on the Consolidated Balance Sheet as of October 1, 2016.

Adopted for Fiscal Year Ending September 30, 2017
In July 2015, the FASB issued ASU No. 2015-12, *Plan Accounting: Defined Benefit Pension Plans (Topic 960), Defined Contribution Pension Plans (Topic 962), Health and Welfare Benefit Plans (Topic 965): (Part I) Fully Benefit-Responsive Investment Contracts, (Part II) Plan Investment Disclosures, (Part III) Measurement Date Practical Expedient (consensuses of the FASB Emerging Issues Task Force)*. The standard allows for a plan with a fiscal year end that does not coincide with the end of the calendar month to measure its investments and investment-related accounts using the month end closest to its fiscal year end. In previous guidance, the measurement date was required to coincide with the fiscal year end. The standard is required to be adopted for annual periods beginning after December 15, 2015, which is our fiscal year 2017. The amendment is to be applied prospectively with early adoption permitted. We adopted ASU No. 2015-12 on a prospective basis for the annual period ending September 30, 2017. The adoption of this standard did not have a material effect on our fiscal year 2017 financial condition, results of operations or disclosures, as the measurement date and fiscal year end coincide.

In September 2015, the FASB issued ASU No. 2015-16, *Business Combinations (Topic 805): Simplifying the Accounting for Measurement-Period Adjustments*, which eliminates the requirement for an acquirer in a business combination to account for measurement-period adjustments retrospectively. Under the existing business combination standard, an acquirer reports provisional amounts with respect to acquired assets and liabilities when their measurements are incomplete as of the end of the reporting period. The provisional amounts and the related impact on earnings are adjusted by restating prior period financial statements during the measurement period which cannot exceed one year from the date of acquisition. The new guidance requires that the cumulative impact of a measurement-period adjustment, including the impact on prior periods, be recognized in the reporting period in which the adjustment is identified, eliminating the requirement to restate prior period financial statements. The new standard requires disclosure of the nature and amount of measurement-period adjustments as well as information with respect to the portion of the adjustments recorded in current-period earnings that would have been recorded in previous reporting periods if the adjustments to provisional amounts had been recognized as of the acquisition date. The standard is required to be adopted for annual periods beginning after December 15, 2015, including interim periods within that annual period, which is our fiscal year 2017. The amendment is to be applied prospectively to measurement-period adjustments that occur after the effective date. Early adoption is permitted. We adopted ASU No. 2015-16 on a prospective basis for the annual period ending September 30, 2017, including interim periods within that annual period. The adoption of the standard had no effect on our financial condition, results of operations or disclosures for our first quarter of fiscal year 2017, as the standard only applies to businesses acquired after the adoption date.

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*, which eliminates the requirement to calculate the implied fair value of goodwill to measure a goodwill impairment charge or Step 2 of the goodwill impairment analysis. Instead, an impairment charge will be recorded based on the excess of a reporting unit's carrying amount over its fair value using Step 1 of the goodwill impairment analysis. The standard is required to be adopted for annual and interim impairment tests performed after December 15, 2019, which is our fiscal year 2020. The amendment is to be applied prospectively. Early adoption is permitted for annual and interim goodwill impairment testing dates after January 1, 2017. We adopted ASU No. 2017-04 on a prospective basis for our annual and interim goodwill impairment testing performed subsequent to January 1, 2017. The adoption of this standard had no effect on our financial condition, results of operations or disclosures for our first quarter of fiscal year 2017 as this standard only impacts the measurement of goodwill impairment charges on a prospective basis.

NOTE 3 INVENTORIES

Inventories consist of material, labor and overhead costs and are stated at the lower of cost or market value, determined under the first-in, first-out accounting method. Certain inventories are measured using the weighted average cost method. Inventories were as follows:

(in thousands)	December 31, 2016	October 1, 2016
Components, assemblies and parts	$ 83,540	$ 87,119
Customer projects in various stages of completion	28,883	32,575
Finished goods	10,247	12,872
Total inventories	$ 122,670	$ 132,566

NOTE 4 WARRANTY OBLIGATIONS

Sales of our products and systems are subject to limited warranty obligations that are included in customer contracts. For sales that include installation services, warranty obligations generally extend for a period of twelve to twenty-four months from the date of either shipment or acceptance based on the contract terms. Product obligations generally extend for a period of twelve to twenty-four months from the date of purchase. Certain products offered in our Sensors segment include a lifetime warranty. Under the terms of these warranties, we are obligated to repair or replace any components or assemblies deemed defective due to workmanship or materials. We reserve the right to reject warranty claims where it is determined that failure is due to normal wear, customer modifications, improper maintenance or misuse. We record general warranty provisions based on an estimated warranty expense percentage applied to current period revenue. The percentage applied reflects our historical warranty claims experience over the preceding twelve-month period. Both the experience percentage and the warranty liability are evaluated on an ongoing basis for adequacy. Warranty provisions are also recognized for certain unanticipated product claims that are individually significant.

Warranty provisions and claims were as follows:

	Three Months Ended	
(in thousands)	December 31, 2016	January 2, 2016
Beginning balance	$ 5,718	$ 4,695
Warranty claims	(954)	(1,435)
Warranty provisions	652	1,045
Adjustments to preexisting warranties	5	—
Currency translation	(19)	(3)
Ending balance	$ 5,402	$ 4,302

NOTE 5 CAPITAL ASSETS

Property and Equipment
Property and equipment are as follows:

(in thousands)	December 31, 2016	October 1, 2016
Land and improvements	$ 2,862	$ 2,865
Buildings and improvements	58,336	59,350
Machinery and equipment	190,312	189,406
Property and equipment, gross	251,510	251,621
Less accumulated depreciation	(152,845)	(150,832)
Property and equipment, net	$ 98,665	$ 100,789

Goodwill
Changes to the carrying amount of goodwill are as follows:

(in thousands)	Test	Sensors	Total
Balance, October 1, 2016	$ 25,022	$ 344,678	$ 369,700
Currency translation gain (loss)	(557)	(50)	(607)
Balance, December 31, 2016	$ 24,465	$ 344,628	$ 369,093

Other Intangible Assets
Other intangible assets are as follows:

	December 31, 2016			
(in thousands)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value	Weighted Average Useful Life (in Years)
Software development costs	$ 23,911	$ (15,161)	$ 8,750	6.0
Technology and patents	46,292	(6,891)	39,401	14.9
Trademarks and trade names	6,691	(1,994)	4,697	25.4
Customer lists	156,955	(5,858)	151,097	15.8
Land-use rights	2,322	(298)	2,024	25.9
Trademarks and trade names	57,500	—	57,500	Indefinite
Total intangible assets	$ 293,671	$ (30,202)	$ 263,469	15.0

	October 1, 2016			
(in thousands)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value	Weighted Average Useful Life (in Years)
Software development costs	$ 23,184	$ (14,938)	$ 8,246	6.0
Technology and patents	46,672	(6,360)	40,312	14.9
Trademarks and trade names	6,903	(1,911)	4,992	25.5
Customer lists	156,987	(3,372)	153,615	15.8
Land-use rights	2,369	(245)	2,124	26.3
Trademarks and trade names	57,500	—	57,500	Indefinite
Total intangible assets	$ 293,615	$ (26,826)	$ 266,789	15.1

Amortization expense recognized during the three months ended December 31, 2016 and January 2, 2016 was $3,665 and $601, respectively.

The estimated future amortization expense related to other amortizable intangible assets for the next five fiscal years and thereafter is as follows:

Fiscal Year		Amortization Expense (in thousands)
Remainder of 2017	$	10,911
2018	$	13,687
2019	$	13,562
2020	$	13,281
2021	$	13,281
2022	$	13,098
Thereafter	$	128,149

Future amortization amounts presented above are estimates. Actual future amortization expense may be different due to future acquisitions, impairments, changes in amortization periods or other factors.

NOTE 6 FAIR VALUE MEASUREMENTS

In determining the fair value of financial assets and liabilities, we currently utilize market data or other assumptions that we believe market participants would use in pricing the asset or liability in the principal or most advantageous market and adjust for non-performance and/or other risk associated with the company as well as counterparties, as appropriate. When considering market participant assumptions in fair value measurements, the following fair value hierarchy distinguishes between observable and unobservable inputs, which are categorized in one of the following levels:

- **Level 1:** Unadjusted quoted prices which are available in active markets for identical assets or liabilities accessible to us at the measurement date.
- **Level 2:** Inputs other than quoted prices included in Level 1 inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the asset or liability.
- **Level 3:** Unobservable inputs for the asset or liability used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at the measurement date.

The hierarchy gives the highest priority to Level 1, as this level provides the most reliable measure of fair value, while giving the lowest priority to Level 3.

Assets and Liabilities Measured at Fair Value on a Recurring Basis
Financial assets and liabilities subject to fair value measurements on a recurring basis are as follows:

	December 31, 2016			
(in thousands)	Level 1	Level 2	Level 3	Total
Assets				
Currency contracts [1]	$ —	$ 1,639	$ —	$ 1,639
Interest rate swaps [2]	—	4,267	—	4,267
Total assets	$ —	$ 5,906	$ —	$ 5,906
Liabilities				
Currency contracts [1]	$ —	$ 57	$ —	$ 57
Total liabilities	$ —	$ 57	$ —	$ 57

(in thousands)	October 1, 2016 Level 1	Level 2	Level 3	Total
Assets				
Currency contracts [1]	$ —	$ 149	$ —	$ 149
Total assets	$ —	$ 149	$ —	$ 149
Liabilities				
Currency contracts [1]	$ —	$ 711	$ —	$ 711
Total liabilities	$ —	$ 711	$ —	$ 711

[1] Based on observable market transactions of spot currency rates and forward currency rates on equivalently-termed instruments. Carrying amounts of the financial assets and liabilities are equal to the fair value. See Note 7 for additional information on derivative financial instruments.

[2] Based on London Interbank Offered Rate (LIBOR) and spot rates. Carrying amount of the financial asset is equal to the fair value. See Note 7 for additional information on derivative financial instruments.

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis
We measure certain financial instruments at fair value on a nonrecurring basis. These assets primarily include goodwill, intangible assets and other long-lived assets acquired either as part of a business acquisition, individually or with a group of other assets, as well as property and equipment. These assets were initially, and are currently, measured and recognized at amounts equal to the fair value determined as of the date of acquisition or purchase subject to changes in value only for foreign currency translation. Periodically, these assets are tested for impairment, by comparing their respective carrying values to the estimated fair value of the reporting unit or asset group in which they reside. In the event any of these assets were to become impaired, we would recognize an impairment loss equal to the amount by which the carrying value of the reporting unit, impaired asset or asset group exceeds its estimated fair value. Fair value measurements of reporting units are estimated using an income approach involving discounted or undiscounted cash flow models that contain certain Level 3 inputs requiring management judgment, including projections of economic conditions and customer demand, revenue and margins, changes in competition, operating costs, working capital requirements and new product introductions. Fair value measurements of the reporting units associated with our goodwill balances are estimated at least annually in the fourth quarter of each fiscal year for purposes of impairment testing if Step 1 of the goodwill impairment analysis is performed. Fair value measurements associated with our intangible assets, other long-lived assets and property and equipment are estimated when events or changes in circumstances such as market value, asset utilization, physical change, legal factors or other matters indicate that the carrying value may not be recoverable. See Note 5 for additional information on goodwill, intangible assets, other long-lived assets and property and equipment.

Assets and Liabilities Not Measured at Fair Value
Certain financial instruments are not measured at fair value but are recorded at carrying amounts approximating fair value based on their short-term nature or variable interest rate. These financial instruments include cash and cash equivalents, restricted cash, accounts receivable, accounts payable and short-term borrowings.

Other Financial Instruments
Other financial instruments subject to fair value measurements include debt, which is recorded at carrying value in the Consolidated Balance Sheets. The carrying amount and estimated fair value of our debt are as follows:

(in thousands)	December 31, 2016 Carrying Value	Fair Value	Level 1	Level 2	Level 3
Debt component of tangible equity units [3]	$ 22,904	$ 29,711	$ —	$ 29,711	$ —
Tranche B term loan [4]	458,850	468,027	—	468,027	—
Total debt	$ 481,754	$ 497,738	$ —	$ 497,738	$ —

(in thousands)		Carrying Value		Fair Value		Level 1		Level 2		Level 3
	October 1, 2016									
Debt component of tangible equity units [3]	$	24,985	$	28,080	$	—	$	28,080	$	—
Tranche B term loan [4]		460,000		465,465		—		465,465		—
Total debt	$	484,985	$	493,545	$	—	$	493,545	$	—

[3] The fair value of the TEUs is based on the most recently quoted price for the outstanding securities, adjusted for any known significant deviations in value. The estimated fair value of these long-term obligations is not necessarily indicative of the amount that would be realized in a current market exchange. See Note 12 for additional information on the TEUs.

[4] The fair value of the Tranche B Term loan is based on the most recently quoted prices for the outstanding debt instrument, adjusted for any known significant deviations in value. The estimated fair value of the debt obligation is not necessarily indicative of the amount that would be realized in a current market exchange. See Note 8 for additional information on debt instruments.

NOTE 7 DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

Our currency exchange contracts and interest rate swaps are designated as cash flow hedges and qualify as hedging instruments. We also have derivatives which are not designated as cash flow hedges and, therefore, are accounted for and reported under foreign currency guidance. Regardless of designation for accounting purposes, we believe all of our derivative instruments are hedges of transactional risk exposures. The fair value of our outstanding designated and undesignated derivative assets and liabilities are reported in the Consolidated Balance Sheets as follows:

(in thousands)		Prepaid Expenses and Other Current Assets		Other Accrued Liabilities
	December 31, 2016			
Designated hedge derivatives				
Cash flow derivatives	$	1,558	$	57
Interest rate swaps		4,267		—
Total designated hedge derivatives		5,825		57
Hedge derivatives not designated				
Balance sheet derivatives		81		—
Total hedge derivatives	$	5,906	$	57

(in thousands)		Prepaid Expenses and Other Current Assets		Other Accrued Liabilities
	October 1, 2016			
Designated hedge derivatives				
Cash flow derivatives	$	149	$	633
Hedge derivatives not designated				
Balance sheet derivatives		—		78
Total hedge derivatives	$	149	$	711

A reconciliation of the net fair value of foreign exchange cash flow hedge assets and liabilities subject to master netting arrangements recorded in the December 31, 2016 and October 1, 2016 Consolidated Balance Sheets to the net fair value that could have been reported in the respective Consolidated Balance Sheets are as follows:

(in thousands)	Gross Recognized Amount	Gross Offset Amount	Net Amount Presented	Derivatives Subject to Offset	Cash Collateral Received	Net Amount [1]
December 31, 2016						
Assets	$ 5,825	$ —	$ 5,825	$ —	$ —	$ 5,825
Liabilities	57	—	57	—	—	57
October 1, 2016						
Assets	$ 149	$ —	$ 149	$ (147)	$ —	$ 2
Liabilities	633	—	633	(147)	—	486

[1] Net fair value of foreign exchange cash flow hedge assets / liabilities that could have been reported in the Consolidated Balance Sheet.

Cash Flow Hedging – Currency Risks
Currency exchange contracts utilized to maintain the functional currency value of expected financial transactions denominated in foreign currencies are designated as cash flow hedges. Qualifying gains and losses related to changes in the market value of these contracts are reported as a component of accumulated other comprehensive income (loss) (AOCI) within shareholders' equity on the Consolidated Balance Sheets and reclassified into earnings in the same period during which the underlying hedged transaction affects earnings. The effective portion of the cash flow hedges represents the change in fair value of the hedge that offsets the change in the functional currency value of the hedged item. We periodically assess whether our currency exchange contracts are effective and, when a contract is determined to be no longer effective as a hedge, we discontinue hedge accounting prospectively. Subsequent changes in the market value of ineffective currency exchange contracts are recognized as an increase or decrease in revenue on the Consolidated Statements of Income as that is the same line item in which the underlying hedged transaction is reported.

As of December 31, 2016 and October 1, 2016, we had outstanding cash flow hedge currency exchange contracts with gross notional U.S. dollar equivalent amounts of $25,323 and $29,092, respectively. Upon netting offsetting contracts to sell foreign currencies against contracts to purchase foreign currencies, irrespective of contract maturity dates, the net notional U.S. dollar equivalent amount of contracts outstanding was $22,509 and $24,884 as of December 31, 2016 and October 1, 2016, respectively. As of December 31, 2016, the net market value of the foreign currency exchange contracts was a net asset of $1,501, consisting of $57 in liabilities and $1,558 in assets. As of October 1, 2016, the net market value of the foreign currency exchange contracts was a net liability of $484, consisting of $149 in assets and $633 in liabilities.

The pretax amounts recognized in AOCI on currency exchange contracts, including (gains) losses reclassified into earnings in the Consolidated Statements of Income and gains (losses) recognized in other comprehensive income (loss) (OCI), are as follows:

	Three Months Ended	
(in thousands)	December 31, 2016	January 2, 2016
Beginning unrealized net gain (loss) in AOCI	$ (400)	$ 608
Net (gain) loss reclassified into revenue (effective portion)	(419)	(150)
Net gain (loss) recognized in OCI (effective portion)	2,242	211
Ending unrealized net gain (loss) in AOCI	$ 1,423	$ 669

The amount recognized in earnings as a result of the ineffectiveness of cash flow hedges was less than $1 in both of the three months ended December 31, 2016 and January 2, 2016. As of December 31, 2016 and January 2, 2016, the amount projected to be reclassified from AOCI into earnings in the next twelve months was a net gain of $1,420 and $624, respectively. The maximum remaining maturity of any forward or optional contract as of December 31, 2016 and January 2, 2016 was 2.0 and 1.5 years, respectively.

Interest Rate Swaps
On October 20, 2016, we entered into a floating to fixed interest rate swap agreement to mitigate our exposure to interest rate increases related to a portion of our tranche B term loan facility. The total notional amount of the interest rate swap is $275,000. The swap agreement expires April 3, 2021. As a result of this agreement, every month, we pay fixed interest at 1.256% in exchange for interest received at 1 month U.S. LIBOR. The market value of the interest rate swap at December 31, 2016 was an asset of $4,267. The interest rate swap has been designated as a cash flow hedge. As a result, changes in the fair value of the interest rate swap are recorded in AOCI within shareholders' equity on the Consolidated Balance Sheets.

The pretax amounts recognized in AOCI on interest rate swaps, including (gains) losses reclassified into earnings in the Consolidated Statements of Income and gains (losses) recognized in OCI, are as follows:

	Three Months Ended	
(in thousands)	December 31, 2016	January 2, 2016
Beginning unrealized net gain (loss) in AOCI	$ —	$ —
Net (gain) loss reclassified into interest expense (effective portion)	—	—
Net gain (loss) recognized in OCI (effective portion)	4,267	—
Ending unrealized net gain (loss) in AOCI	$ 4,267	$ —

As of December 31, 2016, the amount projected to be reclassified from AOCI into earnings in the next twelve months was a net loss of $770.

Foreign Currency Balance Sheet Derivatives
We also use foreign currency derivative contracts to maintain the functional currency value of monetary assets and liabilities denominated in non-functional foreign currencies. The gains and losses related to the changes in the market value of these derivative contracts are included in other income (expense), net on the Consolidated Statements of Income.

As of December 31, 2016 and October 1, 2016, we had outstanding foreign currency balance sheet derivative contracts with gross notional U.S. dollar equivalent amounts of $39,060 and $13,187, respectively. Upon netting offsetting contracts by counterparty banks to sell foreign currencies against contracts to purchase foreign currencies, irrespective of contract maturity dates, the net notional U.S. dollar equivalent amount of contracts outstanding as of December 31, 2016 and October 1, 2016 was $11,356 and $1,347, respectively. As of December 31, 2016 and October 1, 2016, the net market value of the foreign exchange balance sheet derivative contracts was a net asset of $81 and a net liability of $78, respectively.

The net gain (loss) recognized in the Consolidated Statements of Income on foreign exchange balance sheet derivative contracts was as follows:

	Three Months Ended	
(in thousands)	December 31, 2016	January 2, 2016
Net (loss) gain recognized in other (expense) income, net	$ 421	$ (91)

NOTE 8 FINANCING

In the fourth quarter of fiscal year 2016, we entered into a credit agreement with U.S. Bank National Association and HSBC Bank USA, National Association as Co-Documentation Agents, Wells Fargo Bank, National Association as Syndication Agent, JPMorgan Chase Bank, N.A. as Administrative Agent and JP Morgan Chase Bank, N.A., Wells Fargo Securities, LLC as Joint Bookrunners and Joint Lead Arrangers and Bank of America, N.A. (the Credit Agreement). The Credit Agreement provides for senior secured credit facilities consisting of a $120,000 revolving credit facility (the Revolving Credit Facility) which expires on July 5, 2021, and a $460,000 tranche B term loan facility (the Term Facility) which expires on July 5, 2023. The proceeds of the Revolving Credit Facility can be drawn upon to refinance existing indebtedness and for working capital and other general corporate purposes up to a maximum of $120,000. The proceeds of the Term Facility were used for financing the acquisition of PCB Group, Inc. (PCB).

The primary categories of borrowing include Alternate Base Rate (ABR) Borrowing, Swingline Loans and Eurocurrency Borrowing (each as defined in the Credit Agreement). ABR Borrowings and Swingline Loans made in U.S. dollars under the Credit Agreement bear interest at a rate per annum equal to the Alternate Base Rate plus the Applicable Rate (as defined in the Credit Agreement). The Alternate Base Rate is defined as the greater of (a) the Prime Rate (as defined in the Credit Agreement) in effect on such day, (b) the New York Federal Reserve Bank Rate (NYFRB Rate) (as defined in the Credit Agreement) in effect on such day plus ½ of 1.00%, or (c) the Adjusted London Interbank Offered Rate (LIBO Rate) (as defined in the Credit Agreement) for a one month interest period in dollars on such day plus 1.00%. The Alternate Base Rate for ABR Term Loans shall not be less than 1.75% per annum. The Applicable Rate for any ABR Revolving Loans will be based upon the leverage ratio applicable on such date. The Applicable Rate for ABR Term Loans will be 3.25% per annum.

Eurocurrency Borrowings made under the Credit Agreement bear interest at a rate per annum equal to the Adjusted LIBO Rate plus the Applicable Rate. The Adjusted LIBO Rate is defined as an interest rate per annum equal to (a) the LIBO Rate for such interest period multiplied by (b) the Statutory Reserve Rate (as defined in the Credit Agreement). The Applicable Rate for any Eurocurrency Revolving Loan will be based upon the leverage ratio applicable on such date. Based on our current leverage ratio, the Applicable Rate for a Eurocurrency Borrowing is 4.00%. The Adjusted LIBO Rate for Eurocurrency Term Loans will not be less than 0.75% per annum. The Applicable Rate for Eurocurrency Term Loans will be 4.25% per annum.

As of December 31, 2016, there were no borrowings against the Revolving Credit Facility and we had outstanding letters of credit drawn from the Revolving Credit Facility totaling $31,763, leaving approximately $88,237 of unused borrowing capacity. Commitment fees are payable on the unused portion of the Revolving Credit Facility at rates between 0.25% and 0.50% based on the leverage ratio. During the three months ended December 31, 2016, commitment fees incurred totaled $101. During the three months ended January 2, 2016, commitment fees incurred on our previous credit facility totaled $63.

Long-term debt consisted of the following:

(in thousands)	December 31, 2016	October 1, 2016
Long-term debt		
Tranche B term loan, 1.00% amortizing per year, maturing July 5, 2023	$ 458,850	$ 460,000
Tangible equity units, 8.75% coupon, maturing July 1, 2019 [1]	22,904	24,985
Total long-term debt	481,754	484,985
Less: Unamortized underwriting discounts, commissions and other expenses	(16,040)	(16,843)
Less: Current maturities of long-term Tranche B term loan debt [2]	(4,600)	(4,600)
Less: Current maturities of long-term TEU debt [2]	(8,690)	(8,541)
Total long-term debt, less current maturities, net	$ 452,424	$ 455,001

1 See Note 12 for more information on our TEUs issued in the third quarter of fiscal year 2016.

2 Current maturities of long-term debt, net of $10,032 presented on our Consolidated Balance Sheet as of December 31, 2016, includes $4,600 of current maturities of long-term Tranche B term loan debt and $8,690 of current maturities of long-term TEU debt less $3,258 of unamortized underwriting discounts, commissions and issuance costs.

The Term Facility was made available to us on July 5, 2016 to finance the acquisition of PCB. The loans under the Term Facility will amortize in equal quarterly installments in an aggregate annual amount equal to 1.00% of the original principal amount of the Term Facility. At December 31, 2016, the applicable Adjusted LIBO Rate on the Eurocurrency Term Loan Borrowing was 0.78%, plus the Applicable Rate of 4.25%. The weighted average interest rate on Term Facility debt during the three months ended December 31, 2016 was 5.03%.

The Credit Agreement governing the Term Facility requires us to prepay outstanding term loans, subject to certain exceptions, depending on the leverage ratio with (a) up to 50% of the company's annual Excess Cash Flow (as defined in the Credit Agreement) and (b) 100% of the net cash proceeds of (i) certain asset sales and casualty and condemnation events, subject to reinvestment rights and certain other exceptions; and (ii) any incurrence or issuance of certain debt, other than debt permitted under the Credit Agreement. We may voluntarily prepay outstanding loans under the Term Facility at any time without premium or penalty. All obligations under the Term Facility are unconditionally guaranteed by certain of the company's existing wholly owned domestic subsidiaries, and are secured, subject to certain exceptions, by substantially all of the company's assets and the assets of the company's subsidiary guarantors.

On October 20, 2016, in order to mitigate our exposure to interest rate increases on our variable rate debt, we entered into a variable to fixed amortizing interest rate swap with an initial value of $275,000. The effective date of the swap was November 3, 2016. The interest rate swap fixed the variable portion of the interest at 1.256%. We will pay an effective interest rate on the swapped portion of the outstanding debt of 5.51%. The swap agreement expires April 3, 2021.

The interest rate swap will be reduced to the following values over the next five years:

(in thousands)		Swapped Value
November 3, 2016	$	275,000
October 3, 2017		255,000
October 3, 2018		225,000
October 3, 2019		180,000
October 3, 2020		125,000
April 3, 2021		—

Under the Credit Agreement, we are subject to customary affirmative and negative covenants, including, among others, restrictions on our ability to incur debt, create liens, dispose of assets, make investments, loans, advances, guarantees and acquisitions, enter into transactions with affiliates and enter into any restrictive agreements and customary events of default (including payment defaults, covenant defaults, change of control defaults and bankruptcy defaults). The Credit Agreement also contains financial covenants, including the ratio of consolidated total indebtedness to consolidated earnings before income, taxes, depreciation and amortization (EBITDA), as well as the ratio of consolidated EBITDA to consolidated interest expense. These covenants restrict our ability to pay dividends and purchase outstanding shares of our common stock. At December 31, 2016 and October 1, 2016, we were in compliance with these financial covenants. On January 24, 2017, we received a consent and waiver (the Consent) from each of the lenders under the Credit Agreement that waives any defaults resulting from our failure to timely provide audited financial statements for fiscal year 2016 and unaudited financial statements for the first quarter of fiscal year 2017 on our before the deadlines set forth in the Credit Agreement. See Note 18 for additional information on the Consent.

The TEUs had an estimated fair value of $29,711 and $28,080 as of December 31, 2016 and October 1, 2016, respectively. The fair value of the TEUs is based on the most recently quoted price for the outstanding securities, adjusted for any known significant deviations in value. The estimated fair value of these long-term obligations is not necessarily indicative of the amount that would be realized in a current market exchange. Tranche B Term debt had an estimated fair value of $468,027 and $465,465 as of December 31, 2016 and October 1, 2016, respectively. The fair value of long-term debt is based on the most recently quoted price for the outstanding debt instrument, adjusted for any known significant deviations in value. The estimated fair value of these long-term obligations is not necessarily indicative of the amount that would be realized in a current market exchange.

NOTE 9 STOCK-BASED COMPENSATION

We compensate our officers, directors and employees with stock-based compensation under the 2011 Stock Incentive Plan (the 2011 Plan) approved by our shareholders and administered under the supervision of our Board of Directors. During fiscal year 2016, our shareholders approved a 1,500 share increase in the number of shares that may be issued under the 2011 Plan, bringing the aggregate total to 3,800 shares. During the three months ended December 31, 2016, we awarded restricted stock units under the 2011 Plan. During the three months ended January 2, 2016, we awarded stock options and restricted stock units under the 2011 Plan. At December 31, 2016, a total of 2,091 shares were available for future grant under the 2011 Plan. These shares will be available for issuance under the 2011 Plan until January 31, 2018.

In fiscal year 2011, our shareholders approved a 2012 Employee Stock Purchase Plan (2012 ESPP) that was effective on January 1, 2012. During the three months ended December 31, 2016 and January 2, 2016, we issued shares of our common stock to participants under the 2012 ESPP. At December 31, 2016, a total of 651 shares were available for issuance under the 2012 ESPP. Shares will be available for issuance under the 2012 ESPP until December 31, 2021.

Our annual stock option and restricted stock grant is typically made in December. In fiscal year 2017, we did not make an annual stock grant in December due to the previously disclosed internal investigation into our China operations. During the three months ended December 31, 2016, we granted approximately 2 restricted stock units to employees. During the three months ended January 2, 2016, we granted approximately 312 stock options, 58 restricted stock units and 21 performance restricted stock units to directors, officers and employees.

Stock Options

Stock options are granted at an exercise price equal to the closing market price of our stock on the date of grant. The fair value of stock options granted under our stock-based compensation programs has been estimated as of the date of each grant using the multiple option form of the Black-Scholes valuation model, based on the grant price and assumptions regarding the expected grant life, stock price volatility, dividends and risk-free interest rates. Each vesting period of an option award is valued separately, with this value being recognized evenly over the vesting period. Generally, stock options vest proportionally on the first three anniversaries of the grant date and expire, depending on the date of grant, five or seven years from the grant date.

There were no stock options granted during the three months ended December 31, 2016. The weighted average per share fair value of the stock options granted during the three months ended January 2, 2016 was $11.74. The weighted average assumptions used to determine the fair value of these stock options were as follows:

	Three Months Ended January 2, 2016
Expected life (in years)	4.1
Risk-free interest rate	1.5%
Expected volatility	26.6%
Dividend yield	1.9%

The expected life represents the period that the stock option awards are expected to be outstanding and was determined based on historical and anticipated future exercise and expiration patterns. The risk-free interest rate used is based on the yield of constant maturity U.S. Treasury bonds on the grant date with a remaining term equal to the expected life of the grant. We estimate stock price volatility based on a historical weekly price observation. The dividend yield assumption is based on the annualized current dividend divided by the share price on the grant date.

Restricted Stock and Restricted Stock Units

We award restricted stock units to directors. The restricted stock units vest on the date of the next annual meeting after grant. The directors are entitled to cash dividend equivalents on unvested shares, but they do not have voting rights on the unvested shares. The sale and transfer of these units is restricted during the vesting period. Additionally, in fiscal year 2013, we awarded restricted stock to our directors that vest proportionately on the first three anniversaries of the grant date. For restricted stock awarded to directors, participants are entitled to cash dividends and voting rights on unvested shares, but the sale and transfer of these shares is restricted during the vesting period. Restricted stock and restricted stock units are valued based on the market value of the shares at the date of grant with the value allocated to expense evenly over the restricted period.

We award restricted stock units and performance restricted stock units to key employees. Restricted stock units vest proportionally on the first three anniversaries of the grant date, and performance restricted stock units vest based on attainment of return on invested capital performance targets at the end of one, two and three year performance periods. Participants awarded restricted stock units and performance restricted stock units are not entitled to cash dividends or voting rights on unvested units. Performance restricted stock units are valued based on the market value of the shares at the date of grant with the value recognized as an expense over the life of the performance period. Once the performance criteria has been met, the value of the performance restricted stock units is finalized.

The fair value of the restricted stock units and performance restricted stock units granted during the three months ended December 31, 2016 and January 2, 2016 was $47.73 and $59.74, respectively, representing the market value of our shares at the date of grant less the present value of estimated foregone dividends over the vesting period.

NOTE 10 EMPLOYEE BENEFIT PLANS

One of our German subsidiaries has a non-contributory, defined benefit retirement plan for eligible employees. This plan provides benefits based on the employee's years of service and compensation during the years immediately preceding retirement, termination, disability or death, as defined in the plan. We use a September 30 measurement date for this defined benefit retirement plan.

We recognize the funded status of the defined benefit pension in our Consolidated Balance Sheet Statements, recognize changes in that funded status in the year in which the changes occur through comprehensive income and measure the plan's assets and obligations that determine the plan's funded status as of the end of our fiscal year.

Net periodic benefit costs for our defined benefit retirement plan included the following components:

	Three Months Ended	
(in thousands)	December 31, 2016	January 2, 2016
Service cost	$ 349	$ 239
Interest cost	106	150
Expected return on plan assets	(266)	(253)
Net amortization and deferral	244	144
Net periodic benefit cost	$ 433	$ 280

The weighted average expected long-term rate of return on plan assets used to determine the net periodic benefit cost for each of the three months ended December 31, 2016 and January 2, 2016 was 5.5% and 5.5%, respectively.

NOTE 11 INCOME TAXES

As of December 31, 2016, our liability for unrecognized tax benefits was $6,387, of which $3,582 would favorably affect our effective tax rate, if recognized. As of October 1, 2016, our liability for unrecognized tax benefits was $6,232, of which $3,429 would favorably affect our effective tax rate, if recognized. As of December 31, 2016, we do not expect significant changes in the amount of unrecognized tax benefits during the next twelve months.

NOTE 12 SHAREHOLDERS' EQUITY

(Dollars and shares in thousands, except per share and per TEU data)

Share Issuance

During the third quarter of fiscal year 2016, we issued 1,897 shares of our common stock at $42.00 per share in a registered public offering primarily to finance the acquisition of PCB Group, Inc. (PCB), to repay amounts outstanding under our existing revolving credit facility and to pay related costs, fees and expenses. Total net proceeds for fiscal year 2016 were as follows:

(in thousands)	Common Stock	Additional Paid-in Capital	Total
Public offering	$ 474	$ 79,221	$ 79,695
Less: Underwriting discounts and commissions	—	(4,782)	(4,782)
Less: Other expenses[1]	—	(612)	(612)
Issuance of common stock, net	$ 474	$ 73,827	$ 74,301

[1] Other expenses include direct and incremental costs related to the issuance of the common stock.

Tangible Equity Units

During the third quarter of fiscal year 2016, we issued 1,150 8.75% TEUs in a registered public offering primarily to finance the acquisition of PCB, to repay amounts outstanding under our existing revolving credit facility and to pay related costs, fees and expenses. Total proceeds, net of underwriting discounts, commissions and other expenses were $110,926. Each TEU has a stated amount of $100 per TEU and is comprised of a prepaid stock purchase contract and a senior amortizing note having a final installment payment date of July 1, 2019. We allocated the proceeds from the issuance of the TEUs between equity and debt, based on the relative fair values of the respective components of each TEU. The fair value of the prepaid stock purchase contracts, net of underwriting discounts, commissions and other expenses, was recorded in additional paid-in capital in the Consolidated Balance Sheets. The fair value of the senior amortizing note, net of underwriting discounts, commissions and other expenses, was split between current maturities of long-term debt, net and long-term debt, less current maturities, net in the Consolidated Balance Sheets. Underwriting discounts, commissions and other costs directly associated with the TEU-related debt will be amortized using the effective interest rate method over the three year term of the instrument.

The aggregate values assigned upon issuance to each component of the TEUs, based on the relative fair value of the respective components, were as follows:

(in thousands, except fair value price per TEU)	Equity Component	Debt Component	Total
Fair value price per TEU[2]	$ 76.19	$ 23.81	$ 100.00
Gross proceeds	$ 87,614	$ 27,386	$ 115,000
Less: Underwriting discounts and commissions	(2,628)	(822)	(3,450)
Less: Other expenses[3]	(475)	(149)	(624)
Issuance of TEUs, net	$ 84,511	$ 26,415	$ 110,926

[2] The fair value price allocation between equity and debt for each TEU was determined using a discounted cash flow model.

[3] Other expenses include direct and incremental costs related to the issuance of the TEUs.

Equity Component
Unless settled earlier at the option of the holder, each purchase contract will automatically settle on July 1, 2019. A minimum of 1.9841 shares and a maximum of 2.3810 shares of our common stock, subject to adjustment based upon the applicable market value discussed below, will be delivered to the holder of each prepaid stock purchase contract at the settlement date.

The number of shares of our common stock issuable upon settlement of each purchase contract will be determined as follows:

- if the applicable market value is equal to or greater than the threshold appreciation price of $50.40 per share, holders will receive 1.9841 shares of common stock per purchase contract, or the minimum settlement rate, resulting in the issuance of 2,282 shares of our common stock;
- if the applicable market value is greater than the reference price of $42.00 per share, but less than the threshold appreciation price of $50.40 per share, holders will receive a number of shares of common stock equal to $100 per TEU divided by the applicable market value; or
- if the applicable market value is less than or equal to the reference price of $42.00 per share, holders will receive 2.3810 shares of common stock per purchase contract, or the maximum settlement rate, resulting in the issuance of 2,738 shares of our common stock.

The "applicable market value" is defined as the average of the daily volume-weighted average price of the common stock on each of the 20 consecutive trading days beginning on, and including, the 23rd scheduled trading day immediately preceding July 1, 2019.

Debt Component
The amortizing senior note was issued with an initial principal amount of $27,386 or $23.81 per TEU. Equal quarterly cash installments of $2.1875 per amortizing note (except for the October 1, 2016 installment payment, which was $2.5764 per amortizing note) will be paid, which in the aggregate will be equivalent to a 8.75% cash distribution per year with respect to each $100 stated amount per TEU. Each installment will constitute a payment of interest and partial repayment of principal.

Earnings Per Common Share
The TEUs have a dilutive effect on our earnings per share. The 1.9841 minimum shares to be issued are included in the calculation of basic weighted average shares outstanding. The 0.3969 difference between the minimum shares and the 2.3810 maximum shares are potentially dilutive, and accordingly, are included in our diluted earnings per share on a pro rata basis to the extent the applicable market value is higher than the reference price but less than the threshold appreciation price. See Note 13 for additional information regarding the calculation of earnings per share.

Capped Call Transactions
In connection with the pricing of the TEUs during the third quarter of fiscal year 2016, we entered into capped call transactions with third parties. The capped calls are expected to reduce the potential dilution to our common stock upon settlement of the TEUs to the extent the market price per share of our common stock exceeds the applicable strike price of the capped calls. The capped calls have a strike price of $50.40 per share, a cap price of $58.80 per share and are exercisable when the TEUs are converted. If, upon conversion of the TEUs, the price of our common stock is above the strike price of the capped calls, the

third parties will deliver shares of common stock to us with an aggregate value approximately equal to the difference between the price of the common stock at the conversion date (with a maximum price for purposes of this calculation equal to the cap price) and the strike price, multiplied by the number of shares of common stock related to the portion of the capped calls being exercised. The capped calls allow for net share settlement when the TEUs are exercised and expire on July 1, 2019. We paid $7,935 for the capped calls in the third quarter of fiscal year 2016 and recorded the payment as a reduction of additional paid-in capital in the Consolidated Balance Sheets.

NOTE 13 EARNINGS PER SHARE

Basic earnings per share is computed by dividing net income by the daily weighted average number of common shares outstanding during the applicable period. Our TEUs are assumed to be settled at the minimum settlement amount of 1.9841 shares per TEU when calculating weighted-average common shares outstanding for purposes of basic earnings per share.

Using the treasury stock method, diluted earnings per share includes the potentially dilutive effect of common shares issued in connection with outstanding stock-based compensation options and grants. The potentially dilutive effect of common shares issued in connection with outstanding stock options is determined based on the average market price for the period. For diluted earnings per share, our TEUs are assumed to be settled at a conversion factor based on our daily volume-weighted average price per share of our common stock for the 20 consecutive trading days preceding the end of the current fiscal year quarter not to exceed 2.3810 shares of common stock per TEU.

Under the treasury stock method, shares associated with certain stock options have been excluded from the diluted weighted average shares outstanding calculation because the exercise of those options would lead to a net reduction in common shares outstanding or anti-dilution. As a result, stock options to acquire 663 and 528 weighted common shares have been excluded from the diluted weighted average common shares outstanding calculation for the three months ended December 31, 2016 and January 2, 2016, respectively.

In connection with the pricing of our TEUs, we entered into capped call transactions. The capped call transactions will not be reflected in the calculation of diluted earnings per share until settled as they are anti-dilutive. See Note 12 for additional information on our equity instruments.

Basic and diluted earnings per share were calculated as follows:

	Three Months Ended	
(in thousands, except per share data)	December 31, 2016	January 2, 2016
Net income	$ 1,705	$ 11,774
Weighted average common shares outstanding	18,969	14,861
Effect of dilutive securities		
Stock-based compensation	105	138
Tangible equity units	—	—
Weighted average dilutive common shares outstanding	19,074	14,999
Earnings per share		
Basic	$ 0.09	$ 0.79
Diluted	$ 0.09	$ 0.78

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NOTE 14 OTHER COMPREHENSIVE INCOME (LOSS)

Other comprehensive income (loss), a component of shareholders’ equity, consists of foreign currency translation adjustments, gains or losses on derivative instruments and defined benefit pension plan adjustments.

Income tax expense or benefit allocated to each component of other comprehensive income (loss) was as follows:

	Three Months Ended December 31, 2016		
(in thousands)	Pretax	Tax	Net
Foreign currency translation gain (loss) adjustments	$ (9,802)	$ —	$ (9,802)
Derivative instruments			
Unrealized net gain (loss)	6,509	(2,351)	4,158
Net (gain) loss reclassified to earnings	(419)	151	(268)
Defined benefit pension plan			
Unrealized net gain (loss)	183	(55)	128
Net (gain) loss reclassified to earnings	244	(74)	170
Currency exchange rate gain (loss)	697	—	697
Other comprehensive income (loss)	$ (2,588)	$ (2,329)	$ (4,917)

	Three Months Ended January 2, 2016		
(in thousands)	Pretax	Tax	Net
Foreign currency translation gain (loss) adjustments	$ (2,418)	$ —	$ (2,418)
Derivative instruments			
Unrealized net gain (loss)	211	(76)	135
Net (gain) loss reclassified to earnings	(150)	55	(95)
Defined benefit pension plan			
Unrealized net gain (loss)	176	(53)	123
Net (gain) loss reclassified to earnings	145	(44)	101
Currency exchange rate gain (loss)	150	—	150
Other comprehensive income (loss)	$ (1,886)	$ (118)	$ (2,004)

The changes in the net-of-tax balances of each component of AOCI were as follows:

	Three Months Ended December 31, 2016			
	Adjustments			
(in thousands)	Foreign Currency Translation	Unrealized Derivative Instrument	Defined Benefit Pension Plan	Total
Beginning balance	$ 673	$ (255)	$ (10,791)	$ (10,373)
Other comprehensive net gain (loss) reclassifications	(9,802)	4,158	825	(4,819)
Net (gain) loss reclassified to earnings	—	(268)	170	(98)
Other comprehensive income (loss)	(9,802)	3,890	995	(4,917)
Ending balance	$ (9,129)	$ 3,635	$ (9,796)	$ (15,290)

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(in thousands)	Three Months Ended January 2, 2016 Adjustments Foreign Currency Translation	Unrealized Derivative Instrument	Defined Benefit Pension Plan	Total
Beginning balance	$ 1,005	$ 386	$ (6,968)	$ (5,577)
Other comprehensive net gain (loss) reclassifications	(2,418)	135	273	(2,010)
Net (gain) loss reclassified to earnings	—	(95)	101	6
Other comprehensive income (loss)	(2,418)	40	374	(2,004)
Ending balance	$ (1,413)	$ 426	$ (6,594)	$ (7,581)

The effect on certain line items in the Consolidated Statements of Income of amounts reclassified out of AOCI was as follows:

(in thousands)	Three Months Ended December 31, 2016	January 2, 2016	Affected Line Item in the Consolidated Statements of Income
Derivative instruments			
Currency exchange contracts gain (loss)	$ 419	$ 150	Revenue
Income tax benefit (expense)	(151)	(55)	Provision for income taxes
Total net gain (loss) on derivative instruments	268	95	Net income
Defined benefit pension plan			
Actuarial gain (loss)	(133)	(79)	Cost of sales
Actuarial gain (loss)	(69)	(41)	Selling and marketing
Actuarial gain (loss)	(42)	(25)	General and administrative
Total actuarial gain (loss)	(244)	(145)	Income before income taxes
Income tax benefit (expense)	74	44	Provision for income taxes
Total net gain (loss) on pension plan	(170)	(101)	Net income
Total net-of-tax reclassifications out of AOCI included in net income	$ 98	$ (6)	

NOTE 15 BUSINESS SEGMENT INFORMATION

Our Chief Executive Officer (the Chief Operating Decision Maker) regularly reviews financial information for our two operating segments, Test and Sensors. Test provides testing equipment, systems and services to the ground vehicles, materials and structures markets. Sensors provides high-performance position sensors for a variety of industrial and mobile hydraulic applications.

In evaluating each segment’s performance, our Chief Executive Officer focuses on income from operations. This measure excludes interest income and expense, income taxes and other non-operating items. Corporate expenses, including costs associated with various support functions such as human resources, information technology, legal, finance and accounting and general and administrative costs are allocated to the reportable segments on the basis of revenue. The accounting policies of the reportable segments are the same as those described in Note 1 to the Consolidated Financial Statements found in our Annual Report on Form 10-K for the fiscal year ended October 1, 2016.

Financial information by reportable segment was as follows:

(in thousands)	Three Months Ended December 31, 2016	Three Months Ended January 2, 2016
Revenue		
Test	$ 131,126	$ 118,810
Sensors	68,153	21,691
Total revenue	$ 199,279	$ 140,501
Income (Loss) from Operations		
Test	$ 11,716	$ 10,387
Sensors	(1,426)	3,214
Total income (loss) from operations	$ 10,290	$ 13,601

See Note 18 for additional information regarding changes to our Test business.

NOTE 16 RESTRUCTURING AND RELATED COSTS

During the fourth quarter of fiscal year 2016, we initiated plans to close our Machida, Japan facility and eliminate 35 positions in our Sensors segment by the third quarter of fiscal year 2017. We incurred severance and related pre-tax expense of $563 in the first quarter of fiscal year 2017. We have incurred $1,491 of pre-tax expense since the fourth quarter of fiscal year 2016, including $971 and $520 related to severance and facility closure costs, respectively. We expect to incur approximately $500 of additional expenses through the third quarter of fiscal year 2017 related to the Machida facility closing. The severance and facility closing costs are expected to be paid during the third quarter of fiscal year 2017.

During the third quarter of fiscal year 2016, we initiated restructuring actions to further reduce our cost structure by eliminating 61 positions, primarily in our Corporate area and Test segment, through terminations, elimination of certain open positions as a result of employees leaving voluntarily throughout fiscal year 2016 and reductions in contractors. There were no restructuring costs incurred during the three months ended December 31, 2016. The remaining severance and related costs are expected to be paid by the first quarter of fiscal year 2018.

The following table summarizes the restructuring expenses included in our Consolidated Statements of Income for the three months ended December 31, 2016. There was no restructuring expense incurred during the three months ended January 2, 2016.

	Three Months Ended December 31, 2016		
(in thousands)	Test	Sensors	Total
Cost of sales	$ —	$ 326	$ 326
Selling and marketing	—	81	81
General and administrative	—	156	156
Research and development	—	—	—
Total restructuring expense	$ —	$ 563	$ 563

During the third quarter of fiscal year 2014, we initiated workforce and other cost reduction actions at certain locations in the U.S. and Europe. No restructuring expenses were recognized during the three months ended December 31, 2016 or January 2, 2016 related to these restructuring actions.

The following table summarizes the change in our restructuring expense accruals during the three months ended December 31, 2016 for all restructuring actions.

	2016		2014	
(in thousands)	Q3 Restructuring	Q4 Restructuring	Restructuring	Total
Balance, October 1, 2016	$ 308	$ 935	$ 1,053	$ 2,296
Restructuring expense	—	563	—	563
Payments	(149)	(30)	(87)	(266)
Other adjustments	—	—	12	12
Currency translation	(19)	(165)	(68)	(252)
Balance, December 31, 2016	$ 140	$ 1,303	$ 910	$ 2,353

The following table summarizes the location of the restructuring expense accruals included in our Consolidated Balance Sheets.

(in thousands)	December 31, 2016	October 1, 2016
Accrued payroll and related costs	$ 1,315	$ 1,066
Other accrued liabilities	451	520
Other long-term liabilities	587	710
Total severance and related costs	$ 2,353	$ 2,296

NOTE 17 BUSINESS ACQUISITIONS

On July 5, 2016, we acquired 100% of the outstanding capital stock of PCB for an estimated purchase price of $581,407 subject to certain adjustments for cash, indebtedness, transaction costs and the level of net working capital that were made at closing. The transaction was accounted for under the acquisition method of accounting. PCB is a manufacturer of piezoelectric sensors and components used for pressure, force and vibration measurement and is headquartered in Depew, New York. We funded the acquisition of PCB with existing cash on hand as well as funds raised through borrowings under the Term Facility in an aggregate principal amount of $460,000, proceeds from registered public offerings of our TEUs and common stock and the $43,500 of restricted cash that was placed in escrow during the third quarter of fiscal year 2016 to secure termination fees that would have become payable to PCB had the acquisition not occurred under the definitive purchase agreement. The restricted cash was paid to the shareholders of PCB as part of the estimated purchase price. See Note 8 and Note 12 for additional financing information. The acquired assets, liabilities and operating results have been included in our financial statements within Sensors from the date of acquisition. During the three months ended December 31, 2016, we included $45,231 of revenue and an operating loss of $3,197 from PCB in our Consolidated Statements of Income. The operating loss includes a $7,724 fair value adjustment to the acquired PCB inventory.

The estimated purchase price of PCB consisted of the following:

(in thousands)	
Consideration paid to PCB shareholders and employees[1]	$ 580,000
Consideration for PCB closing cash	11,612
Deferred endowment consideration	1,000
Net pre-acquisition earn-out	(141)
Net working capital adjustment	(513)
Cash acquired	(10,551)
Total estimated purchase price, net of cash acquired	$ 581,407

[1] Of the $580,000 consideration paid to PCB, we paid $10,000 directly to employees of PCB on behalf of the PCB shareholders during the fourth quarter of fiscal year 2016. The payment was made pursuant to the definitive purchase agreement entered into with PCB in connection with the acquisition.

PCB's products include accelerometers, microphones, calibration systems, pressure sensors, load and torque sensors, force sensors, single- and multi-channel telemetry, ground fault detection and smart sensing solutions. PCB serves end markets including test and measurement, power and energy, aerospace and defense, industrial measurement and instrumentation, automotive and rail and acoustics and environmental noise monitoring. The acquisition strengthens our current Sensors' business with complementary sensor products and expands channels to market, balancing the revenue mix between our Test and Sensors segments, while enhancing our margin profile and creating significant cross-selling opportunities across the combined portfolio.

The following table summarizes the preliminary fair value measurement of the assets acquired and liabilities assumed net of cash acquired as of the date of acquisition:

(in thousands)		
Assets		
Accounts receivable	$	20,885
Inventories		57,730
Prepaid expenses and other current assets		2,298
Property and equipment		19,649
Intangible assets		
Customer lists		153,900
Trademarks and trade names		58,500
Technology		35,300
Land-use rights		1,200
Other long-term assets		1,796
Total identifiable assets acquired		351,258
Liabilities		
Accounts payable		(6,786)
Accrued payroll and related costs		(7,137)
Non-current deferred tax liability		(94,308)
Other accrued and long-term liabilities		(4,862)
Total identifiable liabilities acquired		(113,093)
Net identifiable assets acquired		238,165
Goodwill		343,242
Total estimated purchase price consideration, net of cash acquired	**$**	**581,407**

The fair value measurement was preliminary at December 31, 2016, pending resolution of any purchase price adjustments. We expect the fair value measurement process to be completed as soon as possible, but no later than one year from the acquisition date. Given the size and complexity of the acquisition, the valuation of certain assets and liabilities, is still being completed, and is subject to final review. Specifically, PCB's tax accounts are provisional pending the completion and review of such assets and liabilities. To the extent that our estimates require adjustment, we will modify the values accordingly. The gross amount of the accounts receivable acquired was $21,726, of which $841 is expected to be uncollectible.

Goodwill was calculated as the difference between the acquisition date fair value of the total purchase price consideration and the fair value of the net assets acquired, and represents the future economic benefits that we expect to achieve as a result of the acquisition. This resulted in an estimated purchase price in excess of the fair value of identifiable net assets acquired. The estimated purchase price also included the fair value of other assets that were not identifiable, not separately recognizable under accounting rules (e.g., assembled workforce) of immaterial value in addition to a going-concern element that represents our ability to earn a higher rate of return on the group of assets than would be expected on the separate assets as determined during the valuation process. Based on preliminary fair value measurement of the assets acquired and liabilities assumed, we allocated $343,242 to goodwill for the expected synergies from combining PCB with our existing business. All of the goodwill was assigned to Sensors. None of the goodwill is expected to be deductible for income tax purposes.

The fair value of acquired identifiable assets was determined using the income approach on an individual project basis. In performing these valuations, the key underlying probability-adjusted assumptions of the discounted cash flows were projected revenues, gross margin expectations and operating cost estimates. The valuations were based on the information that was available as of the acquisition date and the expectations and assumptions that have been deemed reasonable by us. There are inherent uncertainties and management judgment required in these determinations. The fair value measurements of the assets acquired and liabilities assumed were based on valuations involving significant unobservable inputs, or Level 3 in the fair value hierarchy.

The fair value of the acquired intangible assets is $248,900. The expected lives of the acquired intangible assets are approximately 15 years for developed technology, 16 years for customer lists, 5.4 years for leasehold interest and 3 years for finite-lived trademarks and trade names and are being amortized on a straight-line basis. Trade names having a value of $57,500 are considered to have indefinite lives.

Pro Forma Financial Information (Unaudited)
The following unaudited pro forma financial information presents the combined results of operations of MTS Systems Corporation as if the acquisition of PCB had occurred as of the beginning of the fiscal year ended October 1, 2016. The unaudited pro forma information is not necessarily indicative of what our consolidated results of operations actually would have been had the acquisition occurred at the beginning of each fiscal year. In addition, the unaudited pro forma financial information does not attempt to project the future results of operations of the combined company.

(in thousands except per share data)	Three Months Ended January 2, 2016	
Revenue	$	185,641
Net income		4,904
Earnings Per Share		
Basic	$	0.26
Diluted	$	0.26

The unaudited pro forma financial information is based on certain assumptions which we believe are reasonable, directly attributable to the transactions, factually supportable and do not reflect the cost of any integration activities or the benefits from the acquisition of PCB and synergies that may be derived from any integration activities.

The unaudited pro forma financial information above gives effect to the following:

- Incremental amortization and depreciation expense related to the estimated fair value of identifiable intangible assets and property, plant and equipment from the purchase price allocation.
- Exclusion of the purchase accounting impact of the incremental charge reported in cost of sales for the sale of acquired inventory that was written-up to fair value of $7,724.
- Includes $7,656 of interest expense on outstanding debt entered into as part of funding the acquisition.
- Pro forma adjustments tax affected by 20% tax rate.
- Weighted average shares outstanding was adjusted to increase the amount by 4,179 shares for both basic and diluted shares in the earnings per share calculation due to the fact that we issued equity in the form of shares of our common stock to acquire PCB.

Our pro forma first quarter for fiscal year 2016 ended on January 2, 2016, while PCB’s 2015 fiscal year would have ended on December 31, 2015. The unaudited pro forma financial information for the first quarter of fiscal year 2016 combines our unaudited financial information for the first fiscal quarter ended January 2, 2016 and the unaudited financial information of PCB for the three months ended December 31, 2015.

NOTE 18 SUBSEQUENT EVENTS

Test Segment Reorganization
On January 5, 2017, we announced the division of our Test segment into two separate business units, "Materials Test Systems" and "Vehicles and Structure Test Systems." The division of Test will result in us having three operating segments once discrete financial information is made available to the Chief Operating Decision Maker (CODM), and we will continue to report only the Test and Sensors segments until such time. We are currently evaluating the timing of such implementation.

Credit Agreement Consent and Waiver
As previously announced on November 29, 2016, due to an internal investigation of apparent violations by certain employees in our China operations of our Code of Conduct, the filing of our Annual Report on Form 10-K for the fiscal year ended October 1, 2016 and our Quarterly Report on Form 10-Q for the period ended December 31, 2016 were delayed beyond the extended filing due dates, respectively. As a result of the delayed filings, on January 24, 2017, we received a consent and waiver from each of the lenders under our Credit Agreement. Each of the lenders thereto have consented to allow us to deliver our audited financial statements for fiscal year 2016, and our unaudited financial statements for the first quarter of fiscal year 2017, no later than April 24, 2017. We expect to deliver the financial statements prior to this deadline.

Nasdaq Non-Compliance
On December 6, 2016, we received a deficiency letter from Nasdaq indicating that we, as a result of not filing our Annual Report on Form 10-K for fiscal year 2016 (the Late Annual Report) in a timely manner and disclosing that we would not be able to file the Late Annual Report within the 15-day extension period provided in Rule 12b-25(b) under the Securities Exchange Act of 1934, as amended (the Exchange Act), were not in compliance with Nasdaq Listing Rule 5250(c)(1) for continued listing. In addition, on February 15, 2017, we received a second deficiency letter from Nasdaq indicating that we, as a result of not filing our Quarterly Report on Form 10-Q for the period ended December 31, 2016 (the Late Quarterly Report and together with the Late Annual Report, the Late Reports) in a timely manner and disclosing that we would not be able to file the Late Quarterly Report within the five-day extension period provided in Rule 12b-25(b) under the Exchange Act, together with our prior and ongoing failure to timely file the Late Annual Report, were not in compliance with Listing Rule 5250(c)(1) for continued listing. As requested by Nasdaq, we were required to submit a plan to regain compliance with Nasdaq’s filing requirements for continued listing within 60 calendar days of the date of the initial letter.

On January 27, 2017, we submitted our plan to regain compliance with Nasdaq’s filing requirements for continued listing and subsequently provided Nasdaq with updates and additional information on February 23, 2017 and March 23, 2017. On April 7, 2017, Nasdaq granted us an extension to regain compliance with Nasdaq’s filing requirements for continued listing so long as the Late Reports are filed by May 30, 2017.

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

Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) is designed to provide a reader of our financial statements with a narrative from the perspective of management on our financial condition, results of operations, liquidity and certain other factors that may affect our future results. Our MD&A is presented in nine sections:

- Overview
- Financial Results
- Cash Flow Comparison
- Liquidity and Capital Resources
- Off-Balance Sheet Arrangements
- Critical Accounting Policies
- Recently Issued Accounting Pronouncements
- Other Matters
- Forward-Looking Statements

Our MD&A should be read in conjunction with the Consolidated Financial Statements and related Notes included in Item 1 of Part I of this Quarterly Report on Form 10-Q. All dollar and share amounts are in thousands (unless otherwise noted).

Overview

MTS Systems Corporation is a leading global supplier of high-performance test systems and sensors. Our testing hardware and software solutions help customers accelerate and improve design, development and manufacturing processes and are used for determining the mechanical behavior of materials, products and structures. Our high-performance sensors provide controls for a variety of applications measuring acceleration, position, vibration, motion, pressure, force and sound. As of October 1, 2016, we had 3,500 employees and revenue of $650,147 for the fiscal year.

Our goal is to grow profitably, generate strong cash flow and deliver a strong return on invested capital to our shareholders by leveraging our leadership position in the research and development and industrial global end markets for high performance test systems and sensors. Our desire is to be the innovation leader in creating test and measurement solutions and provide total customer satisfaction. We believe we can create value for our customers by helping to enhance the precision, improve the reliability and create superior safety for their products, while reducing the delivery time to market for their products. Our competitive advantages include our mission critical technology and application expertise, our leading global footprint with long-term customer relationships, our large installed base of testing equipment and our expanded presence in the rapidly growing sensors market. We believe these competitive advantages position us well in both the test and sensors markets to deliver profitable growth in the years ahead.

We are working toward our goals of sustained six to eight percent growth in annual revenue, three to four points of expanded earnings before interest, taxes, depreciation and amortization (EBITDA) and mid-teens for return on invested capital (ROIC). We believe the growth in our end markets, combined with three primary opportunities we are currently pursuing will support these goals:

- Realize growth within the rapidly expanding sensors market with strong forecasted growth over the next five years;
- Expand service offerings in our Test segment; and
- Capture growth in ground vehicle and advance materials testing driven by environmental and energy conservation initiatives.

We believe that our business model supports achieving our growth objectives, assuming we continue to move aggressively to build our infrastructure, expand our offerings and execute on opportunities with our key customers around the world. In order to accelerate our revenue growth over the next five years, investments in infrastructure, sales support and field service capacity and capability are essential.

Terms

When we use the terms "we," "us," the "Company," or "our" in this report, unless the context otherwise requires, we are referring to MTS Systems Corporation.

Restructuring Initiative
During the fourth quarter of fiscal year 2016, we initiated plans to close our Machida, Japan facility by the third quarter of fiscal year 2017. We incurred restructuring expense of $563 in the first quarter of fiscal year 2017 related to the closure of this facility. See Note 16 to the Consolidated Financial Statements included in Item 1 of Part I of this Quarterly Report on Form 10-Q.

Foreign Currency
Approximately 75% of our revenue has historically been derived from customers outside of the United States. Our financial results are principally exposed to changes in exchange rates between the U.S. dollar and the Euro, the Japanese yen and the Chinese yuan. A change in foreign exchange rates could positively or negatively affect our reported financial results. The discussion below quantifies the impact of foreign currency translation on our financial results for the periods discussed.

Financial Results

Total Company

Results of Operations
The following table compares results of operations, separately identifying the estimated impact of currency translation, the acquisition of PCB completed in fiscal year 2016 and restructuring expense incurred in fiscal year 2017.

	Three Months Ended				
		Estimated			
(in thousands)	December 31, 2016	Business Change	Acquisition / Restructuring [1]	Currency Translation	January 2, 2016
Revenue	$ 199,279	$ 13,375	45,231	$ 172	$ 140,501
Cost of sales	125,815	7,287	30,448	90	87,990
Gross profit	73,464	6,088	14,783	82	52,511
Gross margin	*36.9%*				*37.4%*
Operating expenses					
Selling and marketing	30,470	218	9,482	116	20,654
General and administrative	24,023	2,754	8,449	(142)	12,962
Research and development	8,681	1,093	2,300	(6)	5,294
Total operating expenses	63,174	4,065	20,231	(32)	38,910
Income from operations	$ 10,290	$ 2,023	(5,448)	$ 114	$ 13,601

[1] The Acquisition / Restructuring column includes revenues and costs from the acquisition of PCB, costs incurred as part of the integration of PCB and restructuring costs.

Revenue

	Three Months Ended		Increased / (Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
Revenue	$ 199,279	$ 140,501	$ 58,778	41.8%

Revenue for the three months ended December 31, 2016 increased by 41.8% primarily due to the PCB acquisition, higher revenue in Test and the favorable impact of currency translation. Test revenue increased $12,316 primarily due to a focus on project execution and backlog conversion. Sensors revenue increased $46,462 primarily driven by the PCB acquisition, higher revenue in the Asia region and the favorable impact of currency translation.

Gross Profit

	Three Months Ended		Increased / (Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
Gross profit	$ 73,464	$ 52,511	$ 20,953	39.9%
Gross margin	*36.9%*	*37.4%*	(0.5)	ppts

Gross profit for the three months ended December 31, 2016 increased 39.9% primarily due to increased sales volume as a result of three months of profit from the PCB acquisition and increased sales volumes and backlog conversion in Test, partially offset by PCB acquisition-related and restructuring expenses. Our gross margin rate declined 0.5 percentage points compared to the same period in the prior year primarily due to the acquisition of PCB, which included a $7,724 fair value adjustment related to the acquired inventory and restructuring costs. Excluding the impact of currency translation, the PCB acquisition and restructuring costs, the gross margin rate increased 0.7 percentage points primarily due to the conversion of products in Test with less customization and higher gross margins.

Selling and Marketing Expense

	Three Months Ended		Increased / (Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
Selling and marketing	$ 30,470	$ 20,654	$ 9,816	47.5%
% of Revenue	*15.3%*	*14.7%*		

Selling and marketing expense for the three months ended December 31, 2016 increased by 47.5% primarily due to the acquisition of PCB and restructuring costs, higher commission expense from increased revenue in Test and the unfavorable impact of currency translation. Excluding the impact of currency translation, the PCB acquisition and restructuring costs, selling and marketing expense increased 1.1%.

General and Administrative Expense

	Three Months Ended		Increased / (Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
General and administrative	$ 24,023	$ 12,962	$ 11,061	85.3%
% of Revenue	*12.1%*	*9.2%*		

General and administrative expense for the three months ended December 31, 2016 increased by 85.3% primarily due to expenses related to the acquisition of PCB, expenses related to the China investigation of $1,976, restructuring costs and an increase in Test bad debt expense. Excluding the impact of currency translation, the PCB acquisition, China investigation expenses and restructuring costs, general and administrative expenses increased 6.0%.

Research and Development Expense

	Three Months Ended		Increased / (Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
Research and development	$ 8,681	$ 5,294	$ 3,387	64.0%
% of Revenue	*4.4%*	*3.8%*		

Research and development (R&D) expense for the three months ended December 31, 2016 increased by 64.0% primarily due to the acquisition of PCB, restructuring costs and additional focused spending to meet certain market needs. Excluding the impact of currency translation, the PCB acquisition and restructuring costs, R&D expense increased 20.6%.

Income from Operations

	Three Months Ended		Increased / (Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
Income from operations	$ 10,290	$ 13,601	$ (3,311)	(24.3)%
% of Revenue	*5.2%*	*9.7%*		

Income from operations for the three months ended December 31, 2016 declined 24.3% primarily due to higher gross profit being more than offset by higher operating expenses which included acquisition and restructuring costs and $1,976 of expenses related to the China investigation. Excluding the impact of currency translation, the PCB acquisition, China investigation expenses and restructuring costs, income from operations increased 0.3%.

Interest Income (Expense), Net

	Three Months Ended		Increased / (Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
Interest income (expense), net	$ (7,280)	$ (201)	$ (7,079)	(3,521.9)%

Interest expense, net for the three months ended December 31, 2016 increased due to interest incurred related to our new tranche B term loan facility and TEUs. Interest expense for the three months ended December 31, 2016 included $5,910 related to the tranche B term loan, $1,015 from amortization of capitalized debt issuance costs and $435 related to the TEUs.

Other Income (Expense), Net

	Three Months Ended		Increased / (Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
Other income (expense), net	$ (829)	$ (310)	$ (519)	(167.4)%

The decline in other income (expense), net for the three months ended December 31, 2016 was primarily driven by an increase in the losses on foreign currency transactions.

Provision for Income Taxes

	Three Months Ended		Increased / (Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
Provision for income taxes	$ 476	$ 1,316	$ (840)	(63.8)%
Effective Rate	*21.8%*	*10.1%*		

The provision for income taxes declined during the three months ended December 31, 2016 primarily due to a decrease in income from operations.

The effective tax rate was higher during the three months ended December 31, 2016 primarily due to a discrete benefit of $2,283 recognized during the three months ended January 2, 2016 related to the enactment of legislation on December 18, 2015 that made the R&D tax credit permanent.

Net Income

(in thousands, except per share data)	Three Months Ended December 31, 2016	Three Months Ended January 2, 2016	Increased / (Decreased) $	Increased / (Decreased) %
Net Income	$ 1,705	$ 11,774	$ (10,069)	(85.5)%
Diluted earnings per share	*$ 0.09*	*$ 0.78*	$ (0.69)	(88.5)%

Net income for the three months ended December 31, 2016 declined due to higher gross profit being more than offset by higher operating expenses and increased interest expense. The decline in diluted EPS was driven by acquisition and restructuring costs, the issuance of common stock and TEUs in the third quarter of fiscal year 2016 and China investigation expenses.

Segment Results

Test Segment

Results of Operations

The following table compares results of operations for Test, separately identifying the estimated impact of currency translation.

(in thousands)	Three Months Ended December 31, 2016	Estimated Business Change	Estimated Currency Translation	January 2, 2016
Revenue	$ 131,126	$ 12,527	$ (211)	$ 118,810
Cost of sales	84,292	6,598	(97)	77,791
Gross profit	46,834	5,929	(114)	41,019
Gross margin	*35.7%*			*34.5%*
Operating expenses				
Selling and marketing	17,070	645	2	16,423
General and administrative	12,937	2,828	(177)	10,286
Research and development	5,111	1,191	(3)	3,923
Total operating expenses	35,118	4,664	(178)	30,632
Income from operations	$ 11,716	$ 1,265	$ 64	$ 10,387

Revenue

(in thousands)	Three Months Ended December 31, 2016	Three Months Ended January 2, 2016	Increased / (Decreased) $	Increased / (Decreased) %
Revenue	$ 131,126	$ 118,810	$ 12,316	10.4%

Revenue for the three months ended December 31, 2016 increased by 10.4% primarily due to a focus on project execution, backlog conversion and increased production of less customized products. Excluding the impact of currency translation, revenue increased 10.5% as the revenue decline in the Europe region was more than offset by the improvement in the Americas and Asia regions.

Gross Profit

(in thousands)	Three Months Ended December 31, 2016	Three Months Ended January 2, 2016	Increased / (Decreased) $	Increased / (Decreased) %
Gross profit	$ 46,834	$ 41,019	$ 5,815	14.2%
Gross margin	*35.7%*	*34.5%*	1.2 ppts	

Gross profit for the three months ended December 31, 2016 increased by 14.2% primarily due to higher revenue. The gross margin rate increased 1.2 percentage points compared to the same period in the prior year, primarily due to leverage on increased volumes in less customized products, partially offset by pricing pressure.

Selling and Marketing Expense

(in thousands)	Three Months Ended December 31, 2016	Three Months Ended January 2, 2016	Increased / (Decreased) $	Increased / (Decreased) %
Selling and marketing	$ 17,070	$ 16,423	$ 647	3.9%
% of Revenue	*13.0%*	*13.8%*		

Selling and marketing expense for the three months ended December 31, 2016 increased by 3.9% primarily due to higher commission expense from increased revenue and investments in service.

General and Administrative Expense

(in thousands)	Three Months Ended December 31, 2016	Three Months Ended January 2, 2016	Increased / (Decreased) $	Increased / (Decreased) %
General and administrative	$ 12,937	$ 10,286	$ 2,651	25.8%
% of Revenue	*9.9%*	*8.7%*		

General and administrative expense for the three months ended December 31, 2016 increased by 25.8% primarily due to expenses related to the China investigation of $1,976 and increased bad debt expense. Excluding the impact of currency translation and China investigation expenses, general and administrative expense increased 8.3%.

Research and Development Expense

(in thousands)	Three Months Ended December 31, 2016	Three Months Ended January 2, 2016	Increased / (Decreased) $	Increased / (Decreased) %
Research and development	$ 5,111	$ 3,923	$ 1,188	30.3%
% of Revenue	*3.9%*	*3.3%*		

Research and development (R&D) expense for the three months ended December 31, 2016 increased 30.3% primarily due to additional focused spending to meet certain market needs.

Income from Operations

	Three Months Ended		Increased / (Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
Income from operations	$ 11,716	$ 10,387	$ 1,329	12.8%
% of Revenue	*8.9%*	*8.7%*		

Income from operations for the three months ended December 31, 2016 increased by 12.8% as the increase in gross profit from higher revenue on higher margin products was partially offset by higher operating expenses which included $1,976 of expenses related to the China investigation.

Sensors Segment

Results of Operations

The following table compares results of operations for Sensors, separately identifying the estimated impact of currency translation, the acquisition of PCB completed in fiscal year 2016 and restructuring expense incurred in fiscal year 2017.

	Three Months Ended				
		Estimated			
(in thousands)	December 31, 2016	Business Change	Acquisition / Restructuring [1]	Currency Translation	January 2, 2016
Revenue	$ 68,153	$ 848	45,231	$ 383	$ 21,691
Cost of sales	41,523	689	30,448	187	10,199
Gross profit	26,630	159	14,783	196	11,492
Gross margin	*39.1%*				*53.0%*
Operating expenses					
Selling and marketing	13,400	(427)	9,482	114	4,231
General and administrative	11,086	(74)	8,449	35	2,676
Research and development	3,570	(98)	2,300	(3)	1,371
Total operating expenses	28,056	(599)	20,231	146	8,278
Income (loss) from operations	$ (1,426)	$ 758	(5,448)	$ 50	$ 3,214

[1] The Acquisition / Restructuring column includes revenues and costs from the acquisition of PCB, costs incurred as part of the integration of PCB and restructuring costs.

Revenue

	Three Months Ended		Increased /(Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
Revenue	$ 68,153	$ 21,691	$ 46,462	214.2%

Revenue increased by 214.2% during the three months ended December 31, 2016, primarily due to increased revenue from sales as a result of the acquisition of PCB. Excluding the impact of currency translation and the impact of the PCB acquisition, Sensors revenue was up 3.9% due to increased sales in all regions.

Gross Profit

	Three Months Ended		Increased / (Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
Gross profit	$ 26,630	$ 11,492	$ 15,138	131.7%
Gross margin	*39.1%*	*53.0%*	*(13.9)*	ppts

Gross profit increased by 131.7% during the three months ended December 31, 2016 primarily due to increased sales volume as a result of the PCB acquisition. The gross margin rate declined 13.9 percentage points, primarily due to a $7,724 fair value adjustment on the acquired inventory related to the acquisition of PCB and restructuring costs of $326. Excluding the impact of currency translation, acquisition and restructuring costs, the gross margin rate declined 1.3 percentage points due to additional labor costs incurred from the movement of production in Machida, Japan to the United States due to the closing of the Machida facility.

Selling and Marketing Expense

	Three Months Ended		Increased / (Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
Selling and marketing	$ 13,400	$ 4,231	$ 9,169	216.7%
% of Revenue	*19.7%*	*19.5%*		

The increase of 216.7% in selling and marketing expense for the three months ended December 31, 2016 was primarily driven by expenses from the PCB acquisition and restructuring costs, partially offset by a decrease in compensation expense associated with open headcount positions. Excluding the impact of currency translation, acquisition and restructuring costs, selling and marketing expense declined 10.1%.

General and Administrative Expense

	Three Months Ended		Increased / (Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
General and administrative	$ 11,086	$ 2,676	$ 8,410	314.3%
% of Revenue	*16.3%*	*12.3%*		

General and administrative expense for the three months ended December 31, 2016 increased by 314.3% primarily driven by expenses from the PCB acquisition and restructuring costs. Excluding the impact of currency translation, acquisition and restructuring costs, general and administrative expense decreased 2.8% due to a decrease in compensation expense associated with open headcount positions.

Research and Development Expense

	Three Months Ended		Increased / (Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
Research and development	$ 3,570	$ 1,371	$ 2,199	160.4%
% of Revenue	*5.2%*	*6.3%*		

R&D expense increased 160.4% for the three months ended December 31, 2016 primarily driven by expenses from the PCB acquisition, partially offset by lower compensation from headcount reductions. Excluding the impact of currency translation, acquisition and restructuring costs, R&D expense decreased 7.1%.

Income (loss) from Operations

	Three Months Ended		Increased / (Decreased)	
(in thousands)	December 31, 2016	January 2, 2016	$	%
Income (loss) from operations	$ (1,426)	$ 3,214	$ (4,640)	(144.4)%
% of Revenue	*(2.1)%*	*14.8%*		

Income from operations declined 144.4% in the three months ended December 31, 2016 primarily due to the $7,724 fair value adjustment on the acquired inventory related to the acquisition of PCB and higher operating expenses which included PCB integration expenses and restructuring costs. Excluding the impact of currency translation, the acquisition of PCB and integration, acquisition and restructuring expenses, income from operations increased 23.6% driven by lower operating expenses in our legacy Sensors business from open headcount positions.

Cash Flow Comparison

Total cash and cash equivalents increased $11,169 for the three months ended December 31, 2016 primarily due to an increase of $29,397 in working capital, consisting primarily of a $15,252 increase in customer advances and a $13,788 increase in cash receipts from accounts and unbilled contracts receivable, $8,392 of depreciation and amortization and a $7,724 fair value adjustment to acquired inventory. The increase was partially offset by $12,586 in accrued payroll and related cost payments, dividend payments of $5,003, investments of $4,654 in property and equipment, a $4,396 decrease due to the effect of exchange rates on the cash balance, a $2,908 increase in prepaid expenses, a $2,080 payment on TEU debt and a $1,150 payment on the Tranche B term loan.

Total cash and cash equivalents increased $7,519 for the three months ended January 2, 2016 primarily driven by $19,758 received through short-term borrowings, $11,774 of net income and $4,945 of depreciation and amortization. The increase was partially offset by purchases of our common stock of $12,356, investment in property and equipment of $6,662 and dividend payments of $4,450.

Cash flows from operating activities provided cash of $28,928 and $10,846 for the three months ended December 31, 2016 and January 2, 2016, respectively.

Cash provided by operating activities for the three months ended December 31, 2016 was primarily generated from $15,252 increased advance payments received from customers, $13,788 increased cash receipts received on accounts and unbilled contract receivables, $8,392 of depreciation and amortization and a $7,724 fair value adjustment to acquired inventory. The cash received was partially offset by $12,586 increased accrued payroll and related cost payments and $2,908 increased payments of prepaid expenses.

Cash provided by operating activities for the three months ended January 2, 2016 was primarily generated from $13,272 increased advanced payments received from customers driven by the strong orders in the three months ended October 3, 2015 and January 2, 2016, $11,774 in net income and $4,945 of depreciation and amortization. The cash received was partially offset by $6,735 in increased accounts and unbilled contracts receivables resulting from general timing of billing and collections, $4,924 in increased inventories to support future revenue, $2,349 in increased payments of prepaid expenses and $2,222 in increased accrued payroll and related cost payments due to timing of payroll.

Cash flows from investing activities used cash of $4,629 and $6,662 for the three months ended December 31, 2016 and January 2, 2016, respectively, primarily for the purchase of property and equipment to support business growth.

Cash flows from financing activities used cash of $8,734 for the three months ended December 31, 2016 and provided cash of $4,219 for the three months ended January 2, 2016.

Cash used by financing activities for the three months ended December 31, 2016 was primarily driven by dividend payments of $5,003, a $2,080 payment on TEU debt and a $1,150 payment on the Tranche B term loan.

Cash provided by financing activities for the three months ended January 2, 2016 was primarily generated from $19,758 of borrowing on our credit facility and $1,199 of proceeds received in connection with stock option exercises and share purchases under our employee stock purchase plan. The cash received was partially offset by the purchase of shares of common stock under our share purchase program and stock-based compensation arrangements for $12,356 and dividend payments of $4,450.

Liquidity and Capital Resources
We had cash and cash equivalents of $95,949 as of December 31, 2016. Of this amount, approximately $33,031 was located in North America, $34,059 in Europe and $28,859 in Asia. Of the $62,918 of cash located outside of North America, approximately $39,996 is not available for use in the U.S. without the incurrence of U.S. federal and state income tax consequences.

The North American balance was primarily invested in bank deposits. In Europe and Asia, the balances were primarily invested in money market funds and bank deposits. In accordance with our investment policy, we place cash equivalent investments with issuers who have high-quality investment credit ratings. In addition, we limit the amount of investment exposure we have with any particular issuer. Our investment objectives are to preserve principal, maintain liquidity and achieve the best available return consistent with our primary objectives of safety and liquidity. At December 31, 2016, we held no short-term investments.

At December 31, 2016, our capital structure was comprised of $13,290 in short-term debt, $468,464 in long-term debt and $398,221 in shareholders' equity. The Consolidated Balance Sheet also includes $19,298 of unamortized debt issuance costs. Total interest-bearing debt at December 31, 2016 was $481,754. On July 5, 2016, we entered into a credit agreement with a consortium of financial institutions (the Credit Agreement). The Credit Agreement provides for senior secured credit facilities consisting of a Revolving Credit Facility and a Term Facility. The maturity date of the Revolving Credit Facility is July 5, 2021 and the maturity date of the loans under the Term Facility is July 5, 2023, unless a term loan lender agrees to extend the maturity date pursuant to a loan modification agreement made in accordance with the terms of the Credit Agreement.

Under the Credit Agreement, we are subject to customary affirmative and negative covenants, including restrictions on our ability to incur debt, create liens, dispose of assets, make investments, loans, advances, guarantees and acquisitions, enter into transactions with affiliates and enter into any restrictive agreements and customary event defaults (including payment defaults, covenant defaults, change of control defaults and bankruptcy defaults). The Credit Agreement also contains financial covenants, including the ratio of consolidated total indebtedness to consolidated earnings before interest, taxes, depreciation and amortization (EBITDA), as well as the ratio of consolidated EBITDA to consolidated interest expense. These covenants restrict our ability to pay dividends and purchase outstanding shares of common stock. At December 31, 2016 and October 1, 2016, we were in compliance with these financial covenants. On January 24, 2017, we received a consent and waiver (the Consent) from each of the lenders under the Credit Agreement that waives any defaults resulting from our failure to timely provide audited financial statements for fiscal year 2016 and unaudited financial statements for the first quarter of fiscal year 2017 on or before the deadlines set forth in the Credit Agreement. See Note 18 to the Consolidated Financial Statements included in Item 1 of Part I of this Quarterly Report on Form 10-Q.

Shareholders' equity decreased by $7,039 during the three months ended December 31, 2016, primarily due to $5,014 in dividends declared, $4,917 in other comprehensive loss and $921 in purchases and retirements of our common stock, partially offset by stock-based compensation of $1,578 and employee stock purchases of $515.

Off-Balance Sheet Arrangements
As of December 31, 2016, we did not have any off-balance sheet arrangements that have, or are reasonably likely to have, a current or future material effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that are material to investors.

Critical Accounting Policies
The Consolidated Financial Statements have been prepared in accordance with U.S. generally accepted accounting principles (U.S. GAAP), which require us to make estimates and assumptions in certain circumstances that affect amounts reported. The preparation of these financial statements requires us to make estimates and assumptions, giving due consideration to materiality, that affect the reported amounts of assets and liabilities, revenues and expenses and related disclosures of any contingent assets and liabilities at the date of the financial statements. We regularly review our estimates and assumptions, which are based on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. For further information, see "Summary of Significant Accounting Policies" under Note 1 to the Consolidated Financial Statements included in Item 8 of our Annual Report on Form 10-K for the fiscal year ended October 1, 2016.

Recently Issued Accounting Pronouncements
Information regarding new accounting pronouncements is included in Note 2 to the Consolidated Financial Statements included in Item 1 of Part I of this Quarterly Report on Form 10-Q.

Other Matters

Dividends

Our dividend policy is to maintain a payout ratio that allows dividends to increase with the long-term growth of earnings per share, while sustaining dividends through economic cycles. Our dividend practice is to target, over time, a payout ratio of approximately 25% of net earnings per share. We have historically paid dividends to holders of our common stock on a quarterly basis. The declaration and payment of future dividends will depend on many factors, including, but not limited to, our earnings, financial condition, business developments needs, maintenance of debt covenants and regulatory consideration and are at the discretion of our Board of Directors.

Forward-Looking Statements

Statements contained in this Quarterly Report on Form 10-Q including, but not limited to, the discussion under Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations, that are not statements of historical fact are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 (the Act). In addition, certain statements in our future filings with the SEC, in press releases, and in oral and written statements made by us or with our approval that are not statements of historical fact constitute forward-looking statements within the meaning of the Act. Examples of forward-looking statements include, but are not limited to: (i) projections of revenue, ROIC, EBITDA, income or loss, earnings or loss per share, the payment or nonpayment of dividends, capital structure, the adequacy of our liquidity and reserves, the continued listing of our shares of common stock on NASDAQ, the anticipated level of expenditures required and other statements concerning future financial performance; (ii) statements of our plans and objectives by our management or Board of Directors, including those relating to products or services, merger or acquisition activity and the potential impact of newly acquired businesses; (iii) statements of assumptions underlying such statements; (iv) statements regarding business relationships with vendors, customers or collaborators or statements relating to our order cancellation history, our ability to convert our backlog of undelivered orders into revenue, the timing of purchases, competitive advantages and growth in end markets; (v) statements relating to the potential business and financial impact that our internal investigation in China may have on our financial condition, results of operations and internal controls; (vi) statements regarding our ability to report additional operating segments in the future; and (vii) statements regarding products, their characteristics, fluctuations in the costs of raw materials for products, our geographic footprint, performance, sales potential or effect in the hands of customers. Words such as "believes," "anticipates," "expects," "intends," "targeted," "should," "potential," "goals," "strategy," and similar expressions are intended to identify forward-looking statements, but are not the exclusive means of identifying such statements.

Forward-looking statements involve risks and uncertainties that may cause actual results to differ materially from those in such statements. Factors that could cause actual results to differ from those discussed in the forward-looking statements include, but are not limited to, those described in Item 1A of Part I of our Annual Report on Form 10-K for the fiscal year ended October 1, 2016. The performance of our business and our securities may be adversely affected by these factors and by other factors common to other businesses and investments, or to the general economy. Forward-looking statements are qualified by some or all of these risk factors. Therefore, you should consider these forward looking statements with caution and form your own critical and independent conclusions about the likely effect of these risk factors on our future performance. Forward-looking statements speak only as of the date on which statements are made, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made to reflect the occurrence of unanticipated events or circumstances. Readers should carefully review the disclosures and the risk factors described in our Annual Report on Form 10-K for the fiscal year ended October 1, 2016 and other documents we file from time to time with the SEC, including our reports on Forms 10-Q and 8-K.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Foreign Currency Exchange Risk

Approximately 75% of our revenue has historically been derived from customers outside of the United States. Our international subsidiaries have functional currencies other than our U.S. dollar reporting currency and, occasionally, transact business in currencies other than their functional currencies. These non-functional currency transactions expose us to market risk on assets, liabilities and cash flows recognized on these transactions.

The strengthening of the U.S. dollar relative to foreign currencies decreases the value of foreign currency-denominated revenue and earnings when translated into U.S. dollars. Conversely, a weakening of the U.S. dollar increases the value of foreign currency-denominated revenue and earnings.

A hypothetical 10% appreciation or depreciation in foreign currencies against the U.S. dollar, assuming all other variables are held constant, would result in an increase or decrease in revenue of approximately $7,005 for the three months ended December 31, 2016.

We have operational procedures to mitigate these non-functional currency exposures. We also utilize foreign currency exchange contracts to exchange currencies at set exchange rates on future dates to offset expected gains or losses on specifically identified exposures.

Mark-to-market gains and losses on derivatives designated as cash flow hedges in our currency hedging program are recorded within accumulated other comprehensive income in the Consolidated Balance Sheets. We recognize gains and losses associated with the fair value of cash flow hedges at the time a gain or loss is recognized on the hedged exposure in the Consolidated Statements of Income or at the time the cash flow hedge is determined to be ineffective. The associated mark-to-market gains and losses are reclassified from accumulated other comprehensive income to the same line item in the Consolidated Statements of Income upon which the underlying hedged transaction is reported. Net gains and losses on foreign currency transactions, included in the accompanying Consolidated Statements of Income, were a net loss of $929 in the three months ended December 31, 2016 and a net loss of $667 in the three months ended January 2, 2016. See Note 7 to the Consolidated Financial Statements included in Item 1 of Part I of this Quarterly Report on Form 10-Q.

Interest Rates

We are also directly exposed to changes in market interest rates on cash, cash equivalents, short-term investments and debt, and are indirectly exposed to the impact of market interest rates on overall business activity.

On floating-rate investments, increases and decreases in market interest rates will increase or decrease future interest income, respectively. On floating-rate debt, increases or decreases in market interest rates will increase or decrease future interest expense, respectively. On fixed-rate investments, increases or decreases in market interest rates do not impact future interest income but may decrease or increase the fair market value of the investments, respectively. On fixed-rate debt, increases or decreases in market interest rates do not impact future interest expense but may decrease or increase the fair market value of the debt, respectively.

As of December 31, 2016, we had cash and cash equivalents of $95,949, most of which was invested in interest-bearing bank deposits or money market funds, with interest rates that are reset every 1 to 89 days. A hypothetical increase or decrease of 1% in market interest rates, assuming all other variables were held constant, would increase or decrease interest income by approximately $24 for the three months ended December 31, 2016.

Secured floating rate credit facilities are used to fund acquisitions and a portion of operations, which require interest payments calculated at a floating rate and, therefore, are impacted by the effect of increases or decreases in market interest rates. We believe that near-term changes in interest rates could have a material effect on our financial statements. A hypothetical increase of one percentage point in floating interest rates, assuming all other variables were held constant, would increase future interest expense by approximately $1,841 on an annualized basis. We have mitigated a portion of this risk by swapping the variable rate for a fixed rate on our term debt. See Note 7 to the Consolidated Financial Statements included in Item 1 of Part I of this Quarterly Report on Form 10-Q.

Item 4. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

Our management, including our Chief Executive Officer and Chief Financial Officer, have conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act) as of December 31, 2016. Our Chief Executive Officer and Chief Financial Officer have concluded that, as a result of our failure to timely file our Annual Report on Form 10-K for the fiscal year ended October 1, 2016 and this Quarterly Report on Form 10-Q for the first quarter of fiscal year 2017 due to our internal investigation of our China operations and the material weakness described in Item 9A of our Annual Report on Form 10-K for the fiscal year ended October 1, 2016, our disclosure controls and procedures were not effective as of December 31, 2016.

For purposes of Rule 13a-15(e) under the Exchange Act, the term disclosure controls and procedures means controls and other procedures of an issuer that are designed to ensure that information required to be disclosed by the issuer in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Exchange Act is accumulated and communicated to the issuer's management, including its Chief Executive Officer and Chief Financial Officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

We acquired PCB on July 5, 2016, and management excluded PCB from its assessment of internal control over financial reporting as of October 1, 2016 and our evaluation of disclosure controls and procedures as of December 31, 2016. PCB represented $690,421 of our consolidated total assets at December 31, 2016 and $45,231 of our consolidated revenue for the period ended December 31, 2016.

(b) Remediation of Material Weakness in Internal Control over Financial Reporting

We are committed to remediating the control deficiencies that gave rise to the material weakness described in Item 9A of our Annual Report on Form 10-K for the fiscal year ended October 1, 2016 by implementing changes to our compliance program and monitoring to support adherence to our Code of Conduct and in turn impact our internal controls over financial reporting. Management is responsible for implementing changes and improvements in our internal control over financial reporting and for remediating the control deficiencies that gave rise to the material weakness.

To remediate the material weakness in our internal control over financial reporting described in Item 9A of our Annual Report on Form 10-K for the fiscal year ended October 1, 2016, we will conduct more robust monitoring of compliance to ensure adherence to the Code of Conduct. Additionally, through our investigation as further discussed in Part II, Item 1 of this Quarterly Report on Form 10-Q, we have identified opportunities to enhance our processes and controls to further address the challenges presented by the China operating environment. To address these challenges, the Company is prepared to assess the mix of products, markets in which it competes and manner by which it selects and utilizes resellers, agents, consultants and vendors as well as enhance ongoing compliance monitoring to support these commitments to reduce the potential for override of internal controls over financial reporting.

(c) Changes in Internal Control over Financial Reporting

Other than the actions described under "Remediation of Material Weakness in Internal Control over Financial Reporting," there were no other changes in the Company's internal control over financial reporting during the first quarter of fiscal year 2017 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting. We continue to implement the remediation plan outlined above to remediate the material weakness identified as part of our annual controls assessment disclosed in Item 9A of our Annual Report on Form 10-K for the fiscal year ended October 1, 2016.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

Internal Investigation Related to China Operations
As previously reported by us, in November 2016, after the end of fiscal year 2016, we initiated an internal investigation into apparent violations of our Code of Conduct involving certain employees in our China operations, including association by those employees with an independent business that may compete with us in certain markets. As the apparent violations implicated members of leadership in our China operations, the Audit Committee engaged independent external counsel to conduct an investigation of our China operations in order to assess the impact of these apparent violations on the Company's financial input from China and to review for potential violations the Company's Code of Conduct, anticorruption compliance policies and procedures and related U.S. law. Independent forensic accountants, acting at the direction of external counsel, performed testing of certain transactions related to our China operations as part of this investigation.

As of March 2017, substantial investigative work was completed. The investigation through March 2017 confirmed that the former China Test leader and several other former senior managers associated with our China Test operations violated the conflict of interest provisions of the MTS Code of Conduct in connection with their involvement with an independent business that competed with the Company’s low-end products in the China market. This inconsistent adherence to the Company's Code of Conduct could have resulted in management override of internal control over financial reporting.

In light of, and to address the findings of the investigation, and to remediate the material weakness in our internal control over financial reporting resulting from the conclusion described in the prior paragraph, we will conduct more robust monitoring to ensure adherence to our Code of Conduct. Additionally, we have identified opportunities to meaningfully enhance our processes and controls related to the adherence with our compliance policies and procedures, and we will be particularly focused on enhancing our third-party intermediary diligence, engagement and monitoring processes, with the support of and guidance from external resources, and continued clear and consistent messaging on compliance expectations at all levels of the organization.

To address the challenges presented by the findings of the investigation of our China operations, we are exploring multiple business alternatives to address the low-end materials market. The consideration of these alternatives could result in a future expectation of sale or disposal of certain assets that could cause an impairment charge to be recognized in a subsequent period. The assets subject to this potential future impairment assessment include tangible assets of approximately $5,000 and intangible assets up to approximately $22,000. We are prepared to assess the mix of products, markets in which we compete and manner by which we select and utilize resellers, agents, consultants and vendors to support these commitments. We have begun implementing measures to strengthen our compliance program and monitoring to ensure adherence to our Code of Conduct.

Government Investigation
As previously reported by us with disclosures starting in March 2012, we investigated certain gift, travel, entertainment and other expenses incurred in connection with some of our operations in the Asia Pacific region. This investigation focused on possible violations of Company policy, corresponding internal control issues and possible violations of applicable law, including the Foreign Corrupt Practices Act. Substantial investigative work was completed on this matter and we implemented remedial measures, including changes to internal control procedures and removing certain persons formerly employed in our Korea office. We voluntarily disclosed this matter to the Department of Justice and the SEC (the Agencies). We also investigated certain business practices in China, starting in 2014 and that investigation had a similar focus to the 2012 investigation described above. We have also updated the Agencies regarding the China investigation described in the *Internal Investigation Related to China Operations* above and intend to continue cooperating with the Agencies. We cannot predict the outcome of the Agencies' review of the matters described in this paragraph at this time or whether these matters will have a material adverse impact on our business prospects, financial condition, operating results or cash flows.

Litigation
We are subject to various claims, legal actions and complaints arising in the ordinary course of business. We believe the final resolution of legal matters outstanding as of December 31, 2016 will not have a material adverse effect on our consolidated financial position or results of operations. We expense legal costs as incurred.

Item 1A. Risk Factors

A discussion of our risk factors can be found in Item 1A of Part I of our Annual Report on Form 10-K for the fiscal year ended October 1, 2016. The risks described in our Annual Report on Form 10-K are not the only risks we face. Additional risks not currently known to us, or that we currently deem to be immaterial, may also adversely affect our business, financial condition or results of operations in future periods.

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

The following table presents repurchases of our equity securities we made during the fiscal quarter ended December 31, 2016.

	Total Number of Shares Purchased		Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet be Purchased Under the Plans or Programs
October 2, 2016 - November 5, 2016	—	$	—	—	437,638
November 6, 2016 - December 3, 2016	—	$	—	—	437,638
December 4, 2016 - December 31, 2016	—	$	—	—	437,638
Total	—	$	—	—	

We made no purchases within the first quarter of fiscal year 2017. However, we purchase common stock from time-to-time to mitigate dilution related to new shares issued as employee equity compensation such as stock options, restricted stock, restricted stock units and employee stock purchase plan awards, as well as to return to shareholders capital not immediately required to fund ongoing operations.

Our Board of Directors approved, and on February 11, 2011 announced, a 2,000,000 share purchase authorization. Authority over pricing and timing under the authorization has been delegated to management. The share purchase authorization has no expiration date. At December 31, 2016, there were 437,638 shares available for purchase under the existing authorization.

Item 5. Other Information

Our Board of Directors has determined that we will hold our virtual annual meeting of shareholders for fiscal year 2017 (the 2017 Annual Meeting) on June 6, 2017, at 9:00 a.m. Central Standard Time.

We previously postponed our 2017 Annual Meeting as a result of our internal investigation into apparent violations of the Company's Code of Conduct involving certain employees in our China operations. As a result, we are informing shareholders of a change in the timing for the receipt of shareholder proposals and director nominations for the 2017 Annual Meeting from the deadlines previously disclosed in our proxy materials for the annual meeting of shareholders for fiscal year 2016.

Because the date of the 2017 Annual Meeting has changed by more than 30 days from the date of the previous annual meeting of shareholders, a new deadline has been established for submission of shareholder proposals intended to be included in our proxy materials for the 2017 Annual Meeting. In accordance with the rules of the Securities and Exchange Commission (SEC), if a shareholder desires for the Company to include a proposal in our proxy statement and form of proxy for presentation at the 2017 Annual Meeting, the proposal must be received by us at our principal executive offices no later than 5:00 p.m., Central Standard Time on April 14, 2017, which we have determined to be a reasonable time before we begin to print and mail our proxy materials. The proposal must include proof of ownership of our stock and satisfy the other requirements of Rule 14a-8 promulgated under the Securities Exchange Act of 1934, as amended.

Our bylaws provide certain procedures that a shareholder must follow to nominate persons for election as directors or to introduce an item of business at an annual meeting of shareholders other than for inclusion in our proxy statement in compliance with Rule 14a-8. Because the 2017 Annual Meeting will be held more than 60 days after the first anniversary of the date of the preceding year’s annual meeting of shareholders, we must receive the notice of a shareholder’s intention to introduce a nomination or to propose an item of business at the 2017 Annual Meeting at our principal executive offices no later than 5:00 p.m., Central Standard Time on April 20, 2017. Our bylaws set out specific requirements that such shareholders and written notices must satisfy. Copies of those requirements will be forwarded to any shareholder upon written request to the secretary of the Company.

Item 6. Exhibits

Exhibit Number	Description
10.1	Letter Agreement, dated August 24, 2016, by and between the Company and William C. Becker, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 5, 2017.
10.2	Letter Agreement, dated December 30, 2016, by and between the Company and Steven B. Harrison, incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on January 5, 2017.
31.1	Certification of the Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
31.2	Certification of the Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
32.1	Certification of the Chief Executive Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith).
32.2	Certification of the Chief Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith).
101.INS*	XBRL Instance Document (filed herewith).
101.SCH*	XBRL Taxonomy Extension Schema Document (filed herewith).
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document (filed herewith).
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document (filed herewith).
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document (filed herewith).
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document (filed herewith).
*	XBRL (Extensible Business Reporting Language) information is furnished and not filed or a part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, as amended, is deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and otherwise is not subject to liability under these sections.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

		MTS SYSTEMS CORPORATION
Date:	April 10, 2017	/s/ JEFFREY A. GRAVES
		Jeffrey A. Graves President and Chief Executive Officer (Principal Executive Officer)
Date:	April 10, 2017	/s/ JEFFREY P. OLDENKAMP
		Jeffrey P. Oldenkamp Senior Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)

Exhibit 31.1

SARBANES-OXLEY SECTION 302 CERTIFICATION

I, Jeffrey A. Graves, certify that:

1. I have reviewed this quarterly report on Form 10-Q of MTS Systems Corporation;

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: April 10, 2017

/s/ JEFFREY A. GRAVES

Jeffrey A. Graves

President and Chief Executive Officer

Exhibit 31.2

SARBANES-OXLEY SECTION 302 CERTIFICATION

I, Jeffrey P. Oldenkamp, certify that:

1. I have reviewed this quarterly report on Form 10-Q of MTS Systems Corporation;

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: April 10, 2017

/s/ JEFFREY P. OLDENKAMP

Jeffrey P. Oldenkamp
Senior Vice President and Chief Financial Officer

Exhibit 32.1

MTS SYSTEMS CORPORATION
CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002 (18 U.S.C. 1350)

The undersigned, Jeffrey A. Graves, the Chief Executive Officer of MTS Systems Corporation (the "Company"), has executed this Certification in connection with the filing with the Securities and Exchange Commission of the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended December 31, 2016 (the "Report").

The undersigned hereby certifies that:

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.

Date: April 10, 2017	/s/ JEFFREY A. GRAVES
	Jeffrey A. Graves
	President and Chief Executive Officer

This certification accompanies the Report pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not be deemed "filed" by the Company for purposes of Section 18 of the Securities and Exchange Act of 1934, as amended.

Exhibit 32.2

MTS SYSTEMS CORPORATION
CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002 (18 U.S.C. 1350)

The undersigned, Jeffrey P. Oldenkamp, the Chief Financial Officer of MTS Systems Corporation (the "Company"), has executed this Certification in connection with the filing with the Securities and Exchange Commission of the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended December 31, 2016 (the "Report").

The undersigned hereby certifies that:

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.

Date: April 10, 2017

/s/ JEFFREY P. OLDENKAMP
Jeffrey P. Oldenkamp
Senior Vice President and Chief Financial Officer

This certification accompanies the Report pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not be deemed "filed" by the Company for purposes of Section 18 of the Securities and Exchange Act of 1934, as amended.