

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 July 1, 2017

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

(State or other jurisdiction
of incorporation or organization)

41-0908057

(I.R.S. Employer Identification No.)

**14000 Technology Drive
Eden Prairie, Minnesota**

(Address of principal executive offices)

55344

(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, smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if smaller reporting company)

Emerging growth company

If an emerging growth company, indicated by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

As of August 3, 2017, there were 16,955,631 shares of Common Stock outstanding.

MTS Systems Corporation
Quarterly Report on Form 10-Q
For the Three Months Ended July 1, 2017

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PART I – FINANCIAL INFORMATION**Item 1. Financial Statements****MTS SYSTEMS CORPORATION****Consolidated Balance Sheets**

(in thousands, except per share data)

	July 1, 2017	October 1, 2016
	(Unaudited)	(Note)
Assets		
Current assets		
Cash and cash equivalents	\$ 101,620	\$ 84,780
Accounts receivable, net of allowance for doubtful accounts of \$4,923 and \$3,923, respectively	106,473	133,500
Unbilled accounts receivable	83,865	76,626
Inventories, net	129,447	132,566
Prepaid expenses and other current assets	23,341	12,793
Total current assets	444,746	440,265
Property and equipment, net	101,083	100,789
Goodwill	369,399	369,700
Intangible assets, net	257,794	266,789
Other long-term assets	4,338	5,061
Deferred income taxes	4,285	5,416
Total assets	\$ 1,181,645	\$ 1,188,020
Liabilities and Shareholders' Equity		
Current liabilities		
Current maturities of long-term debt, net	\$ 19,523	\$ 9,850
Accounts payable	44,546	46,383
Accrued payroll and related costs	39,330	45,505
Advance payments from customers	78,488	72,728
Accrued warranty costs	5,495	5,718
Accrued income taxes	3,054	3,445
Accrued dividends	5,048	4,942
Other accrued liabilities	20,305	27,550
Total current liabilities	215,789	216,121
Long-term debt, less current maturities, net	440,400	455,001
Deferred income taxes	80,522	86,020
Non-current accrued income taxes	6,475	6,232
Defined benefit pension plan obligation	13,533	13,744
Other long-term liabilities	5,490	5,642
Total liabilities	762,209	782,760
Shareholders' Equity		
Common stock, \$0.25 par value; 64,000 shares authorized: 16,832 and 16,660 shares issued and outstanding as of July 1, 2017 and October 1, 2016, respectively	4,208	4,165
Additional paid-in capital	162,344	154,879
Retained earnings	261,021	256,589
Accumulated other comprehensive income (loss)	(8,137)	(10,373)
Total shareholders' equity	419,436	405,260
Total liabilities and shareholders' equity	\$ 1,181,645	\$ 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 (Unaudited) 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		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Revenue				
Product	\$ 167,592	\$ 137,549	\$ 514,987	\$ 373,415
Service	26,172	20,151	71,480	61,884
Total Revenue	193,764	157,700	586,467	435,299
Cost of Sales				
Product	101,629	88,272	316,012	242,051
Service	16,579	11,315	42,579	37,480
Total Cost of Sales	118,208	99,587	358,591	279,531
Gross Profit	75,556	58,113	227,876	155,768
Operating Expenses				
Selling and marketing	31,857	23,300	92,954	64,956
General and administrative	18,726	18,926	66,305	45,907
Research and development	8,356	6,198	26,298	17,244
Total Operating Expenses	58,939	48,424	185,557	128,107
Income From Operations	16,617	9,689	42,319	27,661
Interest expense, net	(7,711)	(375)	(22,409)	(833)
Other income (expense), net	(923)	668	(1,086)	465
Income Before Income Taxes	7,983	9,982	18,824	27,293
Income tax provision (benefit)	(2,627)	2,832	(690)	5,371
Net Income	\$ 10,610	\$ 7,150	\$ 19,514	\$ 21,922
Earnings Per Share				
<i>Basic</i>				
Earnings per share	\$ 0.56	\$ 0.46	\$ 1.03	\$ 1.46
Weighted average common shares outstanding	19,052	15,514	19,012	15,044
<i>Diluted</i>				
Earnings per share	\$ 0.55	\$ 0.46	\$ 1.02	\$ 1.45
Weighted average common shares outstanding	19,138	15,660	19,108	15,169
Dividends declared per share	\$ 0.30	\$ 0.30	\$ 0.90	\$ 0.90

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

[Table of Contents](#)**MTS SYSTEMS CORPORATION****Consolidated Statements of Comprehensive Income (Unaudited)**

(in thousands)

	Three Months Ended		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Net income	\$ 10,610	\$ 7,150	\$ 19,514	\$ 21,922
Other comprehensive income (loss), net of tax				
Foreign currency translation gain (loss) adjustments	5,811	(2,163)	(794)	(1,295)
Derivative instruments				
Unrealized net gain (loss)	(781)	(91)	2,360	(680)
Net (gain) loss reclassified to earnings	153	142	(53)	131
Defined benefit pension plan				
Unrealized net gain (loss)	42	47	368	(75)
Net (gain) loss reclassified to earnings	174	103	511	305
Currency exchange rate gain (loss)	(663)	187	(156)	67
Other comprehensive income (loss)	4,736	(1,775)	2,236	(1,547)
Comprehensive income	\$ 15,346	\$ 5,375	\$ 21,750	\$ 20,375

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

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MTS SYSTEMS CORPORATION
Consolidated Statements of Cash Flows (Unaudited)
(in thousands)

	Nine Months Ended	
	July 1, 2017	July 2, 2016
Cash Flows from Operating Activities		
Net income	\$ 19,514	\$ 21,922
Adjustments to reconcile net income to net cash provided by (used in) operating activities		
Stock-based compensation	3,925	5,177
Excess tax benefits from stock-based compensation	(202)	(187)
Fair value adjustment to acquired inventory	7,975	—
Net periodic pension benefit cost	1,298	851
Depreciation and amortization	25,430	14,427
Amortization of debt issuance costs	2,698	141
Deferred income taxes	(4,399)	872
Bad debt provision (recovery), net	1,345	334
Changes in operating assets and liabilities		
Accounts and unbilled contracts receivable	16,992	(7,853)
Inventories	(5,134)	(6,938)
Prepaid expenses	(2,071)	(2,745)
Accounts payable	(452)	4,759
Accrued payroll and related costs	(5,204)	2,798
Advance payments from customers	5,689	23,578
Accrued warranty costs	(232)	159
Other assets and liabilities	(14,763)	(11,555)
Net Cash Provided by (Used in) Operating Activities	52,409	45,740
Cash Flows from Investing Activities		
Purchases of property and equipment	(13,239)	(16,194)
Proceeds from sale of property and equipment	45	1,514
Purchases of business, net of acquired cash	(1,000)	—
(Increase) decrease in restricted cash	—	(43,500)
Net Cash Provided by (Used in) Investing Activities	(14,194)	(58,180)
Cash Flows from Financing Activities		
Payment of long-term debt	(3,511)	—
Payment of debt issuance costs for long-term debt	(186)	(423)
Payment of debt component of tangible equity units	(6,351)	—
Payment of debt issuance costs for revolving credit facility	(49)	(110)
Proceeds from issuance of common stock, net of issuance costs	—	74,738
Proceeds from issuance of equity component of tangible equity units, net of issuance costs	—	84,824
Payment for capped call transaction	—	(7,935)
Proceeds from issuance of debt component of tangible equity units	—	27,386
Payment of debt issuance costs for debt component of tangible equity units	—	(872)
Receipts under short-term borrowings	—	20,000
Payments under short-term borrowings	—	(41,343)
Excess tax benefits from stock-based compensation	202	187
Cash dividends	(14,976)	(8,935)
Proceeds from exercise of stock options and employee stock purchase plan	5,580	3,796
Payments to purchase and retire common stock	(1,652)	(18,396)
Net Cash Provided by (Used in) Financing Activities	(20,943)	132,917
Effect of Exchange Rate Changes on Cash and Cash Equivalents	(432)	468
Cash and Cash Equivalents		
Increase (decrease) during the period	16,840	120,945
Balance, beginning of period	84,780	51,768
Balance, end of period	\$ 101,620	\$ 172,713

Supplemental Disclosures of Cash Flows

Cash paid during the period for

Interest, net	\$	21,917	\$	658
Income taxes, net		10,538		11,391
Non-cash investing and financing activities				
Property and equipment acquired under capital lease		2,452		—
Dividends declared not yet paid recorded in accrued dividends		5,048		4,935
Common stock issuance costs not yet paid recorded in accounts payable and other accrued liabilities		—		437
Issuance costs on equity component of tangible equity units not yet paid recorded in accounts payable and other accrued liabilities		—		313
Debt issuance costs net yet paid recorded in accounts payable and other accrued liabilities		—		486

The accompanying Notes to Consolidated Financial Statements (Unaudited) 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.

The terms “we,” “us,” the “Company,” or “our” in this report, unless the context otherwise requires, refer to MTS Systems Corporation and its wholly owned subsidiaries.

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 third fiscal quarter ended July 1, 2017 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 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.

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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 non-refundable considerations received as revenue if the arrangement does not meet the standard's contract criteria. The amendment clarifies that fair value of non-cash 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 and analyzing our sales contracts, policies and practices as compared to the new guidance and are working through implementation steps. We continue to evaluate our procedural and related system requirements related to the provisions of this standard. We intend to update 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 are currently evaluating 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 are 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, with early adoption 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

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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 are currently evaluating 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

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statement. The new guidance requires the service cost component of net periodic benefit cost to be presented in the same income statement line items 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 items that include 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.

In May 2017, the FASB issued ASU 2017-09, *Compensation - Stock Compensation (Topic 718): Scope of Modification Accounting*, which clarifies when changes to the terms or conditions of a share-based payment award must be accounted for as modifications. Modification guidance must be applied if the fair value, vesting conditions or classification of the awards changes. 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 to an award modified on or after the adoption date, 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.

Adopted

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. We adopted ASU No. 2015-12 on a prospective basis for the annual period ending September 30, 2017. The adoption of this standard will 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. 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 the three and nine months ended July 1, 2017, as the standard only applies to measurement period adjustments related to business acquisitions on a prospective basis.

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. We early 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 the three and nine months ended July 1, 2017, as this standard only impacts the measurement of goodwill impairment charges on a prospective basis.

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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)	July 1, 2017	October 1, 2016
Components, assemblies and parts	\$ 86,246	\$ 87,119
Customer projects in various stages of completion	31,419	32,575
Finished goods	11,782	12,872
Total inventories, net	\$ 129,447	\$ 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:

(in thousands)	Three Months Ended		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Beginning balance	\$ 5,240	\$ 4,872	\$ 5,718	\$ 4,695
Warranty claims	(1,208)	(1,609)	(3,051)	(4,290)
Warranty provisions	972	1,281	2,466	4,137
Adjustments to pre-existing warranties	470	312	353	312
Currency translation	21	(2)	9	—
Ending balance	\$ 5,495	\$ 4,854	\$ 5,495	\$ 4,854

NOTE 5 CAPITAL ASSETS

Property and Equipment

Property and equipment are as follows:

(in thousands)	July 1, 2017	October 1, 2016
Land and improvements	\$ 2,866	\$ 2,865
Buildings and improvements	59,764	59,350
Machinery and equipment	197,715	189,406
Assets held under capital leases	2,452	—
Total property and equipment, gross	262,797	251,621
Less: Accumulated depreciation	(161,714)	(150,832)
Total property and equipment, net	\$ 101,083	\$ 100,789

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Assets held under capital leases, consisting of machinery and equipment, are recorded at the present value of minimum lease payments and are amortized on a straight-line basis over the estimated life of the asset or the lease term. Amortization of assets held as capital leases is included in depreciation expense in the Consolidated Statements of Income.

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
Adjustment related to finalization of purchase accounting ¹	—	(64)	(64)
Currency translation	(252)	15	(237)
Balance, July 1, 2017	\$ 24,770	\$ 344,629	\$ 369,399

¹ Goodwill from our acquisition of PCB Group, Inc. and its wholly owned subsidiaries (PCB) was finalized in the third quarter of fiscal year 2017. See Note 17 for additional information related to our acquisition of PCB.

Intangible Assets

Intangible assets are as follows:

(in thousands)	July 1, 2017			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value	Weighted Average Useful Life (in Years)
Software development costs	\$ 25,348	\$ (15,607)	\$ 9,741	6.0
Technology and patents	46,500	(8,508)	37,992	14.9
Trademarks and trade names	6,807	(2,305)	4,502	25.5
Customer lists	156,993	(10,856)	146,137	15.8
Land-use rights	2,338	(416)	1,922	26.2
Trade names	57,500	—	57,500	Indefinite
Total intangible assets	\$ 295,486	\$ (37,692)	\$ 257,794	15.0

(in thousands)	October 1, 2016			
	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
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 July 1, 2017 and July 2, 2016 was \$3,656 and \$596, respectively. Amortization expense recognized during the nine months ended July 1, 2017 and July 2, 2016 was \$10,984 and \$1,793, respectively.

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The estimated future amortization expense related to amortizable intangible assets is as follows:

(in thousands)	Amortization Expense	
Remainder of 2017	\$	3,641
2018		13,701
2019		13,576
2020		13,295
2021		13,295
2022		13,112
Thereafter		129,674

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:

(in thousands)	July 1, 2017			
	Level 1	Level 2	Level 3	Total
Assets				
Currency contracts ¹	\$ —	\$ 101	\$ —	\$ 101
Interest rate swaps ²	—	3,491	—	3,491
Total assets	\$ —	\$ 3,592	\$ —	\$ 3,592
Liabilities				
Currency contracts ¹	\$ —	\$ 382	\$ —	\$ 382
Total liabilities	\$ —	\$ 382	\$ —	\$ 382

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(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 indefinite-lived intangible assets are estimated annually in the fourth quarter of each fiscal year for purposes of impairment testing. 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)	July 1, 2017				
	Carrying Value	Fair Value	Level 1	Level 2	Level 3
Debt component of tangible equity units ³	\$ 18,634	\$ 22,514	\$ —	\$ 22,514	\$ —
Tranche B term loan ⁴	456,550	458,239	—	458,239	—
Total debt	\$ 475,184	\$ 480,753	\$ —	\$ 480,753	\$ —

(in thousands)	October 1, 2016				
	Carrying Value	Fair Value	Level 1	Level 2	Level 3
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 8.75% tangible equity units (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)	July 1, 2017	
	Prepaid Expenses and Other Current Assets	Other Accrued Liabilities
Designated hedge derivatives		
Cash flow derivatives	\$ 101	\$ 339
Interest rate swaps	3,491	—
Total designated hedge derivatives	3,592	339
Hedge derivatives not designated		
Balance sheet derivatives	—	43
Total hedge derivatives	\$ 3,592	\$ 382

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

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

(in thousands)	Gross Recognized Amount	Gross Offset Amount	Net Amount Presented	Derivatives Subject to Offset	Cash Collateral Received	Net Amount ¹
July 1, 2017						
Assets	\$ 3,592	\$ —	\$ 3,592	\$ —	\$ —	\$ 3,592
Liabilities	339	—	339	—	—	339
October 1, 2016						
Assets	\$ 149	\$ —	\$ 149	\$ (147)	\$ —	\$ 2
Liabilities	633	—	633	(147)	—	486

¹ Net fair value of foreign exchange cash flow hedge assets and liabilities that could have been reported in the Consolidated Balance Sheets.

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 in 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 in the Consolidated Statements of Income as that is the same line item in which the underlying hedged transaction is reported.

As of July 1, 2017 and October 1, 2016, we had outstanding cash flow hedge currency exchange contracts with gross notional U.S. dollar equivalent amounts of \$31,825 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 \$28,441 and \$24,884 as of July 1, 2017 and October 1, 2016, respectively. As of July 1, 2017, the net market value of the foreign currency exchange contracts was a net liability of \$238, consisting of \$339 in liabilities and \$101 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:

(in thousands)	Three Months Ended		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Beginning unrealized net gain (loss) in AOCI	\$ (115)	\$ (335)	\$ (400)	\$ 608
Net (gain) loss reclassified into revenue (effective portion)	58	223	(679)	205
Net gain (loss) recognized in OCI (effective portion)	(222)	(143)	800	(1,068)
Ending unrealized net gain (loss) in AOCI	\$ (279)	\$ (255)	\$ (279)	\$ (255)

The amount recognized in earnings as a result of the ineffectiveness of cash flow hedges was \$0 and \$7 in the three and nine months ended July 1, 2017, respectively, and less than \$1 in both the three and nine months ended July 2, 2016. As of July 1, 2017 and July 2, 2016, the amount projected to be reclassified from AOCI into earnings in the next twelve months was a net loss of \$279 and \$246, respectively. The maximum remaining maturity of any forward or optional contract as of July 1, 2017 and July 2, 2016 was 1.5 and 1.0 years, respectively.

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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 as of July 1, 2017. 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 one month U.S. LIBOR. The market value of the interest rate swap as of July 1, 2017 was an asset of \$3,491. 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 in 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:

(in thousands)	Three Months Ended		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Beginning unrealized net gain (loss) in AOCI	\$ 4,310	\$ —	\$ —	\$ —
Net (gain) loss reclassified into interest expense (effective portion)	182	—	598	—
Net gain (loss) recognized in OCI (effective portion)	(1,001)	—	2,893	—
Ending unrealized net gain (loss) in AOCI	\$ 3,491	\$ —	\$ 3,491	\$ —

As of July 1, 2017, the amount projected to be reclassified from AOCI into earnings in the next twelve months was a net gain of \$96.

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 in the Consolidated Statements of Income.

As of July 1, 2017 and October 1, 2016, we had outstanding foreign currency balance sheet derivative contracts with gross notional U.S. dollar equivalent amounts of \$25,186 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 July 1, 2017 and October 1, 2016 was \$7,282 and \$1,347, respectively. As of July 1, 2017 and October 1, 2016, the net market value of the foreign exchange balance sheet derivative contracts was a net liability of \$43 and \$78, respectively.

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

(in thousands)	Three Months Ended		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Net gain (loss) recognized in other income (expense), net	\$ (680)	\$ (64)	\$ (691)	\$ (898)

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.

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 ABR plus the Applicable Rate (as defined in the Credit Agreement). The ABR is defined as the greater of (a) the Prime Rate (as defined in the Credit Agreement) in effect on such day,

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(b) the New York Federal Reserve Bank (NYFRB) rate (as defined in the Credit Agreement) in effect on such day plus ½ of 1.00%, or (c) the Adjusted LIBOR (as defined in the Credit Agreement) for a one month interest period in dollars on such day plus 1.00%. The ABR 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 was 3.25% per annum as of July 1, 2017.

Eurocurrency Borrowings made under the Credit Agreement bear interest at a rate per annum equal to the Adjusted LIBOR plus the Applicable Rate. The Adjusted LIBOR is defined as an interest rate per annum equal to (a) the LIBOR 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 LIBOR for Eurocurrency Term Loans will not be less than 0.75% per annum. The Applicable Rate for Eurocurrency Term Loans is 4.25% per annum as of July 1, 2017.

As of July 1, 2017, there were no borrowings against the Revolving Credit Facility and we had outstanding letters of credit drawn from the Revolving Credit Facility totaling \$37,673, leaving \$82,327 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 as of July 1, 2017. During the three and nine months ended July 1, 2017, commitment fees incurred totaled \$106 and \$320, respectively. During the three and nine months ended July 2, 2016, commitment fees incurred on our previous credit facility totaled \$48 and \$170, respectively.

Long-term debt consisted of the following:

(in thousands)	July 1, 2017	October 1, 2016
Long-term debt		
Tranche B term loan, 1.00% amortizing per year, maturing July 5, 2023	\$ 456,550	\$ 460,000
Tangible equity units, 8.75% coupon, maturing July 1, 2019 ¹	18,634	24,985
Capital lease obligations	2,391	—
Total long-term debt	477,575	484,985
Less: Unamortized underwriting discounts, commissions and other expenses	(14,124)	(16,843)
Less: Current maturities of Tranche B term loan debt ²	(13,600)	(4,600)
Less: Current maturities of TEU debt ²	(8,996)	(8,541)
Less: Current maturities of capital lease obligations	(455)	—
Total long-term debt, less current maturities, net	\$ 440,400	\$ 455,001

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

² Current maturities of long-term debt, net of \$19,523 presented on our Consolidated Balance Sheet as of July 1, 2017, consisted of \$13,600 of current maturities of tranche B term loan debt, including 1% annual payments and an estimate of the required annual Excess Cash Flow payment, \$8,996 of current maturities of TEU debt and \$455 of current maturities of capital lease obligations, less \$3,528 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. As of July 1, 2017, the applicable Adjusted LIBOR on the Eurocurrency Term Loan Borrowing was 1.23%, plus the Applicable Rate of 4.25%. The weighted average interest rate on Term Facility debt during the nine months ended July 1, 2017 was 5.10%.

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 Credit Agreement 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.

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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. See Note 7 for additional information on financing arrangements.

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

(in thousands)	Notional Amount
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 adjusted consolidated earnings before income, taxes, depreciation and amortization (Adjusted EBITDA), as defined in the Credit Agreement, as well as the ratio of Adjusted EBITDA to consolidated interest expense. These covenants restrict our ability to pay dividends and purchase outstanding shares of our common stock. As of July 1, 2017 and October 1, 2016, we were in compliance with these financial covenants.

The TEUs had an estimated fair value of \$22,514 and \$28,080 as of July 1, 2017 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 \$458,239 and \$465,465 as of July 1, 2017 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) and 2017 Stock Incentive Plan (the 2017 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 could be issued under the 2011 Plan, bringing the aggregate total to 3,800 shares. In the third quarter of fiscal year 2017, the 2017 Plan was approved by our shareholders. The 2017 Plan provides stock incentive awards in the form of stock options, stock appreciation rights, restricted stock, restricted stock units, performance stock, performance stock units and other stock awards. Awards under the 2017 Plan may be granted to officers, directors, employees and key service providers. Effective upon approval of the 2017 Plan, no new awards may be granted under the 2011 Plan, and carryover activity for forfeitures and cancellations of unvested grants under the 2011 Plan will become available for issuance under the 2017 Plan. In addition to the carryover activity from the 2011 Plan, 1,500 shares are authorized for issuance under the 2017 Plan. As of July 1, 2017, a total of 1,513 shares were available for issuance under the 2017 Plan. Shares will be available for issuance under the 2017 Plan until June 6, 2027.

In fiscal year 2011, our shareholders approved a 2012 Employee Stock Purchase Plan (2012 ESPP) that was effective on January 1, 2012. During the nine months ended July 1, 2017 and July 2, 2016, we issued shares of our common stock to participants under the 2012 ESPP. As of July 1, 2017, a total of 639 shares were available for issuance under the 2012 ESPP. Shares will be available for issuance under the 2012 ESPP until December 31, 2021.

During the nine months ended July 1, 2017, we granted approximately 288 stock options, 118 restricted stock units and 35 performance restricted stock units to directors, officers and employees under the 2011 Plan and the 2017 Plan. During the nine months ended July 2, 2016, we granted approximately 316 stock options, 74 restricted stock units and 21 performance restricted stock units to directors, officers and employees under the 2011 Plan.

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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.

The weighted average per share fair value of the stock options granted during the nine months ended July 1, 2017 and July 2, 2016 was \$8.91 and \$11.71, respectively. The weighted average assumptions used to determine the fair value of these stock options were as follows:

	Nine Months Ended	
	July 1, 2017	July 2, 2016
Expected life (in years)	4.0	4.1
Risk-free interest rate	1.6%	1.5%
Expected volatility	29.2%	26.7%
Dividend yield	2.6%	2.0%

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, Restricted Stock Units and Performance Restricted Stock Units

We award restricted stock units to directors. Restricted stock units vest one year from the date of the grant, provided the director continues to serve on the Board of Directors. The directors are not entitled to cash dividend equivalents on restricted stock units and they do not have voting rights on the unvested shares until they become owners of the shares, unless otherwise approved by the Compensation and Leadership Development Committee of the Board of Directors. 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. 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 nine months ended July 1, 2017 and July 2, 2016 was \$45.00 and \$57.73, 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 Sheets, 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.

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

(in thousands)	Three Months Ended		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Service cost	\$ 356	\$ 246	\$ 1,047	\$ 728
Interest cost	108	153	317	455
Expected return on plan assets	(271)	(259)	(797)	(769)
Net amortization and deferral	249	147	731	437
Net periodic benefit cost	\$ 442	\$ 287	\$ 1,298	\$ 851

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 and nine months ended July 1, 2017 and July 2, 2016 was 5.5%.

NOTE 11 INCOME TAXES

The income tax benefit for the three and nine months ended July 1, 2017 included certain discrete benefits of \$2,801 recognized during the three months ended July 1, 2017 which consisted of additional U.S. tax benefits for prior fiscal years associated with domestic manufacturing, deductible PCB acquisition-related expenses and U.S. R&D tax credit. Excluding the impact of these discrete benefits, the effective tax rate for the three and nine months ended July 1, 2017 declined compared to the prior year periods primarily due to lower income before taxes and a more favorable geographic mix of earnings.

The income tax provision for the three months ended July 2, 2016 included a one-time tax cost of \$577 associated with non-deductible PCB acquisition-related expenses. The income tax provision for the nine months ended July 2, 2016 included a \$2,283 discrete benefit for retroactive reinstatement of the U.S. R&D tax credit as well as a one-time tax cost of \$577 associated with non-deductible PCB acquisition-related expenses.

As of July 1, 2017, the liability for unrecognized tax benefits was \$6,475, of which \$3,700 would favorably affect our effective tax rate, if recognized. As of October 1, 2016, the liability for unrecognized tax benefits was \$6,232, of which \$3,429 would favorably affect our effective tax rate, if recognized. As of July 1, 2017, 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, 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.

[Table of Contents](#)**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.

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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. The 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-based compensation options and grants is determined based on the average market price for the period. For diluted earnings per share, the 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 813 and 733 weighted common shares have been excluded from the diluted weighted average common shares outstanding calculation for the three months ended July 1, 2017 and July 2, 2016, respectively. Stock options to acquire 702 and 657 weighted common shares have been excluded from the diluted weighted average common shares outstanding calculation for the nine months ended July 1, 2017 and July 2, 2016, respectively.

In connection with the pricing of the 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.

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Basic and diluted earnings per share were calculated as follows:

(in thousands, except per share data)	Three Months Ended		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Net income	\$ 10,610	\$ 7,150	\$ 19,514	\$ 21,922
Weighted average common shares outstanding	19,052	15,514	19,012	15,044
Effect of dilutive securities				
Stock-based compensation	86	82	96	104
Tangible equity units	—	64	—	21
Weighted average dilutive common shares outstanding	19,138	15,660	19,108	15,169
Earnings per share				
Basic	\$ 0.56	\$ 0.46	\$ 1.03	\$ 1.46
Diluted	0.55	0.46	1.02	1.45

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:

(in thousands)	Three Months Ended			Nine Months Ended		
	July 1, 2017					
	Pretax	Tax	Net	Pretax	Tax	Net
Foreign currency translation gain (loss) adjustments	\$ 5,811	\$ —	\$ 5,811	\$ (794)	\$ —	\$ (794)
Derivative instruments						
Unrealized net gain (loss)	(1,223)	442	(781)	3,693	(1,333)	2,360
Net (gain) loss reclassified to earnings	240	(87)	153	(81)	28	(53)
Defined benefit pension plan						
Unrealized net gain (loss)	60	(18)	42	527	(159)	368
Net (gain) loss reclassified to earnings	249	(75)	174	731	(220)	511
Currency exchange rate gain (loss)	(663)	—	(663)	(156)	—	(156)
Other comprehensive income (loss)	\$ 4,474	\$ 262	\$ 4,736	\$ 3,920	\$ (1,684)	\$ 2,236

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(in thousands)	Three Months Ended			Nine Months Ended		
	July 2, 2016					
	Pretax	Tax	Net	Pretax	Tax	Net
Foreign currency translation gain (loss) adjustments	\$ (2,163)	\$ —	\$ (2,163)	\$ (1,295)	\$ —	\$ (1,295)
Derivative instruments						
Unrealized net gain (loss)	(143)	52	(91)	(1,068)	388	(680)
Net (gain) loss reclassified to earnings	223	(81)	142	205	(74)	131
Defined benefit pension plan						
Unrealized net gain (loss)	67	(20)	47	(107)	32	(75)
Net (gain) loss reclassified to earnings	147	(44)	103	437	(132)	305
Currency exchange rate gain (loss)	187	—	187	67	—	67
Other comprehensive income (loss)	\$ (1,682)	\$ (93)	\$ (1,775)	\$ (1,761)	\$ 214	\$ (1,547)

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

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017							
	Adjustments				Adjustments			
	Foreign Currency Translation	Unrealized Derivative Instrument	Defined Benefit Pension Plan	Total	Foreign Currency Translation	Unrealized Derivative Instrument	Defined Benefit Pension Plan	Total
Beginning balance	\$ (5,932)	\$ 2,680	\$ (9,621)	\$ (12,873)	\$ 673	\$ (255)	\$ (10,791)	\$ (10,373)
Other comprehensive net gain (loss) reclassifications	5,811	(781)	(621)	4,409	(794)	2,360	212	1,778
Net (gain) loss reclassified to earnings	—	153	174	327	—	(53)	511	458
Other comprehensive income (loss)	5,811	(628)	(447)	4,736	(794)	2,307	723	2,236
Ending balance	\$ (121)	\$ 2,052	\$ (10,068)	\$ (8,137)	\$ (121)	\$ 2,052	\$ (10,068)	\$ (8,137)

(in thousands)	Three Months Ended				Nine Months Ended			
	July 2, 2016							
	Adjustments				Adjustments			
	Foreign Currency Translation	Unrealized Derivative Instrument	Defined Benefit Pension Plan	Total	Foreign Currency Translation	Unrealized Derivative Instrument	Defined Benefit Pension Plan	Total
Beginning balance	\$ 1,873	\$ (214)	\$ (7,008)	\$ (5,349)	\$ 1,005	\$ 386	\$ (6,968)	\$ (5,577)
Other comprehensive net gain (loss) reclassifications	(2,163)	(91)	234	(2,020)	(1,295)	(680)	(8)	(1,983)
Net (gain) loss reclassified to earnings	—	142	103	245	—	131	305	436
Other comprehensive income (loss)	(2,163)	51	337	(1,775)	(1,295)	(549)	297	(1,547)
Ending balance	\$ (290)	\$ (163)	\$ (6,671)	\$ (7,124)	\$ (290)	\$ (163)	\$ (6,671)	\$ (7,124)

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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		Nine Months Ended		Affected Line Item in the Consolidated Statements of Income
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016	
Derivative instruments					
Currency exchange contracts gain (loss)	\$ (58)	\$ (223)	\$ 679	\$ (205)	Revenue
Interest rate swap contracts gain (loss)	(182)	—	(598)	—	Interest expense, net
Income tax benefit (expense)	87	81	(28)	74	Income tax provision (benefit)
Total net gain (loss) on derivative instruments	(153)	(142)	53	(131)	Net income
Defined benefit pension plan					
Actuarial loss	(136)	(80)	(399)	(238)	Cost of sales
Actuarial loss	(70)	(42)	(207)	(124)	Selling and marketing
Actuarial loss	(43)	(25)	(125)	(75)	General and administrative
Total actuarial loss	(249)	(147)	(731)	(437)	Income before income taxes
Income tax benefit	75	44	220	132	Income tax provision (benefit)
Total net loss on pension plan	(174)	(103)	(511)	(305)	Net income
Total net-of-tax reclassifications out of AOCI included in net income	\$ (327)	\$ (245)	\$ (458)	\$ (436)	

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 sensors used for acceleration, position, vibration, motion, pressure and force measurement.

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		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Revenue				
Test	\$ 124,359	\$ 133,512	\$ 379,325	\$ 366,119
Sensors	69,405	24,188	207,142	69,180
Total revenue	\$ 193,764	\$ 157,700	\$ 586,467	\$ 435,299
Income (Loss) from Operations				
Test	\$ 8,709	\$ 10,683	\$ 26,792	\$ 22,785
Sensors	7,908	(994)	15,527	4,876
Total income (loss) from operations	\$ 16,617	\$ 9,689	\$ 42,319	\$ 27,661

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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 our Test segment will result in us having three operating segments once discrete financial information is made available to our Chief Operating Decision Maker. We will continue to report only the Test and Sensors segments until such time. We are currently evaluating the timing of such implementation.

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 in the third quarter of fiscal year 2017. We incurred severance and related pre-tax expense of \$92 and \$1,036 in the three and nine months ended July 1, 2017, respectively. As of July 1, 2017, we have incurred a total of \$1,964 of pre-tax expense, including \$1,444 and \$520 related to severance and facility closure costs, respectively. The remaining severance and facility closing costs are expected to be paid during the first quarter of fiscal year 2018.

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 expenses incurred during the three or nine months ended July 1, 2017. The remaining severance and related costs are expected to be paid during the first quarter of fiscal year 2018.

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 or nine months ended July 1, 2017 or July 2, 2016 related to these restructuring actions.

The following table summarizes the restructuring expenses included in our Consolidated Statements of Income for all restructuring actions.

(in thousands)	Three Months Ended			Nine Months Ended		
	July 1, 2017					
	Test	Sensors	Total	Test	Sensors	Total
Cost of sales	\$ —	\$ 67	\$ 67	\$ —	\$ 647	\$ 647
Selling and marketing	—	10	10	—	136	136
General and administrative	—	15	15	—	253	253
Research and development	—	—	—	—	—	—
Total restructuring expense	\$ —	\$ 92	\$ 92	\$ —	\$ 1,036	\$ 1,036

(in thousands)	Three Months Ended			Nine Months Ended		
	July 2, 2016					
	Test	Sensors	Total	Test	Sensors	Total
Cost of sales	\$ 299	\$ —	\$ 299	\$ 299	\$ —	\$ 299
Selling and marketing	129	98	227	129	98	227
General and administrative	414	292	706	414	292	706
Research and development	5	—	5	5	—	5
Total restructuring expense	\$ 847	\$ 390	\$ 1,237	\$ 847	\$ 390	\$ 1,237

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The following table summarizes the change in our restructuring expense accruals in the Consolidated Balance Sheets for all restructuring actions.

(in thousands)	2016		2014		Total
	Q3 Restructuring	Q4 Restructuring	Restructuring		
Balance, October 1, 2016	\$ 308	\$ 935	\$ 1,053	\$	2,296
Restructuring expense	—	1,036	—		1,036
Payments	(221)	(1,652)	(262)		(2,135)
Other adjustments	—	—	13		13
Currency translation	(8)	(110)	7		(111)
Balance, July 1, 2017	\$ 79	\$ 209	\$ 811	\$	1,099

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

(in thousands)	July 1, 2017	October 1, 2016
Accrued payroll and related costs	\$ 546	\$ 1,066
Other accrued liabilities	98	520
Other long-term liabilities	455	710
Total severance and related costs	\$ 1,099	\$ 2,296

NOTE 17 BUSINESS ACQUISITIONS

On July 5, 2016, we acquired 100% of the outstanding capital stock of PCB for a purchase price of \$581,773 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 and nine months ended July 1, 2017, we included \$41,739 and \$129,197 of revenue and operating income of \$2,479 and \$2,773 from PCB in the Consolidated Statements of Income, respectively. The operating income for the three and nine months ended July 1, 2017 includes \$251 and \$7,975, respectively, of fair value adjustment to the acquired PCB inventory.

The final purchase price for 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	(147)
Cash acquired	(10,551)
Total purchase price, net of cash acquired	\$ 581,773

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

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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 final 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	\$ 21,008
Inventories	57,981
Prepaid expenses and other current assets	2,362
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	351,696
Liabilities	
Accounts payable	(6,786)
Accrued payroll and related costs	(7,137)
Non-current deferred tax liability	(94,141)
Other accrued and long-term liabilities	(5,037)
Total identifiable liabilities assumed	(113,101)
Net identifiable assets acquired	238,595
Goodwill	343,178
Total purchase price consideration, net of cash acquired	\$ 581,773

The fair value measurement was completed as of July 1, 2017. The measurement period adjustments were recorded in fiscal year 2017 and were not material. The impact to the Consolidated Statements of Income for fiscal year 2017 related to income effects that would have been recognized in the prior year if the measurement period adjustments were recorded at acquisition date was not material. The gross amount of the accounts receivable acquired was \$21,726, of which \$718 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 a purchase price in excess of the fair value of identifiable net assets acquired. The 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 the fair value measurement of the assets acquired and liabilities assumed, we allocated \$343,178 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 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

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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 being amortized on a straight-line basis are 15 years for developed technology, 16 years for customer lists, 5 years for leasehold interest and 3 years for finite-lived trademarks and trade names. Trade names having a fair 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 the 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		Nine Months Ended	
	July 2, 2016			
Revenue	\$	201,547	\$	567,531
Net income		2,243		7,471
Earnings per share				
Basic	\$	0.11	\$	0.39
Diluted		0.11		0.39

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 \$251 and \$7,975 in the three and nine months ended July 1, 2017, respectively.
- Includes \$7,656 and \$22,968 of interest expense on outstanding debt entered into as part of funding the acquisition for the three and nine months ended July 2, 2016, respectively.
- Pro forma adjustments tax affected by 20% tax rate for both the three and nine months ended July 2, 2016.
- 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 for both the three and nine months ended July 2, 2016 to reflect the financing of the acquisition of PCB in the form of the issuance of shares of common stock and the minimum shares to be issued for our TEUs at the minimum settlement rate.

Our pro forma third quarter for fiscal year 2016 ended on July 2, 2016, while PCB's second quarter for fiscal year 2016 would have ended on June 30, 2016. The unaudited pro forma financial information for the third quarter of fiscal year 2016 combines our unaudited financial information for the third fiscal quarter ended July 2, 2016 and the unaudited financial information of PCB for the three months ended June 30, 2016. The unaudited pro forma financial information for the nine months ended July 2, 2016 combines our unaudited financial information for the first three fiscal quarters ended January 2, 2016, April 2, 2016 and July 2, 2016, respectively, and the unaudited financial information of PCB for each of the three months ended December 31, 2015, March 31, 2016 and June 30, 2016.

NOTE 18 SUBSEQUENT EVENTS

On July 6, 2017, we entered into a repricing amendment to the Credit Agreement to reduce by 100 basis points the respective Applicable Rate for the Term Facility and the Revolving Credit Facility and make certain reductions to the commitment fee rates for the Revolving Credit Facility. The amendment did not result in any changes to outstanding principal, maturities or covenants. See Note 8 for additional information on financing arrangements.

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 fiscal year 2016.

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.

Debt Repricing

On July 6, 2017, we completed the repricing of our \$456,550 tranche B term loan facility to reduce the applicable rate by 100 basis points. We also repriced our revolving credit facility of up to \$120,000 to reduce the applicable rate by 100 basis points and make certain reductions to the commitment fee rates. Currently, there are no borrowings against the revolving credit facility. See Note 8 and Note 18 to the Consolidated Financial Statements included in Item 1 of Part I of this Quarterly Report on Form 10-Q.

[Table of Contents](#)**Restructuring Initiative**

We completed the closure of our Machida, Japan production facility in the third quarter of fiscal year 2017. We incurred restructuring expense of \$92 and \$1,036 in the three and nine months ended July 1, 2017, respectively, 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.

Terms

The terms “we,” “us,” the “Company,” or “our” in this report, unless the context otherwise requires, refer to MTS Systems Corporation and its wholly owned subsidiaries.

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.

(in thousands)	Three Months Ended				
	July 1, 2017	Estimated			July 2, 2016
		Business Change	Acquisition / Restructuring ¹	Currency Translation	
Revenue	\$ 193,764	\$ (3,564)	41,739	\$ (2,111)	\$ 157,700
Cost of sales	118,208	(1,264)	21,603	(1,718)	99,587
Gross profit	75,556	(2,300)	20,136	(393)	58,113
Gross margin	39.0%				36.9%
Operating expenses					
Selling and marketing	31,857	(1,191)	9,916	(168)	23,300
General and administrative	18,726	(6,010)	5,958	(148)	18,926
Research and development	8,356	(282)	2,452	(12)	6,198
Total operating expenses	58,939	(7,483)	18,326	(328)	48,424
Income from operations	\$ 16,617	\$ 5,183	1,810	\$ (65)	\$ 9,689

(in thousands)	Nine Months Ended					
	July 1, 2017	Estimated			July 2, 2016	
		Business Change	Acquisition / Restructuring ¹	Currency Translation		
Revenue	\$ 586,467	\$ 26,532	\$ 129,197	\$ (4,561)	\$ 435,299	
Cost of sales	358,591	8,627	74,298	(3,865)	279,531	
Gross profit	227,876	17,905	54,899	(696)	155,768	
Gross margin	38.9%				35.8%	
Operating expenses						
Selling and marketing	92,954	(600)	28,964	(366)	64,956	
General and administrative	66,305	945	19,961	(508)	45,907	
Research and development	26,298	1,915	7,192	(53)	17,244	
Total operating expenses	185,557	2,260	56,117	(927)	128,107	
Income from operations	\$ 42,319	\$ 15,645	\$ (1,218)	\$ 231	\$ 27,661	

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

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Revenue	\$ 193,764	\$ 157,700	\$ 36,064	22.9%	\$ 586,467	\$ 435,299	\$ 151,168	34.7%

Revenue for the three months ended July 1, 2017 increased by 22.9% primarily due to the PCB acquisition and higher revenue in our organic Sensors business, partially offset by a decline in revenue in our Test business and the unfavorable impact of currency translation. Test revenue decreased \$9,153, primarily due to lower backlog conversion and the unfavorable impact of currency translation, partially offset by strong growth in service revenue and a continued focus on project execution. Sensors revenue increased \$45,217, primarily driven by the PCB acquisition and growth in organic Sensors revenue.

Revenue for the nine months ended July 1, 2017 increased by 34.7% primarily due to the PCB acquisition and higher revenue in our Test and organic Sensors businesses, partially offset by the unfavorable impact of currency translation. Test revenue increased \$13,206, primarily due to a continued focus on project execution, higher conversion of existing backlog in the first two quarters of fiscal year 2017 relative to the prior year, and growth in service revenue. Sensors revenue increased \$137,962, primarily driven by the PCB acquisition and growth in organic Sensors revenue.

Gross Profit

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Gross profit	\$ 75,556	\$ 58,113	\$ 17,443	30.0%	\$ 227,876	\$ 155,768	\$ 72,108	46.3%
Gross margin	39.0%	36.9%	2.1	ppts	38.9%	35.8%	3.1	ppts

Gross profit for the three months ended July 1, 2017 increased 30.0% primarily due to the gross profit contribution from the PCB acquisition, higher revenue volume in organic Sensors, and a continued focus on Test project execution, partially offset by reduced Test revenue volume and increased Test compensation expenses. Gross margin rate increased 2.1 percentage points primarily due to the gross profit contribution from the PCB acquisition and a positive contribution from Test product mix, partially offset by increased Test compensation expenses and reduced leverage on Test revenue volume. Excluding the impact of currency translation, the PCB acquisition, and restructuring costs, gross profit declined 4.4% and the gross margin rate declined 0.8 percentage points.

Gross profit for the nine months ended July 1, 2017 increased 46.3%. Gross margin rate increased 3.1 percentage points primarily due to gross profit contribution from the PCB acquisition, a continued focus on Test project execution, positive

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contribution from Test product mix, and leverage on higher revenue volume in Test and organic Sensors. These increases were partially offset by a \$7,975 fair value adjustment related to the acquired inventory of PCB, increased Test compensation expenses, and current year Sensors restructuring expenses related to the closure of our Machida, Japan facility. Excluding the impact of currency translation, the PCB acquisition, and restructuring costs, gross profit increased 11.3% and the gross margin rate increased 1.8 percentage points.

Selling and Marketing Expense

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1,	July 2,	Increased / (Decreased)		July 1,	July 2,	Increased / (Decreased)	
	2017	2016	\$	%	2017	2016	\$	%
Selling and marketing	\$ 31,857	\$ 23,300	\$ 8,557	36.7%	\$ 92,954	\$ 64,956	\$ 27,998	43.1%
% of Revenue	16.4%	14.8%			15.8%	14.9%		

Selling and marketing expense for the three months ended July 1, 2017 increased by 36.7% primarily due to the addition of PCB expenses and higher Test compensation expenses, partially offset by reduced Test commission expense, nonrecurring restructuring costs incurred in the prior year, and the favorable impact of currency translation. Excluding the impact of currency translation, PCB expenses, restructuring costs, and China investigation expenses, selling and marketing expense decreased 4.4%.

Selling and marketing expense for the nine months ended July 1, 2017 increased by 43.1% primarily due to the addition of PCB expenses, higher Test compensation expenses, China investigation expenses of \$442, and current-year nonrecurring Sensors restructuring costs of \$136. These increases were partially offset by reduced Test commission expense, the favorable impact of currency translation, and nonrecurring restructuring costs incurred in the prior year. Excluding the impact of currency translation, PCB expenses, restructuring costs, and China investigation expenses, selling and marketing expense decreased 1.3%.

General and Administrative Expense

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1,	July 2,	Increased / (Decreased)		July 1,	July 2,	Increased / (Decreased)	
	2017	2016	\$	%	2017	2016	\$	%
General and administrative	\$ 18,726	\$ 18,926	\$ (200)	(1.1)%	\$ 66,305	\$ 45,907	\$ 20,398	44.4%
% of Revenue	9.7%	12.0%			11.3%	10.5%		

General and administrative expense for the three months ended July 1, 2017 declined by 1.1% primarily due to nonrecurring PCB acquisition-related expenses of \$4,966 and restructuring costs of \$706 both incurred in the prior year, reduced compensation expenses, and the favorable impact of currency translation, partially offset by the addition of PCB expenses and China investigation expenses of \$155. Excluding the impact of currency translation, PCB expenses, restructuring costs, and China investigation expenses, general and administrative expense decreased 3.7%.

General and administrative expense for the nine months ended July 1, 2017 increased by 44.4% primarily due to the addition of PCB expenses, China investigation expenses of \$8,300, increased Test bad debt expense, and current-year nonrecurring restructuring costs of \$253. These increases were partially offset by nonrecurring PCB acquisition-related expenses of \$6,317 and restructuring costs of \$706 both incurred in the prior year, as well as the favorable impact of currency translation. Excluding the impact of currency translation, PCB expenses, restructuring costs, and China investigation expenses, general and administrative expense decreased 0.9%.

Research and Development Expense

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1,	July 2,	Increased / (Decreased)		July 1,	July 2,	Increased / (Decreased)	
	2017	2016	\$	%	2017	2016	\$	%
Research and development	\$ 8,356	\$ 6,198	\$ 2,158	34.8%	\$ 26,298	\$ 17,244	\$ 9,054	52.5%
% of Revenue	4.3%	3.9%			4.5%	4.0%		

Research and development (R&D) expense for the three months ended July 1, 2017 increased by 34.8%, primarily due to the addition of PCB expenses and new product development in organic Sensors, partially offset by a planned reduction of Test

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R&D expense. Excluding the impact of currency translation, PCB expenses, restructuring costs, and China investigation expenses, R&D expense decreased 5.0%.

R&D expense for the nine months ended July 1, 2017 increased by 52.5%, primarily due to the addition of PCB expenses, additional focused R&D spending to meet certain Test market needs, new product development spending in organic Sensors, and China investigation expenses of \$238. Excluding the impact of currency translation, PCB expenses, restructuring costs, and China investigation expenses, R&D expense increased 9.8%.

Income from Operations

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Income from operations	\$ 16,617	\$ 9,689	\$ 6,928	71.5%	\$ 42,319	\$ 27,661	\$ 14,658	53.0%
% of Revenue	8.6%	6.1%			7.2%	6.4%		

Income from operations for the three months ended July 1, 2017 increased by 71.5% primarily due to higher gross profit and reduced operating expenses in organic Sensors, nonrecurring PCB acquisition-related expenses of \$4,966 and restructuring costs of \$1,237 both incurred in the prior year, reduced Test operating expenses, and the contribution of PCB to income from operations, partially offset by decreased Test gross profit and China investigation expenses of \$245.

Income from operations for the nine months ended July 1, 2017 increased by 53.0% primarily due to higher gross profit in both Test and organic Sensors, nonrecurring PCB acquisition-related expenses of \$6,317 and restructuring costs of \$1,237 both incurred in the prior year, and decreased operating expenses in organic Sensors, partially offset by China investigation expenses of \$8,980, the PCB contribution to income from operations including a \$7,975 fair value adjustment on the acquired inventory, and current-year nonrecurring restructuring costs of \$1,036.

Interest Expense, Net

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Interest expense, net	\$ 7,711	\$ 375	\$ 7,336	1,956.3%	\$ 22,409	\$ 833	\$ 21,576	2,590.2%

Interest expense, net for the three and nine months ended July 1, 2017 increased due to interest incurred related to the tranche B term loan of \$5,923 and \$17,941, respectively, amortization of capitalized debt issuance costs of \$997 and \$3,020, respectively, and interest related to the TEUs of \$362 and \$1,197, respectively.

Other Income (Expense), Net

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Other income (expense), net	\$ (923)	\$ 668	\$ (1,591)	(238.2)%	\$ (1,086)	\$ 465	\$ (1,551)	(333.5)%

The decrease in other income (expense), net for the three and nine months ended July 1, 2017 was primarily driven by current year losses on foreign currency transactions.

Income Tax Provision (Benefit)

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Income tax provision (benefit)	\$ (2,627)	\$ 2,832	\$ (5,459)	(192.8)%	\$ (690)	\$ 5,371	\$ (6,061)	(112.8)%
Effective Rate	(32.9)%	28.4%			(3.7)%	19.7%		

The effective tax rate of (32.9)% and (3.7)% decreased for the three and nine months ended July 1, 2017, respectively, primarily due to certain discrete benefits of \$2,801 recognized during the three months ended July 1, 2017 which consisted of

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additional U.S. tax benefits for prior fiscal years associated with domestic manufacturing, deductible PCB acquisition-related expenses, and U.S. R&D tax credit. Excluding the impact of these discrete benefits, the effective tax rate for the three and nine months ended July 1, 2017 was 2.2% and 11.2%, respectively, and declined compared to the prior year primarily due to lower income before taxes and a more favorable geographic mix of earnings.

The effective tax rate of 28.4% for the three months ended July 2, 2016 included a one-time tax cost of \$577 associated with non-deductible PCB acquisition-related expenses. The effective tax rate of 19.7% for the nine months ended July 2, 2016 included a \$2,283 discrete benefit for retroactive reinstatement of the U.S. R&D tax credit as well as one-time tax cost of \$577 associated with non-deductible PCB acquisition-related expenses. Excluding the impact of these items, the effective tax rates for the three and nine months ended July 1, 2016 were 22.6% and 25.9%, respectively.

Net Income

(in thousands, except per share data)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Net income	\$ 10,610	\$ 7,150	\$ 3,460	48.4%	\$ 19,514	\$ 21,922	\$ (2,408)	(11.0)%
Diluted earnings per share	\$ 0.55	\$ 0.46	\$ 0.09	19.6%	\$ 1.02	\$ 1.45	\$ (0.43)	(29.7)%

Net income for the three months ended July 1, 2017 increased due to higher gross profit and a current-year tax benefit resulting from nonrecurring discrete items, partially offset by increased operating expenses and increased interest expense. The increase in diluted EPS was driven by the current year tax benefit and increased income from operations driven by Sensors, partially offset by increased interest expense and the issuance of common stock and TEUs at the end of the third quarter of fiscal year 2016.

Net income for the nine months ended July 1, 2017 declined due to higher operating expenses and increased interest expense, partially offset by higher gross profit and a current-year tax benefit resulting from nonrecurring discrete items. The decline in diluted EPS was driven by increased interest expense and the issuance of common stock and TEUs at the end of the third quarter of fiscal year 2016, partially offset by increased income from operations driven by organic Sensors and Test and the current year tax benefit.

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				Nine Months Ended			
	July 1, 2017	Estimated		July 2, 2016	July 1, 2017	Estimated		July 2, 2016
		Business Change	Currency Translation			Business Change	Currency Translation	
Revenue	\$ 124,359	\$ (7,321)	\$ (1,832)	\$ 133,512	\$ 379,325	\$ 17,259	\$ (4,053)	\$ 366,119
Cost of sales	83,240	(2,980)	(1,568)	87,788	246,638	4,049	(3,618)	246,207
Gross profit	41,119	(4,341)	(264)	45,724	132,687	13,210	(435)	119,912
Gross margin	33.1%			34.2%	35.0%			32.8%
Operating expenses								
Selling and marketing	17,780	(1,298)	(122)	19,200	52,188	(209)	(382)	52,779
General and administrative	10,209	(723)	(126)	11,058	38,832	8,027	(481)	31,286
Research and development	4,421	(360)	(2)	4,783	14,875	1,824	(11)	13,062
Total operating expenses	32,410	(2,381)	(250)	35,041	105,895	9,642	(874)	97,127
Income from operations	\$ 8,709	\$ (1,960)	\$ (14)	\$ 10,683	\$ 26,792	\$ 3,568	\$ 439	\$ 22,785

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Revenue

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Revenue	\$ 124,359	\$ 133,512	\$ (9,153)	(6.9)%	\$ 379,325	\$ 366,119	\$ 13,206	3.6%

Revenue for the three months ended July 1, 2017 decreased by 6.9% primarily due to lower backlog conversion and the unfavorable impact of currency translation, partially offset by strong growth in service revenue and a continued focus on project execution. Excluding the impact of currency translation, revenue decreased 5.5%.

Revenue for the nine months ended July 1, 2017 increased by 3.6% primarily due to a continued focus on project execution, higher conversion of existing backlog in the first two quarters relative to the prior year, and growth in service revenue, partially offset by the unfavorable impact of currency translation. Excluding the impact of currency translation, revenue increased 4.7%.

Gross Profit

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Gross profit	\$ 41,119	\$ 45,724	\$ (4,605)	(10.1)%	\$ 132,687	\$ 119,912	\$ 12,775	10.7%
Gross margin	33.1%	34.2%	(1.1)	ppts	35.0%	32.8%	2.2	ppts

Gross profit for the three months ended July 1, 2017 declined by 10.1%. Gross margin rate declined 1.1 percentage points, primarily due to increased compensation expenses and lower leverage on revenue volume, partially offset by a positive impact from product mix and a continued focus on project execution. Excluding the impact of currency translation and restructuring costs, gross profit declined 10.1% and gross margin rate declined 1.7 percentage points.

Gross profit for the nine months ended July 1, 2017 increased by 10.7%. Gross margin rate increased 2.2 percentage points primarily due to a continued focus on project execution, a positive impact from product mix, favorability in warranty claims, and leverage on increased revenue volume, partially offset by increased compensation expenses. Excluding the impact of currency translation and restructuring costs, gross profit increased 10.7% and gross margin rate increased 1.9 percentage points.

Selling and Marketing Expense

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Selling and marketing	\$ 17,780	\$ 19,200	\$ (1,420)	(7.4)%	\$ 52,188	\$ 52,779	\$ (591)	(1.1)%
% of Revenue	14.3%	14.4%			13.8%	14.4%		

Selling and marketing expense for the three months ended July 1, 2017 declined by 7.4% primarily due to a reduction in commission expense commensurate with decreased revenue, nonrecurring restructuring costs of \$129 incurred in the prior year, and the favorable impact of currency translation, partially offset by higher compensation costs, increased bad debt expense, and current year China investigation expenses. Excluding the impact of currency translation, restructuring costs, and China investigation expenses, selling and marketing expense decreased 6.4%.

Selling and marketing expense for the nine months ended July 1, 2017 declined by 1.1% primarily due to a reduction in commission expense related to mix of indirect versus direct sales, the favorable impact of currency translation, and nonrecurring restructuring costs of \$129 incurred in the prior year, partially offset by increased compensation expenses and current year China investigation expenses of \$442. Excluding the impact of currency translation, restructuring costs, and China investigation expenses, selling and marketing expense decreased 1.0%.

General and Administrative Expense

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
General and administrative	\$ 10,209	\$ 11,058	\$ (849)	(7.7)%	\$ 38,832	\$ 31,286	\$ 7,546	24.1%
% of Revenue	8.2%	8.3%			10.2%	8.5%		

General and administrative expense for the three months ended July 1, 2017 declined by 7.7% primarily due to a decrease in compensation expenses, nonrecurring restructuring costs of \$414 incurred in the prior year, and the favorable impact of currency translation, partially offset by current year China investigation expenses. Excluding the impact of currency translation, restructuring costs, and China investigation expenses, general and administrative expense decreased 4.4%.

General and administrative expense increased by 24.1% for the nine months ended July 1, 2017 primarily due to current year China investigation expenses of \$8,300 and increased compensation and bad debt expense, partially offset by the favorable impact of currency translation and nonrecurring restructuring costs of \$414 incurred in the prior year. Excluding the impact of currency translation, restructuring costs, and China investigation expenses, general and administrative expense increased 0.5%.

Research and Development Expense

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Research and development	\$ 4,421	\$ 4,783	\$ (362)	(7.6)%	\$ 14,875	\$ 13,062	\$ 1,813	13.9%
% of Revenue	3.6%	3.6%			3.9%	3.6%		

R&D expense for the three months ended July 1, 2017 declined by 7.6% primarily due to a planned reduction in R&D spending in the current quarter, partially offset by China investigation expenses. Excluding the impact of currency translation, restructuring costs, and China investigation expenses, R&D expense decreased 8.1%.

R&D expense for the nine months ended July 1, 2017 increased by 13.9% primarily due to additional focused R&D spending to meet certain market needs in the first two quarters of the current year and China investigation expenses of \$238. Excluding the impact of currency translation, restructuring costs, and China investigation expenses, R&D expense increased 12.2%.

Income from Operations

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Income from operations	\$ 8,709	\$ 10,683	\$ (1,974)	(18.5)%	\$ 26,792	\$ 22,785	\$ 4,007	17.6%
% of Revenue	7.0%	8.0%			7.1%	6.2%		

Income from operations for the three months ended July 1, 2017 declined by 18.5% primarily due to a reduction in gross profit from lower revenue volume, increased compensation expenses, and \$245 current year China investigation expenses, partially offset by lower operating expenses and \$847 prior-year nonrecurring restructuring expenses.

Income from operations for the nine months ended July 1, 2017 increased by 17.6% primarily due to an increase in gross profit from higher revenue volume, a continued focus on project execution and \$847 prior-year nonrecurring restructuring expenses, partially offset by higher operating expenses which included \$8,980 of current year China investigation expenses.

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 the fourth quarter of fiscal year 2016, and restructuring expense incurred in fiscal year 2017.

(in thousands)	Three Months Ended					July 2, 2016
	July 1, 2017	Estimated				
		Business Change	Acquisition / Restructuring ¹	Currency Translation		
Revenue	\$ 69,405	\$ 3,757	\$ 41,739	\$ (279)	\$ 24,188	
Cost of sales	34,968	1,716	21,603	(150)	11,799	
Gross profit	34,437	2,041	20,136	(129)	12,389	
Gross margin	49.6%				51.2%	
Operating expenses						
Selling and marketing	14,077	107	9,916	(46)	4,100	
General and administrative	8,517	(5,287)	5,958	(22)	7,868	
Research and development	3,935	78	2,452	(10)	1,415	
Total operating expenses	26,529	(5,102)	18,326	(78)	13,383	
Income (loss) from operations	\$ 7,908	\$ 7,143	\$ 1,810	\$ (51)	\$ (994)	

(in thousands)	Nine Months Ended					July 2, 2016
	July 1, 2017	Estimated				
		Business Change	Acquisition / Restructuring ¹	Currency Translation		
Revenue	\$ 207,142	\$ 9,273	\$ 129,197	\$ (508)	\$ 69,180	
Cost of sales	111,953	4,578	74,298	(247)	33,324	
Gross profit	95,189	4,695	54,899	(261)	35,856	
Gross margin	46.0%				51.8%	
Operating expenses						
Selling and marketing	40,766	(391)	28,964	16	12,177	
General and administrative	27,473	(7,082)	19,961	(27)	14,621	
Research and development	11,423	91	7,192	(42)	4,182	
Total operating expenses	79,662	(7,382)	56,117	(53)	30,980	
Income (loss) from operations	\$ 15,527	\$ 12,077	\$ (1,218)	\$ (208)	\$ 4,876	

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

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Revenue	\$ 69,405	\$ 24,188	\$ 45,217	186.9%	\$ 207,142	\$ 69,180	\$ 137,962	199.4%

Revenue increased by 186.9% and 199.4% during the three and nine months ended July 1, 2017, respectively, primarily due to increased volume as a result of the acquisition of PCB and growth in our organic Sensors business. Excluding the impact of currency translation and the impact of the PCB acquisition, revenue increased 15.5% and 13.4%, respectively.

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Gross Profit

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1,	July 2,	Increased / (Decreased)		July 1,	July 2,	Increased / (Decreased)	
	2017	2016	\$	%	2017	2016	\$	%
Gross profit	\$ 34,437	\$ 12,389	\$ 22,048	178.0%	\$ 95,189	\$ 35,856	\$ 59,333	165.5%
Gross margin	49.6%	51.2%	(1.6)	ppts	46.0%	51.8%	(5.8)	ppts

Gross profit increased by 178.0% during the three months ended July 1, 2017 primarily due to increased revenue volume as a result of the PCB acquisition and increased revenue volume in our organic Sensors business. The gross margin rate declined 1.6 percentage points primarily due to the gross profit contribution from the PCB acquisition, which included a \$251 fair value adjustment on the acquired inventory recognized in the third quarter of fiscal year 2017, and additional labor costs from the movement of production in Machida, Japan to the United States due to the closure of the Machida facility, partially offset by leverage on increased organic revenue volume as well as a positive impact from product mix. Excluding the impact of currency translation, the PCB acquisition, and restructuring costs, gross profit increased 16.5% and the gross margin rate increased 0.4 percentage points.

Gross profit increased by 165.5% for the nine months ended July 1, 2017 primarily due to increased revenue volume as a result of the PCB acquisition and increased revenue volume in our organic Sensors business. The gross margin rate declined 5.8 percentage points primarily due to the gross profit contribution from the PCB acquisition, which included a \$7,975 fair value adjustment on the acquired inventory recognized in the first and third quarters of fiscal year 2017, additional labor costs from the movement of production in Machida, Japan to the United States due to the closure of the Machida facility, and current year restructuring costs of \$647, partially offset by leverage on increased organic revenue volume. Excluding the impact of currency translation, the PCB acquisition, and restructuring costs, gross profit increased 13.1% and the gross margin rate declined 0.1 percentage points.

Selling and Marketing Expense

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1,	July 2,	Increased / (Decreased)		July 1,	July 2,	Increased / (Decreased)	
	2017	2016	\$	%	2017	2016	\$	%
Selling and marketing	\$ 14,077	\$ 4,100	\$ 9,977	243.3%	\$ 40,766	\$ 12,177	\$ 28,589	234.8%
% of Revenue	20.3%	17.0%			19.7%	17.6%		

Selling and marketing expense for the three months ended July 1, 2017 increased by 243.3% primarily driven by the addition of PCB expenses and higher commission expense, partially offset by decreased compensation expenses due to open headcount. Excluding the impact of currency translation, PCB expenses, and restructuring costs, selling and marketing expense increased 5.1%.

Selling and marketing expense for the nine months ended July 1, 2017 increased by 234.8% primarily driven by the addition of PCB expenses, higher commission expenses, and current year restructuring costs of \$136, partially offset by a decrease in compensation expenses due to open headcount. Excluding the impact of currency translation, PCB expenses, and restructuring costs, selling and marketing expense decreased 2.4%.

General and Administrative Expense

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1,	July 2,	Increased / (Decreased)		July 1,	July 2,	Increased / (Decreased)	
	2017	2016	\$	%	2017	2016	\$	%
General and administrative	\$ 8,517	\$ 7,868	\$ 649	8.2%	\$ 27,473	\$ 14,621	\$ 12,852	87.9%
% of Revenue	12.3%	32.5%			13.3%	21.1%		

General and administrative expense for the three months ended July 1, 2017 increased by 8.2% primarily driven by the addition of PCB expenses, partially offset by nonrecurring PCB acquisition-related expenses of \$4,966 and restructuring costs of \$292 both incurred in the prior year, as well as decreased compensation expenses due to reduced headcount. Excluding the impact of currency translation, PCB expenses, restructuring costs, and acquisition-related expenses, general and administrative expense decreased 1.1%.

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General and administrative expense for the nine months ended July 1, 2017 increased by 87.9% primarily driven by the addition of PCB expenses and nonrecurring restructuring costs of \$253 incurred in the current year, partially offset by nonrecurring PCB acquisition-related expenses of \$6,317 and restructuring costs of \$292 both incurred in the prior year, as well as a decrease in compensation expenses due to reduced headcount. Excluding the impact of currency translation, PCB expenses, restructuring costs, and acquisition-related expenses, general and administrative expense decreased 5.9%.

Research and Development Expense

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Research and development	\$ 3,935	\$ 1,415	\$ 2,520	178.1%	\$ 11,423	\$ 4,182	\$ 7,241	173.1%
% of Revenue	5.7%	5.9%			5.5%	6.0%		

R&D expense increased 178.1% and 173.1% for the three and nine months ended July 1, 2017, respectively, primarily driven by the addition of PCB expenses and increased spending to support new products. Excluding the impact of currency translation and PCB expenses, R&D expense increased 5.5% and 2.2%, respectively.

Income (Loss) from Operations

(in thousands)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	Increased / (Decreased)		July 1, 2017	July 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Income (loss) from operations	\$ 7,908	\$ (994)	\$ 8,902	895.6%	\$ 15,527	\$ 4,876	\$ 10,651	218.4%
% of Revenue	11.4%	(4.1)%			7.5%	7.0%		

Income (loss) from operations increased 895.6% in the three months ended July 1, 2017 primarily due to nonrecurring PCB acquisition-related costs of \$4,966 incurred in the prior year, increased organic gross profit on increased revenue volume, the current year PCB contribution to income from operations, reductions in organic operating expenses, and nonrecurring restructuring costs of \$390 incurred in the prior year. Excluding the impact of currency translation, the PCB acquisition, restructuring expenses, and acquisition-related costs, income from operations increased 41.0%.

Income from operations increased 218.4% for the nine months ended July 1, 2017 primarily due to nonrecurring PCB acquisition-related expenses of \$6,317 incurred in the prior year, increased organic gross profit on increased revenue volume, reductions in organic operating expenses, current year PCB contribution to income from operations, and nonrecurring restructuring costs of \$390 incurred in the prior year, partially offset by the \$7,975 fair value adjustment on acquired inventory related to the acquisition of PCB, and the impact of the higher operating expenses related to the PCB acquisition, which included integration expenses and restructuring costs. Excluding the impact of currency translation, the PCB acquisition, restructuring expenses, and acquisition-related expenses, income from operations increased 46.4%.

Cash Flow Comparison

Total cash and cash equivalents increased \$16,840 for the nine months ended July 1, 2017 primarily due to \$25,430 of depreciation and amortization, net income of \$19,514, an increase of \$17,095 in working capital resulting from general timing of purchases and payments, a \$7,975 fair value adjustment to acquired inventory, and \$5,580 in proceeds from stock option exercises and share purchases under our Employee Stock Purchase Plan (ESPP). The increases were partially offset by \$14,976 of dividend payments, \$14,763 in other assets and liabilities due to timing, investments of \$13,239 in property and equipment, \$6,351 in payments on TEU debt, \$5,204 in accrued payroll and related cost payments, and \$4,399 in deferred income taxes. The change in working capital consisted of a \$16,992 increase in cash receipts from accounts and unbilled contracts receivable and a \$5,689 increase in receipts of customer advances, partially offset by a \$5,134 change in inventory and \$452 in payments of accounts payable due to the general timing of purchases and payments.

Total cash and cash equivalents increased \$120,945 for the nine months ended July 2, 2016 primarily due to \$186,948 net cash received in connection with the issuance of common stock and TEUs, \$21,922 of net income, \$14,427 in depreciation and amortization, a reduction of \$13,546 in working capital requirements, consisting of \$23,578 increase in customer advances, and \$4,759 increase in accounts payable, partially offset by \$7,853 and \$6,938 increases in accounts and unbilled contracts receivables and inventories, respectively, as well as \$5,177 of stock based compensation. The increase was partially offset by a \$43,500 increase in restricted cash held in escrow for the acquisition of PCB, \$21,343 net repayments of short-term

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borrowings, the purchase of \$18,396 of our common stock, investments of \$16,194 in property and equipment, \$11,555 in other assets and liabilities due to timing of payments, and dividend payments of \$8,935.

Cash flows from operating activities provided cash of \$52,409 and \$45,740 for the nine months ended July 1, 2017 and July 2, 2016, respectively.

Cash provided by operating activities for the nine months ended July 1, 2017 was primarily generated from \$25,430 of depreciation and amortization, net income of \$19,514, \$16,992 increased cash receipts on accounts and unbilled contract receivables, a \$7,975 fair value adjustment to acquired inventory, and \$5,689 increased advance payments received from customers. The cash received was partially offset by \$14,763 in other assets and liabilities due to timing, \$5,204 increased accrued payroll and related cost payments, and \$5,134 change in inventory.

Cash provided by operating activities for the nine months ended July 2, 2016 was primarily generated from \$23,578 in customer advances, \$21,922 of net income, \$14,427 of depreciation and amortization, \$5,177 in stock-based compensation, and \$4,759 from increased accounts payable resulting from general timing of purchases and payments. The cash received was partially offset by \$11,555 in other assets and liabilities due to timing of payments, \$7,853 in increased accounts and unbilled contract receivables resulting from general timing and collections, and \$6,938 in increased inventories to support future revenue.

Cash flows from investing activities used cash of \$14,194 and \$58,180 for the nine months ended July 1, 2017 and July 2, 2016, respectively. Cash used for the nine months ended July 1, 2017 was primarily for the purchase of \$13,239 of property and equipment to support business growth and a \$1,000 payment made related to the acquisition of PCB. Cash used for the nine months ended July 2, 2016 consisted of a \$43,500 increase in restricted cash held in escrow for the acquisition of PCB and cash used for the purchase of property and equipment of \$16,194 to support business growth. The cash used was partially offset by proceeds received from the sale of property and equipment of \$1,514.

Cash flows from financing activities used cash of \$20,943 and provided cash of \$132,917 for the nine months ended July 1, 2017 and July 2, 2016, respectively.

Cash used by financing activities for the nine months ended July 1, 2017 was primarily driven by dividend payments of \$14,976, \$6,351 in payments on TEU debt, and payments of long-term debt of \$3,511, partially offset by \$5,580 of proceeds from the exercise of stock options and ESPP share purchases.

Cash provided by financing activities for the nine months ended July 2, 2016 was primarily driven by \$112,210 in net cash received from the issuance of TEUs, \$74,738 in net cash received from the issuance of common stock, and \$3,796 in proceeds from stock option exercises and ESPP share purchases. These increases were partially offset by \$21,343 in net repayments of short-term borrowings, the purchase of shares under our share purchase program and stock-based compensation arrangements for \$18,396, dividend payments of \$8,935, and \$7,935 related to payments for the capped call transactions made in connection with the issuance of the TEUs.

Liquidity and Capital Resources

We had cash and cash equivalents of \$101,620 as of July 1, 2017. Of this amount, \$27,405 was located in North America, \$38,080 in Europe and \$36,135 in Asia. Of the \$74,215 of cash located outside of North America, approximately \$47,128 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 July 1, 2017, we held no short-term investments.

At July 1, 2017, our capital structure consisted of \$23,051 in short-term debt, \$454,524 in long-term debt and \$419,436 in shareholders' equity. The Consolidated Balance Sheets also includes \$17,652 of unamortized debt issuance costs as of July 1, 2017. Total interest-bearing debt at July 1, 2017 was \$477,575. 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.

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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 adjusted consolidated earnings before interest, taxes, depreciation and amortization (Adjusted EBITDA), as defined in the Credit Agreement, as well as the ratio of Adjusted EBITDA to consolidated interest expense. These covenants impact our ability to pay dividends and purchase outstanding shares of common stock. As of July 1, 2017 and October 1, 2016, we were in compliance with these financial covenants.

Shareholders' equity increased by \$14,176 during the nine months ended July 1, 2017, primarily due to net income of \$19,514, \$4,560 proceeds from the exercise of stock options, \$3,778 of stock-based compensation, \$2,236 in other comprehensive income, and employee stock purchases of \$1,020 under our ESPP, partially offset by \$15,082 in dividends declared and \$1,652 in purchases and retirements of our common stock.

Off-Balance Sheet Arrangements

As of July 1, 2017, 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. 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 non-payment of dividends, capital structure, the adequacy of our liquidity and reserves, 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, including PCB; (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

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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 \$20,795 for the nine months ended July 1, 2017.

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 (loss) 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 (loss) to the same line item in the Consolidated Statements of Income in 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 \$2,588 in the nine months ended July 1, 2017 and a net loss of \$1,574 in the nine months ended July 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 for information on derivative instruments and hedging activities.

Interest Rates

We are 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 July 1, 2017, we had cash and cash equivalents of \$101,620, some of which was invested in interest-bearing bank deposits or money market funds, with interest rates that are reset every 1 to 89 days, which generate interest income that will vary based on changes in short-term interest rates. A hypothetical decrease of 100 basis points in market interest rates, assuming all other variables were held constant, would decrease interest income by approximately \$89 for the nine months ended July 1, 2017.

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 100 basis points in floating interest rates, assuming all other variables were held constant, would increase future interest expense by approximately \$1,745 on an annualized basis.

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 July 1, 2017. Our Chief Executive Officer and Chief Financial Officer have concluded that, due to 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 July 1, 2017.

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.

(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 are conducting 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 assessing 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 enhancing ongoing compliance monitoring to support these commitments to reduce the potential for override of internal control over financial reporting.

(c) Changes in Internal Control over Financial Reporting

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. We are currently in the process of implementing our internal control structure over PCB and will incorporate its operations into our assessment of internal control over financial reporting as of September 30, 2017. We have extended our oversight and monitoring processes that support internal control over financial reporting to include the operations of PCB. PCB represented \$696,550 of our consolidated total assets at July 1, 2017 and \$129,197 of our consolidated revenue for the nine months ended July 1, 2017.

We continue to implement the remediation plan outlined above to remediate the material weakness identified as part of our annual assessment of internal control over financial reporting disclosed in Item 9A of our Annual Report on Form 10-K for the fiscal year ended October 1, 2016.

There were no other changes in the Company's internal control over financial reporting during the third quarter of fiscal year 2017 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

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 possibly 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. As of July 1, 2017, we do not anticipate any material impairment charges for the tangible and intangible assets. 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. We were notified by the Agencies in August 2017 that their respective investigations were closed as to MTS without further action taken by either agency. With the closure of the government investigations by the Agencies and the steps being taken by the Company voluntarily, we believe that the matter has been resolved. We are committed to continuing to monitor compliance with the Company's Code of Conduct policy and applicable law.

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 July 1, 2017 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

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

The following table presents repurchases of our equity securities we made during the fiscal quarter ended July 1, 2017.

	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
April 2, 2017 - May 6, 2017	—	\$ —	—	438
May 7, 2017 - June 3, 2017	—	\$ —	—	438
June 4, 2017 - July 1, 2017	—	\$ —	—	438
Total	—	\$ —	—	

We made no purchases within the third 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 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 July 1, 2017, there were 438 shares available for purchase under the existing authorization.

Item 5. Other Information

Our Board of Directors has established February 13, 2018 as the date of our next Annual Meeting of Shareholders (Annual Meeting). Because the date of the Annual Meeting has changed by more than 30 days from the anniversary of our last annual meeting of shareholders held on June 6, 2017, different deadlines apply for submission of proposals by shareholders intended to be included in our proxy statement and form of proxy for the Annual Meeting and submission of proposals not intended to be included in such proxy materials but intended to be presented at the meeting.

Shareholders who wish to have a proposal considered for inclusion in our proxy materials for the Annual Meeting, pursuant to Rule 14a-8 under the Exchange Act, must ensure that such proposal is received by our Chief Executive Officer at MTS Systems Corporation, 14000 Technology Drive, Eden Prairie, Minnesota 55344 on or before the close of business on September 8, 2017, which we have determined to be a reasonable time before we expect to begin to print and send our proxy materials. Any such proposal must also meet the requirements set forth in the rules and regulations of the SEC in order to be eligible for inclusion in the proxy materials for the Annual Meeting.

If a shareholder wishes to present a proposal at our Annual Meeting or to nominate one or more directors and the proposal is not intended to be included in our proxy statement relating to that meeting, the shareholder must give advance notice to us prior to November 15, 2017, which is 90 days before the Annual Meeting in accordance with the advanced notice provision included in our Bylaws.

In addition, in accordance with the requirements contained in our Bylaws, shareholders who wish to bring business before the Annual Meeting outside of Rule 14a-8 of the Exchange Act or to nominate a person for election as a director must ensure that written notice of such proposal (including all of the information specified in our Bylaws) is received by the Company's Secretary, Jeffrey A. Graves, at the address specified above no later than the close of business on November 15, 2017. Any such proposal must meet the requirements set forth in the our Bylaws in order to be brought before the Annual Meeting.

Item 6. Exhibits

Exhibit Number	Description
10.1	MTS Systems Corporation 2017 Stock Incentive Plan, incorporated by reference to Annex A of the Company's Definitive Proxy Statement on Schedule 14A filed April 25, 2017.
10.2	Form of Restricted Stock Unit Agreement - Employee under 2017 Stock Incentive Plan, incorporated by reference to Exhibit 99.2 of the Company's Registration Statement on Form S-8 filed June 7, 2017.
10.3	Form of Non-Qualified Stock Option Agreement - Employee under 2017 Stock Incentive Plan, incorporated by reference to Exhibit 99.3 of the Company's Registration Statement on Form S-8 filed June 7, 2017.
10.4	Form of Performance Restricted Stock Unit Agreement - Employee under 2017 Stock Incentive Plan, incorporated by reference to Exhibit 99.4 of the Company's Registration Statement on Form S-8 filed June 7, 2017.
10.5	Form of Restricted Stock Unit Agreement - Non-employee Director under 2017 Stock Incentive Plan, incorporated by reference to Exhibit 99.5 of the Company's Registration Statement on Form S-8 filed June 7, 2017.
10.6	Amendment No. 2 to Credit Agreement, dated as of July 6, 2017, by and among MTS Systems Corporation, JPMorgan Chase Bank, N.A., as Administrative Agent and Swingline Lender, JPMorgan Chase Bank, N.A. and U.S. Bank National Association, as Issuing Banks, the Revolving Lenders party thereto and Bank of America, N.A., as an Additional Lender, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed July 6, 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: August 7, 2017

/s/ JEFFREY A. GRAVES

Jeffrey A. Graves

President and Chief Executive Officer

(Principal Executive Officer)

Date: August 7, 2017

/s/ BRIAN T. ROSS

Brian T. Ross

Senior Vice President and Chief Financial Officer

(Principal Financial Officer and Principal Accounting Officer)

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: August 7, 2017

/s/ JEFFREY A. GRAVES

Jeffrey A. Graves

President and Chief Executive Officer

SARBANES-OXLEY SECTION 302 CERTIFICATION

I, Brian T. Ross, 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: August 7, 2017

/s/ BRIAN T. ROSS

Brian T. Ross

Senior Vice President and Chief Financial Officer

**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 July 1, 2017 (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: August 7, 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.

**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, Brian T. Ross, 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 July 1, 2017 (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: August 7, 2017

/s/ BRIAN T. ROSS

Brian T. Ross

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.

