

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 April 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 May 4, 2017, there were 16,741,681 shares of Common Stock outstanding.

**MTS Systems Corporation**  
**Quarterly Report on Form 10-Q**  
**For the Three Months Ended April 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)

	April 1, 2017	October 1, 2016
	(Unaudited)	(Note)
<b>Assets</b>		
Current assets		
Cash and cash equivalents	\$ 97,433	\$ 84,780
Accounts receivable, net of allowance for doubtful accounts of \$4,547 and \$3,923, respectively	115,830	133,500
Unbilled accounts receivable	73,951	76,626
Inventories, net	125,146	132,566
Prepaid expenses and other current assets	21,378	12,793
<b>Total current assets</b>	<b>433,738</b>	<b>440,265</b>
Property and equipment, net	99,131	100,789
Goodwill	369,224	369,700
Intangible assets, net	260,513	266,789
Other long-term assets	4,600	5,061
Deferred income taxes	4,691	5,416
<b>Total assets</b>	<b>\$ 1,171,897</b>	<b>\$ 1,188,020</b>
<b>Liabilities and Shareholders' Equity</b>		
Current liabilities		
Current maturities of long-term debt, net	\$ 10,218	\$ 9,850
Accounts payable	41,480	46,383
Accrued payroll and related costs	38,077	45,505
Advance payments from customers	86,766	72,728
Accrued warranty costs	5,240	5,718
Accrued income taxes	2,311	3,445
Accrued dividends	5,021	4,942
Other accrued liabilities	22,370	27,550
<b>Total current liabilities</b>	<b>211,483</b>	<b>216,121</b>
Long-term debt, less current maturities, net	449,798	455,001
Deferred income taxes	82,136	86,020
Non-current accrued income taxes	6,325	6,232
Defined benefit pension plan obligation	12,687	13,744
Other long-term liabilities	5,424	5,642
<b>Total liabilities</b>	<b>767,853</b>	<b>782,760</b>
<b>Shareholders' Equity</b>		
Common stock, \$0.25 par value; 64,000 shares authorized: 16,724 and 16,660 shares issued and outstanding as of April 1, 2017 and October 1, 2016, respectively	4,181	4,165
Additional paid-in capital	157,277	154,879
Retained earnings	255,459	256,589
Accumulated other comprehensive loss	(12,873)	(10,373)
<b>Total shareholders' equity</b>	<b>404,044</b>	<b>405,260</b>
<b>Total liabilities and shareholders' equity</b>	<b>\$ 1,171,897</b>	<b>\$ 1,188,020</b>

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

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

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**MTS SYSTEMS CORPORATION**

**Consolidated Statements of Income (Unaudited)**

(in thousands, except per share data)

	Three Months Ended		Six Months Ended	
	April 1, 2017	April 2, 2016	April 1, 2017	April 2, 2016
<b>Revenue</b>				
Product	\$ 170,800	\$ 116,565	\$ 347,395	\$ 235,866
Service	22,624	20,533	45,308	41,733
<b>Total Revenue</b>	193,424	137,098	392,703	277,599
<b>Cost of Sales</b>				
Product	101,605	79,115	214,383	153,779
Service	12,963	12,839	26,000	26,165
<b>Total Cost of Sales</b>	114,568	91,954	240,383	179,944
<b>Gross Profit</b>	78,856	45,144	152,320	97,655
<b>Operating Expenses</b>				
Selling and marketing	30,627	21,002	61,097	41,656
General and administrative	23,556	14,019	47,579	26,981
Research and development	9,261	5,752	17,942	11,046
<b>Total Operating Expenses</b>	63,444	40,773	126,618	79,683
<b>Income From Operations</b>	15,412	4,371	25,702	17,972
Interest income (expense), net	(7,418)	(257)	(14,698)	(458)
Other income (expense), net	666	107	(163)	(203)
<b>Income Before Income Taxes</b>	8,660	4,221	10,841	17,311
Provision for income taxes	1,461	1,223	1,937	2,539
<b>Net Income</b>	\$ 7,199	\$ 2,998	\$ 8,904	\$ 14,772
<b>Earnings Per Share</b>				
<i>Basic</i>				
Earnings per share	\$ 0.38	\$ 0.20	\$ 0.47	\$ 1.00
Weighted average common shares outstanding	19,016	14,756	18,992	14,808
<i>Diluted</i>				
Earnings per share	\$ 0.38	\$ 0.20	\$ 0.47	\$ 0.99
Weighted average common shares outstanding	19,109	14,851	19,095	14,925
<b>Dividends declared per share</b>	\$ 0.30	\$ 0.30	\$ 0.60	\$ 0.60

The accompanying Notes to Consolidated Financial Statements 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		Six Months Ended	
	April 1, 2017	April 2, 2016	April 1, 2017	April 2, 2016
<b>Net income</b>	\$ 7,199	\$ 2,998	\$ 8,904	\$ 14,772
Other comprehensive income (loss), net of tax				
Foreign currency translation gain (loss) adjustments	3,197	3,286	(6,605)	868
Derivative instruments				
Unrealized net gain (loss)	(1,017)	(724)	3,141	(589)
Net (gain) loss reclassified to earnings	62	84	(206)	(11)
Defined benefit pension plan				
Unrealized net gain (loss)	198	(245)	326	(122)
Net (gain) loss reclassified to earnings	167	101	337	202
Currency exchange rate gain (loss)	(190)	(270)	507	(120)
<b>Other comprehensive income (loss)</b>	<b>2,417</b>	<b>2,232</b>	<b>(2,500)</b>	<b>228</b>
<b>Comprehensive income (loss)</b>	<b>\$ 9,616</b>	<b>\$ 5,230</b>	<b>\$ 6,404</b>	<b>\$ 15,000</b>

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

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

	Six Months Ended	
	April 1, 2017	April 2, 2016
<b>Cash Flows from Operating Activities</b>		
Net income	\$ 8,904	\$ 14,772
Adjustments to reconcile net income to net cash provided by (used in) operating activities		
Stock-based compensation	2,637	3,523
Excess tax benefits from stock-based compensation	(42)	(171)
Fair value adjustment to acquired inventory	7,724	—
Net periodic pension benefit cost	856	564
Depreciation and amortization	16,832	9,886
Amortization of debt issuance costs	1,807	80
Deferred income taxes	(3,383)	580
Bad debt provision (recovery), net	890	163
Changes in operating assets and liabilities		
Accounts and unbilled contracts receivable	15,233	(2,100)
Inventories	(1,925)	(9,352)
Prepaid expenses	(3,055)	(2,980)
Accounts payable	(3,627)	3,635
Accrued payroll and related costs	(6,319)	185
Advance payments from customers	14,437	32,494
Accrued warranty costs	(465)	175
Other assets and liabilities	(9,329)	(10,600)
<b>Net Cash Provided by (Used in) Operating Activities</b>	<b>41,175</b>	<b>40,854</b>
<b>Cash Flows from Investing Activities</b>		
Purchases of property and equipment	(9,318)	(11,197)
Proceeds from sale of property and equipment	25	1,320
<b>Net Cash Provided by (Used in) Investing Activities</b>	<b>(9,293)</b>	<b>(9,877)</b>
<b>Cash Flows from Financing Activities</b>		
Payment of long-term debt	(2,300)	—
Payment of debt issuance costs for long-term debt	(186)	—
Payment of debt component of tangible equity units	(4,197)	—
Payment of debt issuance costs for revolving credit facility	(49)	—
Receipts under short-term borrowings	—	20,000
Payments under short-term borrowings	—	(20,000)
Excess tax benefits from stock-based compensation	42	171
Cash dividends	(9,955)	(4,513)
Proceeds from exercise of stock options and employee stock purchase plan	1,672	2,560
Payments to purchase and retire common stock	(1,482)	(18,362)
<b>Net Cash Provided by (Used in) Financing Activities</b>	<b>(16,455)</b>	<b>(20,144)</b>
<b>Effect of Exchange Rate Changes on Cash and Cash Equivalents</b>	<b>(2,774)</b>	<b>746</b>
<b>Cash and Cash Equivalents</b>		
<b>Increase (decrease) during the period</b>	<b>12,653</b>	<b>11,579</b>
Balance, beginning of period	84,780	51,768
Balance, end of period	\$ 97,433	\$ 63,347
<b>Supplemental Disclosures of Cash Flows</b>		
Cash paid during the period for		
Interest	\$ 15,197	\$ 349
Income taxes	\$ 9,379	\$ 8,338
Non-cash financing activities		
Dividends declared not yet paid recorded in accrued dividends	\$ 5,021	\$ 4,360

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



**MTS SYSTEMS CORPORATION**

**Notes to Consolidated Financial Statements (Unaudited)**

(Dollars and shares in thousands, unless otherwise noted)

**NOTE 1 BASIS OF PRESENTATION**

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

We have prepared the interim unaudited consolidated financial statements included herein pursuant to the rules and regulations of the United States (U.S.) Securities and Exchange Commission (SEC). The information furnished in these consolidated financial statements includes normal recurring adjustments and reflects all adjustments that are, in our opinion, necessary for a fair presentation of such financial statements. The consolidated financial statements are prepared in accordance with U.S. Generally Accepted Accounting Principles (U.S. GAAP). U.S. GAAP requires us to make estimates and assumptions that affect amounts reported. Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted pursuant to SEC rules and regulations. The accompanying consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in our Annual Report on Form 10-K for the fiscal year ended October 1, 2016 filed with the SEC. Interim results of operations for the second fiscal quarter ended April 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 a contract and allow an entity to elect to account for the cost of shipping and handling performed after control of a good has been transferred to the customer as a fulfillment cost or an expense. The updated guidance also clarifies how an entity would evaluate the nature of its promise in granting a license of intellectual property, which determines whether the entity recognizes revenue over time or at a point in time, and other aspects relative to licensing.

In May 2016, the FASB issued ASU No. 2016-11, *Revenue Recognition (Topic 605) and Derivatives and Hedging (Topic 815): Rescission of SEC Guidance Because of Accounting Standards Updates 2014-09 and 2014-16 Pursuant to Staff Announcements*



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at the March 3, 2016 EITF Meeting (SEC Update), which rescinds previous guidance on revenue and expense recognition for freight services in process, accounting for shipping and handling fees and costs and accounting for consideration given by a vendor to a customer.

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

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

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

### **Other**

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

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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 statement. The new guidance requires the service cost component of net periodic benefit cost to be presented in the same

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income statement line item(s) as other employee compensation costs arising from services rendered during the period with only the service cost component eligible for capitalization in assets. Other components of the net periodic benefit cost are to be stated separately from the line item(s) that includes the service cost and outside of operating income. These components are not eligible for capitalization in assets. The standard is required to be adopted for annual periods beginning after December 15, 2017, including interim periods within that annual period, which is our fiscal year 2019. The amendment is to be applied retrospectively. Early adoption is permitted as of the beginning of an annual period. We have not yet evaluated the impact of adoption of this guidance will have on our financial condition, results of operations or disclosures.

### ***Adopted***

In July 2015, the FASB issued ASU No. 2015-12, *Plan Accounting: Defined Benefit Pension Plans (Topic 960), Defined Contribution Pension Plans (Topic 962), Health and Welfare Benefit Plans (Topic 965): (Part I) Fully Benefit-Responsive Investment Contracts, (Part II) Plan Investment Disclosures, (Part III) Measurement Date Practical Expedient (consensuses of the FASB Emerging Issues Task Force)*. The standard allows for a plan with a fiscal year end that does not coincide with the end of the calendar month to measure its investments and investment-related accounts using the month end closest to its fiscal year end. In previous guidance, the measurement date was required to coincide with the fiscal year end. The standard is required to be adopted for annual periods beginning after December 15, 2015, which is our fiscal year 2017. The amendment is to be applied prospectively with early adoption permitted. We adopted ASU No. 2015-12 on a prospective basis for the annual period ending September 30, 2017. The adoption of this standard 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. The standard is required to be adopted for annual periods beginning after December 15, 2015, including interim periods within that annual period, which is our fiscal year 2017. The amendment is to be applied prospectively to measurement-period adjustments that occur after the effective date. Early adoption is permitted. We adopted ASU No. 2015-16 on a prospective basis for the annual period ending September 30, 2017, including interim periods within that annual period. The adoption of the standard had no effect on our financial condition, results of operations or disclosures for the three and six months ended April 1, 2017, as the standard only applies to businesses acquired after the adoption date.

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

**NOTE 3 INVENTORIES**

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

(in thousands)	April 1, 2017	October 1, 2016
Components, assemblies and parts	\$ 83,629	\$ 87,119
Customer projects in various stages of completion	29,551	32,575
Finished goods	11,966	12,872
Total inventories	\$ 125,146	\$ 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		Six Months Ended	
	April 1, 2017	April 2, 2016	April 1, 2017	April 2, 2016
Beginning balance	\$ 5,402	\$ 4,302	\$ 5,718	\$ 4,695
Warranty claims	(889)	(1,246)	(1,843)	(2,681)
Warranty provisions	842	1,811	1,494	2,856
Adjustments to preexisting warranties	(122)	—	(117)	—
Currency translation	7	5	(12)	2
Ending balance	\$ 5,240	\$ 4,872	\$ 5,240	\$ 4,872

**NOTE 5 CAPITAL ASSETS**

***Property and Equipment***

Property and equipment are as follows:

(in thousands)	April 1, 2017	October 1, 2016
Land and improvements	\$ 2,863	\$ 2,865
Buildings and improvements	59,329	59,350
Machinery and equipment	195,172	189,406
Property and equipment, gross	257,364	251,621
Less accumulated depreciation	(158,233)	(150,832)
Property and equipment, net	\$ 99,131	\$ 100,789

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**Goodwill**

Changes to the carrying amount of goodwill are as follows:

(in thousands)	Test	Sensors	Total
Balance, October 1, 2016	\$ 25,022	\$ 344,678	\$ 369,700
Currency translation gain (loss)	(440)	(36)	(476)
Balance, April 1, 2017	\$ 24,582	\$ 344,642	\$ 369,224

**Other Intangible Assets**

Other intangible assets are as follows:

(in thousands)	April 1, 2017			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value	Weighted Average Useful Life (in Years)
Software development costs	\$ 24,537	\$ (15,384)	\$ 9,153	6.0
Technology and patents	46,372	(7,684)	38,688	14.9
Trademarks and trade names	6,736	(2,145)	4,591	25.4
Customer lists	156,965	(8,353)	148,612	15.8
Land-use rights	2,331	(362)	1,969	26.0
Trademarks and trade names	57,500	—	57,500	Indefinite
Total intangible assets	\$ 294,441	\$ (33,928)	\$ 260,513	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
Trademarks and trade names	57,500	—	57,500	Indefinite
Total intangible assets	\$ 293,615	\$ (26,826)	\$ 266,789	15.1

Amortization expense recognized during the three months ended April 1, 2017 and April 2, 2016 was \$3,663 and \$596, respectively. Amortization expense recognized during the six months ended April 1, 2017 and April 2, 2016 was \$7,328 and \$1,197, respectively.

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

Fiscal Year	Amortization Expense (in thousands)
Remainder of 2017	\$ 7,277
2018	\$ 13,693
2019	\$ 13,568
2020	\$ 13,287
2021	\$ 13,287
2022	\$ 13,104
Thereafter	\$ 128,797

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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)	April 1, 2017			
	Level 1	Level 2	Level 3	Total
<b>Assets</b>				
Currency contracts <sup>1</sup>	\$ —	\$ 373	\$ —	\$ 373
Interest rate swaps <sup>2</sup>	—	4,310	—	4,310
<b>Total assets</b>	<b>\$ —</b>	<b>\$ 4,683</b>	<b>\$ —</b>	<b>\$ 4,683</b>
<b>Liabilities</b>				
Currency contracts <sup>1</sup>	\$ —	\$ 700	\$ —	\$ 700
<b>Total liabilities</b>	<b>\$ —</b>	<b>\$ 700</b>	<b>\$ —</b>	<b>\$ 700</b>

(in thousands)	October 1, 2016			
	Level 1	Level 2	Level 3	Total
<b>Assets</b>				
Currency contracts <sup>1</sup>	\$ —	\$ 149	\$ —	\$ 149
<b>Total assets</b>	<b>\$ —</b>	<b>\$ 149</b>	<b>\$ —</b>	<b>\$ 149</b>
<b>Liabilities</b>				
Currency contracts <sup>1</sup>	\$ —	\$ 711	\$ —	\$ 711
<b>Total liabilities</b>	<b>\$ —</b>	<b>\$ 711</b>	<b>\$ —</b>	<b>\$ 711</b>

<sup>1</sup> 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.

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

**Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis**

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

**Assets and Liabilities Not Measured at Fair Value**

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

**Other Financial Instruments**

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

<i>(in thousands)</i>	April 1, 2017				
	Carrying Value	Fair Value	Level 1	Level 2	Level 3
Debt component of tangible equity units <sup>3</sup>	\$ 20,788	\$ 26,226	\$ —	\$ 26,226	\$ —
Tranche B term loan <sup>4</sup>	457,700	462,826	—	462,826	—
<b>Total debt</b>	<b>\$ 478,488</b>	<b>\$ 489,052</b>	<b>\$ —</b>	<b>\$ 489,052</b>	<b>\$ —</b>

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

<sup>3</sup> The fair value of the 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.

<sup>4</sup> 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)	April 1, 2017	
	Prepaid Expenses and Other Current Assets	Other Accrued Liabilities
<b>Designated hedge derivatives</b>		
Cash flow derivatives	\$ 373	\$ 504
Interest rate swaps	4,310	—
Total designated hedge derivatives	4,683	504
<b>Hedge derivatives not designated</b>		
Balance sheet derivatives	—	196
Total hedge derivatives	\$ 4,683	\$ 700

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

A reconciliation of the net fair value of foreign exchange cash flow hedge assets and liabilities subject to master netting arrangements recorded in the April 1, 2017 and October 1, 2016 Consolidated Balance Sheets to the net fair value that could have been reported in the respective Consolidated Balance Sheets are as follows:

(in thousands)	Gross Recognized Amount	Gross Offset Amount	Net Amount Presented	Derivatives Subject to Offset	Cash Collateral Received	Net Amount <sup>1</sup>
<b>April 1, 2017</b>						
Assets	\$ 4,683	\$ —	\$ 4,683	\$ —	\$ —	\$ 4,683
Liabilities	504	—	504	—	—	504
<b>October 1, 2016</b>						
Assets	\$ 149	\$ —	\$ 149	\$ (147)	\$ —	\$ 2
Liabilities	633	—	633	(147)	—	486

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

**Cash Flow Hedging – Currency Risks**

Currency exchange contracts utilized to maintain the functional currency value of expected financial transactions denominated in foreign currencies are designated as cash flow hedges. Qualifying gains and losses related to changes in the market value of these contracts are reported as a component of accumulated other comprehensive income (loss) (AOCI) within shareholders'



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equity on the Consolidated Balance Sheets and reclassified into earnings in the same period during which the underlying hedged transaction affects earnings. The effective portion of the cash flow hedges represents the change in fair value of the hedge that offsets the change in the functional currency value of the hedged item. We periodically assess whether our currency exchange contracts are effective and, when a contract is determined to be no longer effective as a hedge, we discontinue hedge accounting prospectively. Subsequent changes in the market value of ineffective currency exchange contracts are recognized as an increase or decrease in revenue on the Consolidated Statements of Income as that is the same line item in which the underlying hedged transaction is reported.

As of April 1, 2017 and October 1, 2016, we had outstanding cash flow hedge currency exchange contracts with gross notional U.S. dollar equivalent amounts of \$25,323 and \$29,092, respectively. Upon netting offsetting contracts to sell foreign currencies against contracts to purchase foreign currencies, irrespective of contract maturity dates, the net notional U.S. dollar equivalent amount of contracts outstanding was \$22,509 and \$24,884 as of April 1, 2017 and October 1, 2016, respectively. As of April 1, 2017, the net market value of the foreign currency exchange contracts was a net liability of \$131, consisting of \$504 in liabilities and \$373 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		Six Months Ended	
	April 1, 2017	April 2, 2016	April 1, 2017	April 2, 2016
Beginning unrealized net gain (loss) in AOCI	\$ 1,423	\$ 669	\$ (400)	\$ 608
Net (gain) loss reclassified into revenue (effective portion)	(318)	132	(737)	(18)
Net gain (loss) recognized in OCI (effective portion)	(1,220)	(1,136)	1,022	(925)
Ending unrealized net gain (loss) in AOCI	\$ (115)	\$ (335)	\$ (115)	\$ (335)

The amount recognized in earnings as a result of the ineffectiveness of cash flow hedges was \$6 and \$7 in the three and six months ended April 1, 2017, respectively, and less than \$1 in both the three and six months ended April 2, 2016. As of April 1, 2017 and April 2, 2016, the amount projected to be reclassified from AOCI into earnings in the next twelve months was a net loss of \$117 and \$213, respectively. The maximum remaining maturity of any forward or optional contract as of April 1, 2017 and April 2, 2016 was 1.8 and 1.2 years, respectively.

#### Interest Rate Swaps

On October 20, 2016, we entered into a floating to fixed interest rate swap agreement to mitigate our exposure to interest rate increases related to a portion of our tranche B term loan facility. The total notional amount of the interest rate swap is \$275,000. The swap agreement expires April 3, 2021. As a result of this agreement, every month, we pay fixed interest at 1.256% in exchange for interest received at 1 month U.S. LIBOR. The market value of the interest rate swap at April 1, 2017 was an asset of \$4,310. The interest rate swap has been designated as a cash flow hedge. As a result, changes in the fair value of the interest rate swap are recorded in AOCI within shareholders' equity on the Consolidated Balance Sheets.

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

(in thousands)	Three Months Ended		Six Months Ended	
	April 1, 2017	April 2, 2016	April 1, 2017	April 2, 2016
Beginning unrealized net gain (loss) in AOCI	\$ 4,267	\$ —	\$ —	\$ —
Net (gain) loss reclassified into interest expense (effective portion)	416	—	416	—
Net gain (loss) recognized in OCI (effective portion)	(373)	—	3,894	—
Ending unrealized net gain (loss) in AOCI	\$ 4,310	\$ —	\$ 4,310	\$ —

As of April 1, 2017, the amount projected to be reclassified from AOCI into earnings in the next twelve months was a net loss of \$454.

[Table of Contents](#)**Foreign Currency Balance Sheet Derivatives**

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

As of April 1, 2017 and October 1, 2016, we had outstanding foreign currency balance sheet derivative contracts with gross notional U.S. dollar equivalent amounts of \$52,773 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 April 1, 2017 and October 1, 2016 was \$17,420 and \$1,347, respectively. As of April 1, 2017 and October 1, 2016, the net market value of the foreign exchange balance sheet derivative contracts was a net liability of \$196 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		Six Months Ended	
	April 1, 2017	April 2, 2016	April 1, 2017	April 2, 2016
Net gain (loss) recognized in other income (expense), net	\$ (432)	\$ (743)	\$ (11)	\$ (834)

**NOTE 8 FINANCING**

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

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

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

As of April 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 \$31,612, leaving approximately \$88,388 of unused borrowing capacity. Commitment fees are payable on the unused portion of the Revolving Credit Facility at rates between 0.25% and 0.50% based on the leverage ratio. During the three and six months ended April 1, 2017, commitment fees incurred totaled \$114 and \$215, respectively. During the three and six months ended April 2, 2016, commitment fees incurred on our previous credit facility totaled \$60 and \$123, respectively.

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Long-term debt consisted of the following:

(in thousands)	April 1, 2017	October 1, 2016
<b>Long-term debt</b>		
Tranche B term loan, 1.00% amortizing per year, maturing July 5, 2023	\$ 457,700	\$ 460,000
Tangible equity units, 8.75% coupon, maturing July 1, 2019 <sup>1</sup>	20,788	24,985
Total long-term debt	478,488	484,985
Less: Unamortized underwriting discounts, commissions and other expenses	(15,249)	(16,843)
Less: Current maturities of long-term Tranche B term loan debt <sup>2</sup>	(4,600)	(4,600)
Less: Current maturities of long-term TEU debt <sup>2</sup>	(8,841)	(8,541)
Total long-term debt, less current maturities, net	\$ 449,798	\$ 455,001

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

<sup>2</sup> Current maturities of long-term debt, net of \$10,218 presented on our Consolidated Balance Sheet as of April 1, 2017, includes \$4,600 of current maturities of long-term Tranche B term loan debt and \$8,841 of current maturities of long-term TEU debt less \$3,223 of unamortized underwriting discounts, commissions and issuance costs.

The Term Facility was made available to us on July 5, 2016 to finance the acquisition of PCB. The loans under the Term Facility will amortize in equal quarterly installments in an aggregate annual amount equal to 1.00% of the original principal amount of the Term Facility. At April 1, 2017, the applicable Adjusted LIBO Rate on the Eurocurrency Term Loan Borrowing was 0.99%, plus the Applicable Rate of 4.25%. The weighted average interest rate on Term Facility debt during the six months ended April 1, 2017 was 5.24%.

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.

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 more related disclosures.

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

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

Under the Credit Agreement, we are subject to customary affirmative and negative covenants, including, among others, restrictions on our ability to incur debt, create liens, dispose of assets, make investments, loans, advances, guarantees and acquisitions, enter into transactions with affiliates and enter into any restrictive agreements and customary events of default (including payment defaults, covenant defaults, change of control defaults and bankruptcy defaults). The Credit Agreement also contains financial covenants, including the ratio of consolidated total indebtedness to consolidated earnings before income, taxes, depreciation and amortization (EBITDA), as well as the ratio of consolidated EBITDA to consolidated interest expense. These covenants restrict our ability to pay dividends and purchase outstanding shares of our common stock. At April 1, 2017 and October 1, 2016, we were in compliance with these financial covenants.

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The TEUs had an estimated fair value of \$26,226 and \$28,080 as of April 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 \$462,826 and \$465,465 as of April 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) approved by our shareholders and administered under the supervision of our Board of Directors. During fiscal year 2016, our shareholders approved a 1,500 share increase in the number of shares that may be issued under the 2011 Plan, bringing the aggregate total to 3,800 shares. During the six months ended April 1, 2017, we awarded restricted stock units under the 2011 Plan. During the six months ended April 2, 2016, we awarded stock options and restricted stock units under the 2011 Plan. At April 1, 2017, a total of 2,133 shares were available for future grant under the 2011 Plan. These shares will be available for issuance under the 2011 Plan until January 31, 2018.

In fiscal year 2011, our shareholders approved a 2012 Employee Stock Purchase Plan (2012 ESPP) that was effective on January 1, 2012. During the six months ended April 1, 2017 and April 2, 2016, we issued shares of our common stock to participants under the 2012 ESPP. At April 1, 2017, a total of 651 shares were available for issuance under the 2012 ESPP. Shares will be available for issuance under the 2012 ESPP until December 31, 2021.

Our annual stock option and restricted stock grant is typically made in December. In fiscal year 2017, we did not make an annual stock grant in December due to the previously disclosed internal investigation into our China operations which delayed the filing of our Annual Report on Form 10-K for the fiscal year ended October 1, 2016. During the six months ended April 1, 2017, we granted approximately 2 restricted stock units to employees. During the six months ended April 2, 2016, we granted approximately 314 stock options, 74 restricted stock units and 21 performance restricted stock units to directors, officers and employees.

On April 17, 2017, after the end of our second quarter, we made our annual stock grant which was delayed until after the filing of our Annual Report on Form 10-K for the fiscal year ended October 1, 2016. On that date, we issued approximately 284 stock options, 98 restricted stock units and 34 performance restricted stock units to officers and employees.

***Stock Options***

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

There were no stock options granted during the six months ended April 1, 2017. The weighted average per share fair value of the stock options granted during the six months ended April 1, 2016 was \$11.73. The weighted average assumptions used to determine the fair value of these stock options were as follows:

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

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

**Restricted Stock and Restricted Stock Units**

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

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

The fair value of the restricted stock units and performance restricted stock units granted during the six months ended April 1, 2017 and April 2, 2016 was \$47.73 and \$57.82, respectively, representing the market value of our shares at the date of grant less the present value of estimated foregone dividends over the vesting period.

**NOTE 10 EMPLOYEE BENEFIT PLANS**

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

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

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

(in thousands)	Three Months Ended		Six Months Ended	
	April 1, 2017	April 2, 2016	April 1, 2017	April 2, 2016
Service cost	\$ 342	\$ 243	\$ 691	\$ 482
Interest cost	103	152	209	302
Expected return on plan assets	(260)	(257)	(526)	(510)
Net amortization and deferral	238	146	482	290
Net periodic benefit cost	\$ 423	\$ 284	\$ 856	\$ 564

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 six months ended April 1, 2017 and April 2, 2016 was 5.5% and 5.5%, respectively.

**NOTE 11 INCOME TAXES**

As of April 1, 2017, our liability for unrecognized tax benefits was \$6,325, of which \$3,542 would favorably affect our effective tax rate, if recognized. As of October 1, 2016, our liability for unrecognized tax benefits was \$6,232, of which \$3,429 would favorably affect our effective tax rate, if recognized. As of April 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 <sup>1</sup>		—		(612)	(612)
Issuance of common stock, net	\$	474	\$	73,827	\$ 74,301

<sup>1</sup> Other expenses include direct and incremental costs related to the issuance of the common stock.

**Tangible Equity Units**

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

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

(in thousands, except fair value price per TEU)	Equity Component		Debt Component		Total
Fair value price per TEU <sup>2</sup>	\$	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 <sup>3</sup>		(475)		(149)	(624)
Issuance of TEUs, net	\$	84,511	\$	26,415	\$ 110,926

<sup>2</sup> The fair value price allocation between equity and debt for each TEU was determined using a discounted cash flow model.

<sup>3</sup> 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;

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- if the applicable market value is greater than the reference price of \$42.00 per share, but less than the threshold appreciation price of \$50.40 per share, holders will receive a number of shares of common stock equal to \$100 per TEU divided by the applicable market value; or
- if the applicable market value is less than or equal to the reference price of \$42.00 per share, holders will receive 2,3810 shares of common stock per purchase contract, or the maximum settlement rate, resulting in the issuance of 2,738 shares of our common stock.

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

### *Debt Component*

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

### *Earnings Per Common Share*

The TEUs have a dilutive effect on our earnings per share. The 1,9841 minimum shares to be issued are included in the calculation of basic weighted average shares outstanding. The 0.3969 difference between the minimum shares and the 2,3810 maximum shares are potentially dilutive, and accordingly, are included in our diluted earnings per share on a pro rata basis to the extent the applicable market value is higher than the reference price but less than the threshold appreciation price. See Note 13 for additional information regarding the calculation of earnings per share.

### *Capped Call Transactions*

In connection with the pricing of the TEUs during the third quarter of fiscal year 2016, we entered into capped call transactions with third parties. The capped calls are expected to reduce the potential dilution to our common stock upon settlement of the TEUs to the extent the market price per share of our common stock exceeds the applicable strike price of the capped calls. The capped calls have a strike price of \$50.40 per share, a cap price of \$58.80 per share and are exercisable when the TEUs are converted. If, upon conversion of the TEUs, the price of our common stock is above the strike price of the capped calls, the third parties will deliver shares of common stock to us with an aggregate value approximately equal to the difference between the price of the common stock at the conversion date (with a maximum price for purposes of this calculation equal to the cap price) and the strike price, multiplied by the number of shares of common stock related to the portion of the capped calls being exercised. The capped calls allow for net share settlement when the TEUs are exercised and expire on July 1, 2019. We paid \$7,935 for the capped calls in the third quarter of fiscal year 2016 and recorded the payment as a reduction of additional paid-in capital in the Consolidated Balance Sheets.

## **NOTE 13 EARNINGS PER SHARE**

Basic earnings per share is computed by dividing net income by the daily weighted average number of common shares outstanding during the applicable period. Our TEUs are assumed to be settled at the minimum settlement amount of 1,9841 shares per TEU when calculating weighted-average common shares outstanding for purposes of basic earnings per share.

Using the treasury stock method, diluted earnings per share includes the potentially dilutive effect of common shares issued in connection with outstanding stock-based compensation options and grants. The potentially dilutive effect of common shares issued in connection with outstanding stock options is determined based on the average market price for the period. For diluted earnings per share, our TEUs are assumed to be settled at a conversion factor based on our daily volume-weighted average price per share of our common stock for the 20 consecutive trading days preceding the end of the current fiscal year quarter not to exceed 2,3810 shares of common stock per TEU.

Under the treasury stock method, shares associated with certain stock options have been excluded from the diluted weighted average shares outstanding calculation because the exercise of those options would lead to a net reduction in common shares outstanding or anti-dilution. As a result, stock options to acquire 629 and 729 weighted common shares have been excluded from the diluted weighted average common shares outstanding calculation for the three months ended April 1, 2017 and April 2, 2016, respectively. Stock options to acquire 649 and 627 weighted common shares have been excluded from the diluted weighted average common shares outstanding calculation for the six months ended April 1, 2017 and April 2, 2016, respectively.

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

Basic and diluted earnings per share were calculated as follows:

(in thousands, except per share data)	Three Months Ended		Six Months Ended	
	April 1, 2017	April 2, 2016	April 1, 2017	April 2, 2016
Net income	\$ 7,199	\$ 2,998	\$ 8,904	\$ 14,772
Weighted average common shares outstanding	19,016	14,756	18,992	14,808
Effect of dilutive securities				
Stock-based compensation	93	95	103	117
Weighted average dilutive common shares outstanding	19,109	14,851	19,095	14,925
Earnings per share				
Basic	\$ 0.38	\$ 0.20	\$ 0.47	\$ 1.00
Diluted	\$ 0.38	\$ 0.20	\$ 0.47	\$ 0.99

**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			Six Months Ended		
	April 1, 2017					
	Pretax	Tax	Net	Pretax	Tax	Net
Foreign currency translation gain (loss) adjustments	\$ 3,197	\$ —	\$ 3,197	\$ (6,605)	\$ —	\$ (6,605)
Derivative instruments						
Unrealized net gain (loss)	(1,593)	576	(1,017)	4,916	(1,775)	3,141
Net (gain) loss reclassified to earnings	98	(36)	62	(321)	115	(206)
Defined benefit pension plan						
Unrealized net gain (loss)	284	(86)	198	467	(141)	326
Net (gain) loss reclassified to earnings	238	(71)	167	482	(145)	337
Currency exchange rate gain (loss)	(190)	—	(190)	507	—	507
Other comprehensive income (loss)	\$ 2,034	\$ 383	\$ 2,417	\$ (554)	\$ (1,946)	\$ (2,500)



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(in thousands)	Three Months Ended			Six Months Ended		
	April 2, 2016					
	Pretax	Tax	Net	Pretax	Tax	Net
Foreign currency translation gain (loss) adjustments	\$ 3,286	\$ —	\$ 3,286	\$ 868	\$ —	\$ 868
Derivative instruments						
Unrealized net gain (loss)	(1,136)	412	(724)	(925)	336	(589)
Net (gain) loss reclassified to earnings	132	(48)	84	(18)	7	(11)
Defined benefit pension plan						
Unrealized net gain (loss)	(350)	105	(245)	(174)	52	(122)
Net (gain) loss reclassified to earnings	145	(44)	101	290	(88)	202
Currency exchange rate gain (loss)	(270)	—	(270)	(120)	—	(120)
Other comprehensive income (loss)	\$ 1,807	\$ 425	\$ 2,232	\$ (79)	\$ 307	\$ 228

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

(in thousands)	Three Months Ended				Six Months Ended			
	April 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	\$ (9,129)	\$ 3,635	\$ (9,796)	\$ (15,290)	\$ 673	\$ (255)	\$ (10,791)	\$ (10,373)
Other comprehensive net gain (loss) reclassifications	3,197	(1,017)	8	2,188	(6,605)	3,141	833	(2,631)
Net (gain) loss reclassified to earnings	—	62	167	229	—	(206)	337	131
Other comprehensive income (loss)	3,197	(955)	175	2,417	(6,605)	2,935	1,170	(2,500)
Ending balance	\$ (5,932)	\$ 2,680	\$ (9,621)	\$ (12,873)	\$ (5,932)	\$ 2,680	\$ (9,621)	\$ (12,873)

(in thousands)	Three Months Ended				Six Months Ended			
	April 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	\$ (1,413)	\$ 426	\$ (6,594)	\$ (7,581)	\$ 1,005	\$ 386	\$ (6,968)	\$ (5,577)
Other comprehensive net gain (loss) reclassifications	3,286	(724)	(515)	2,047	868	(589)	(242)	37
Net (gain) loss reclassified to earnings	—	84	101	185	—	(11)	202	191
Other comprehensive income (loss)	3,286	(640)	(414)	2,232	868	(600)	(40)	228
Ending balance	\$ 1,873	\$ (214)	\$ (7,008)	\$ (5,349)	\$ 1,873	\$ (214)	\$ (7,008)	\$ (5,349)

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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		Six Months Ended		Affected Line Item in the Consolidated Statements of Income
	April 1, 2017	April 2, 2016	April 1, 2017	April 2, 2016	
<b>Derivative instruments</b>					
Currency exchange contracts gain (loss)	\$ 318	\$ (132)	\$ 737	\$ 18	Revenue
Interest rate swap contracts gain (loss)	(416)	—	(416)	—	Interest income (expense), net
Income tax benefit (expense)	36	48	(115)	(7)	Provision for income taxes
<b>Total net gain (loss) on derivative instruments</b>	<b>(62)</b>	<b>(84)</b>	<b>206</b>	<b>11</b>	<b>Net income</b>
<b>Defined benefit pension plan</b>					
Actuarial loss	(130)	(79)	(263)	(158)	Cost of sales
Actuarial loss	(67)	(41)	(136)	(82)	Selling and marketing
Actuarial loss	(41)	(25)	(83)	(50)	General and administrative
<b>Total actuarial loss</b>	<b>(238)</b>	<b>(145)</b>	<b>(482)</b>	<b>(290)</b>	<b>Income before income taxes</b>
Income tax benefit	71	44	145	88	Provision for income taxes
<b>Total net loss on pension plan</b>	<b>(167)</b>	<b>(101)</b>	<b>(337)</b>	<b>(202)</b>	<b>Net income</b>
<b>Total net-of-tax reclassifications out of AOCI included in net income</b>	<b>\$ (229)</b>	<b>\$ (185)</b>	<b>\$ (131)</b>	<b>\$ (191)</b>	

**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		Six Months Ended	
	April 1, 2017	April 2, 2016	April 1, 2017	April 2, 2016
<b>Revenue</b>				
Test	\$ 123,840	\$ 113,797	\$ 254,966	\$ 232,607
Sensors	69,584	23,301	137,737	44,992
<b>Total revenue</b>	<b>\$ 193,424</b>	<b>\$ 137,098</b>	<b>\$ 392,703</b>	<b>\$ 277,599</b>
<b>Income from Operations</b>				
Test	\$ 6,367	\$ 1,715	\$ 18,083	\$ 12,102
Sensors	9,045	2,656	7,619	5,870
<b>Total income from operations</b>	<b>\$ 15,412</b>	<b>\$ 4,371</b>	<b>\$ 25,702</b>	<b>\$ 17,972</b>

On January 5, 2017, we announced the division of our Test segment into two separate business units, "Materials Test Systems" and "Vehicles and Structure Test Systems." The division of Test will result in us having three operating segments once discrete

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financial information is made available to the Chief Operating Decision Maker, and 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 by the third quarter of fiscal year 2017. We incurred severance and related pre-tax expense of \$381 and \$944 in the three and six months ended April 1, 2017, respectively. We have incurred a total of \$1,872 of pre-tax expense, including \$1,352 and \$520 related to severance and facility closure costs, respectively. We expect to incur approximately \$100 of additional expenses through the third quarter of fiscal year 2017 related to the Machida facility closing. The severance and facility closing costs are expected to be paid during the third quarter of fiscal year 2017.

During the third quarter of fiscal year 2016, we initiated restructuring actions to further reduce our cost structure by eliminating 61 positions, primarily in our Corporate area and Test segment, through terminations, elimination of certain open positions as a result of employees leaving voluntarily throughout fiscal year 2016 and reductions in contractors. There were no restructuring expenses incurred during the three or six months ended April 1, 2017. The remaining severance and related costs are expected to be paid by the first quarter of fiscal year 2018.

The following table summarizes the restructuring expenses included in our Consolidated Statements of Income for the three and six month periods ended April 1, 2017. There were no restructuring expenses incurred during the three and six months ended April 2, 2016.

(in thousands)	Three Months Ended			Six Months Ended		
	April 1, 2017					
	Test	Sensors	Total	Test	Sensors	Total
Cost of sales	\$ —	\$ 254	\$ 254	\$ —	\$ 580	\$ 580
Selling and marketing	—	45	45	—	126	126
General and administrative	—	82	82	—	238	238
Research and development	—	—	—	—	—	—
<b>Total restructuring expense</b>	<b>\$ —</b>	<b>\$ 381</b>	<b>\$ 381</b>	<b>\$ —</b>	<b>\$ 944</b>	<b>\$ 944</b>

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 six months ended April 1, 2017 or April 2, 2016 related to these restructuring actions.

The following table summarizes the change in our restructuring expense accruals during the six months ended April 1, 2017 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	—	944	—		944
Payments	(157)	(600)	(167)		(924)
Other adjustments	—	—	12		12
Currency translation	(13)	(105)	(51)		(169)
<b>Balance, April 1, 2017</b>	<b>\$ 138</b>	<b>\$ 1,174</b>	<b>\$ 847</b>	<b>\$</b>	<b>2,159</b>

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

(in thousands)	April 1, 2017	October 1, 2016
Accrued payroll and related costs	\$ 1,171	\$ 1,066
Other accrued liabilities	471	520
Other long-term liabilities	517	710
<b>Total severance and related costs</b>	<b>\$ 2,159</b>	<b>\$ 2,296</b>

**NOTE 17 BUSINESS ACQUISITIONS**

On July 5, 2016, we acquired 100% of the outstanding capital stock of PCB for an estimated purchase price of \$581,407 subject to certain adjustments for cash, indebtedness, transaction costs and the level of net working capital that were made at closing. The transaction was accounted for under the acquisition method of accounting. PCB is a manufacturer of piezoelectric sensors and components used for pressure, force and vibration measurement and is headquartered in Depew, New York. We funded the acquisition of PCB with existing cash on hand as well as funds raised through borrowings under the Term Facility in an aggregate principal amount of \$460,000, proceeds from registered public offerings of our TEUs and common stock and the \$43,500 of restricted cash that was placed in escrow during the third quarter of fiscal year 2016 to secure termination fees that would have become payable to PCB had the acquisition not occurred under the definitive purchase agreement. The restricted cash was paid to the shareholders of PCB as part of the estimated purchase price. See Note 8 and Note 12 for additional financing information. The acquired assets, liabilities and operating results have been included in our financial statements within Sensors from the date of acquisition. During the three and six months ended April 1, 2017, we included \$42,227 and \$87,458 of revenue and operating income of \$3,491 and \$294 from PCB in our Consolidated Statements of Income, respectively. The operating income for the three and six months ended April 1, 2017 includes \$0 and \$7,724, respectively, of fair value adjustment to the acquired PCB inventory. The recognition of additional expense related to the fair value adjustment of acquired PCB inventory was completed in the first quarter of fiscal year 2017.

The estimated purchase price of PCB consisted of the following:

(in thousands)

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

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

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

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

(in thousands)

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

The fair value measurement was preliminary at April 1, 2017, pending resolution of any purchase price adjustments. We expect the fair value measurement process to be completed as soon as possible, but no later than one year from the acquisition date. Given the size and complexity of the acquisition, the valuation of certain assets and liabilities, is still being completed, and is subject to final review. Specifically, PCB's tax accounts are provisional pending the completion and review of such assets and liabilities. To the extent that our estimates require adjustment, we will modify the values accordingly. The gross amount of the accounts receivable acquired was \$21,726, of which \$841 is expected to be uncollectible.

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

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

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The fair value of the acquired intangible assets is \$248,900. The expected lives of the acquired intangible assets are approximately 15 years for developed technology, 16 years for customer lists, 5.4 years for leasehold interest and 3 years for finite-lived trademarks and trade names and are being amortized on a straight-line basis. Trade names having a 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		Six Months Ended	
	April 2, 2016			
Revenue	\$	180,343	\$	365,984
Net income		324		5,228
Earnings per share				
Basic	\$	0.02	\$	0.28
Diluted	\$	0.02	\$	0.27

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

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

- Incremental amortization and depreciation expense related to the estimated fair value of identifiable intangible assets and property, plant and equipment from the purchase price allocation.
- Exclusion of the purchase accounting impact of the incremental charge reported in cost of sales for the sale of acquired inventory that was written-up to fair value of \$7,724 in the first quarter of fiscal year 2017.
- Includes \$7,656 and \$15,312 of interest expense on outstanding debt entered into as part of funding the acquisition for the three and six months ended April 2, 2016, respectively.
- Pro forma adjustments tax affected by 20% tax rate for both the three and six months ended April 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 six months ended April 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 second quarter for fiscal year 2016 ended on April 2, 2016, while PCB's first quarter for fiscal year 2016 would have ended on March 31, 2016. The unaudited pro forma financial information for the second quarter of fiscal year 2016 combines our unaudited financial information for the second fiscal quarter ended April 2, 2016 and the unaudited financial information of PCB for the three months ended March 31, 2016. The unaudited pro forma financial information for the six months ended April 2, 2016 combines our unaudited financial information for the first two fiscal quarters ended December 31, 2016 and April 2, 2016, respectively and the unaudited financial information of PCB for both of the three months ended December 31, 2015 and March 31, 2016.

**NOTE 18 SUBSEQUENT EVENTS**

On April 17, 2017, we made our annual stock grant which was delayed from its typical timing in December of each year due to the delay in the filing of our Annual Report on Form 10-K for the fiscal year ended October 1, 2016. On that date, we issued approximately 284 stock options, 98 restricted stock units and 34 performance restricted stock units to officers and employees.

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

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

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

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

### Overview

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

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

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

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

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

### Terms

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

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**Restructuring Initiative**

During the fourth quarter of fiscal year 2016, we initiated plans to close our Machida, Japan facility by the third quarter of fiscal year 2017. We incurred restructuring expense of \$381 and \$944 in the three and six months ended April 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.

**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				
	April 1, 2017	Estimated			April 2, 2016
		Business Change	Acquisition / Restructuring <sup>1</sup>	Currency Translation	
<b>Revenue</b>	\$ 193,424	\$ 16,721	42,227	\$ (2,622)	\$ 137,098
<b>Cost of sales</b>	114,568	2,604	22,247	(2,237)	91,954
<b>Gross profit</b>	78,856	14,117	19,980	(385)	45,144
Gross margin	40.8%				32.9%
<b>Operating expenses</b>					
Selling and marketing	30,627	373	9,566	(314)	21,002
General and administrative	23,556	4,201	5,554	(218)	14,019
Research and development	9,261	1,104	2,440	(35)	5,752
<b>Total operating expenses</b>	63,444	5,678	17,560	(567)	40,773
<b>Income from operations</b>	\$ 15,412	\$ 8,439	2,420	\$ 182	\$ 4,371

(in thousands)	Six Months Ended				
	April 1, 2017	Estimated			April 2, 2016
		Business Change	Acquisition / Restructuring <sup>1</sup>	Currency Translation	
<b>Revenue</b>	\$ 392,703	\$ 30,096	\$ 87,458	\$ (2,450)	\$ 277,599
<b>Cost of sales</b>	240,383	9,891	52,695	(2,147)	179,944
<b>Gross profit</b>	152,320	20,205	34,763	(303)	97,655
Gross margin	38.8%				35.2%
<b>Operating expenses</b>					
Selling and marketing	61,097	591	19,048	(198)	41,656
General and administrative	47,579	6,955	14,003	(360)	26,981
Research and development	17,942	2,197	4,740	(41)	11,046
<b>Total operating expenses</b>	126,618	9,743	37,791	(599)	79,683
<b>Income from operations</b>	\$ 25,702	\$ 10,462	\$ (3,028)	\$ 296	\$ 17,972

<sup>1</sup> 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.



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**Revenue**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1,	April 2,	Increased / (Decreased)		April 1,	April 2,	Increased / (Decreased)	
	2017	2016	\$	%	2017	2016	\$	%
Revenue	\$ 193,424	\$ 137,098	\$ 56,326	41.1%	\$ 392,703	\$ 277,599	\$ 115,104	41.5%

Revenue for the three and six months ended April 1, 2017 increased by 41.1% and 41.5%, respectively, primarily due to the PCB acquisition and higher revenue in our Test and legacy Sensors businesses, partially offset by the unfavorable impact of currency translation. Test revenue increased \$10,043 and \$22,359, respectively, primarily due to a focus on project execution and backlog conversion. Sensors revenue increased \$46,283 and \$92,745, respectively, primarily driven by the PCB acquisition and organic growth in position sensors revenue.

**Gross Profit**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1,	April 2,	Increased / (Decreased)		April 1,	April 2,	Increased / (Decreased)	
	2017	2016	\$	%	2017	2016	\$	%
Gross profit	\$ 78,856	\$ 45,144	\$ 33,712	74.7%	\$ 152,320	\$ 97,655	\$ 54,665	56.0%
Gross margin	40.8%	32.9%	7.9	ppts	38.8%	35.2%	3.6	ppts

Gross profit for the three months ended April 1, 2017 increased 74.7%. Gross margin rate increased 7.9 percentage points primarily due to continued focus on project execution in the Test business, gross profit contribution from the PCB acquisition and leverage on higher revenue volume in Test and organic Sensors, partially offset by PCB integration costs and restructuring expenses. Excluding the impact of currency translation, the PCB acquisition and restructuring costs, the gross margin rate increased 5.6 percentage points.

Gross profit for the six months ended April 1, 2017 increased 56.0%. Our gross margin rate increased 3.6 percentage points compared to the same period in the prior year primarily due to continued focus on project execution in the Test business, gross profit contribution from the PCB acquisition and leverage on higher revenue volume in Test and organic Sensors, partially offset by a \$7,724 fair value adjustment related to the acquired inventory of PCB recorded in the first quarter of fiscal year 2017, PCB integration costs and restructuring expenses. Excluding the impact of currency translation, the PCB acquisition and restructuring costs, the gross margin rate increased 3.1 percentage points.

**Selling and Marketing Expense**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1,	April 2,	Increased / (Decreased)		April 1,	April 2,	Increased / (Decreased)	
	2017	2016	\$	%	2017	2016	\$	%
Selling and marketing	\$ 30,627	\$ 21,002	\$ 9,625	45.8%	\$ 61,097	\$ 41,656	\$ 19,441	46.7%
% of Revenue	15.8%	15.3%			15.6%	15.0%		

Selling and marketing expense for the three months ended April 1, 2017 increased by 45.8% primarily due to the addition of PCB expenses, restructuring costs and China investigation expenses of \$385, partially offset by the favorable impact of currency translation. Excluding the impact of currency translation, PCB expenses, restructuring costs and China investigation expenses, selling and marketing expense remained flat.

Selling and marketing expense for the six months ended April 1, 2017 increased by 46.7% primarily due to the addition of PCB expenses, restructuring costs, China investigation expenses of \$385 and higher compensation expense, partially offset by the favorable impact of currency translation. Excluding the impact of currency translation, PCB expenses, restructuring costs and China investigation expenses, selling and marketing expense increased 0.5%.

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**General and Administrative Expense**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
General and administrative	\$ 23,556	\$ 14,019	\$ 9,537	68.0%	\$ 47,579	\$ 26,981	\$ 20,598	76.3%
% of Revenue	12.2%	10.2%			12.1%	9.7%		

General and administrative expense for the three months ended April 1, 2017 increased by 68.0% primarily due to China investigation expenses of \$6,169, the addition of current period PCB expenses and restructuring costs, partially offset by non-recurring PCB acquisition-related expenses of \$1,351 incurred in the prior year and a decrease in stock-based compensation expense due to the delay in our annual equity grant. Excluding the impact of currency translation, all PCB expenses, restructuring costs and China investigation expenses, general and administrative expenses decreased 4.9%.

General and administrative expense for the six months ended April 1, 2017 increased by 76.3% primarily due to the addition of current period PCB expenses, restructuring costs, China investigation expenses of \$8,145 and an increase in Test bad debt expense, partially offset by non-recurring PCB acquisition-related expenses of \$1,351 incurred in the prior year, a decrease in stock-based compensation expense due to the delay in our annual equity grant and the favorable impact of currency translation. Excluding the impact of currency translation, all PCB expenses, restructuring costs and China investigation expenses, general and administrative expenses increased 0.6%.

**Research and Development Expense**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Research and development	\$ 9,261	\$ 5,752	\$ 3,509	61.0%	\$ 17,942	\$ 11,046	\$ 6,896	62.4%
% of Revenue	4.8%	4.2%			4.6%	4.0%		

Research and development (R&D) expense for the three and six months ended April 1, 2017 increased by 61.0% and 62.4%, respectively, primarily due to the addition of PCB expenses, additional focused R&D spending to meet certain market needs and China investigation expenses of \$205 in both periods. Excluding the impact of currency translation, PCB expenses, restructuring costs and China investigation expenses, R&D expense increased 15.6% and 18.0%, respectively.

**Income from Operations**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Income from operations	\$ 15,412	\$ 4,371	\$ 11,041	252.6%	\$ 25,702	\$ 17,972	\$ 7,730	43.0%
% of Revenue	8.0%	3.2%			6.5%	6.5%		

Income from operations for the three and six months ended April 1, 2017 increased primarily due to higher gross profit, partially offset by higher operating expenses, which included the PCB contribution to income from operations, restructuring costs and expenses related to the China investigation of \$6,759 and \$8,735, respectively.

**Interest Income (Expense), Net**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Interest income (expense), net	\$ (7,418)	\$ (257)	\$ (7,161)	(2,786.4)%	\$ (14,698)	\$ (458)	\$ (14,240)	(3,109.2)%

Interest expense, net for the three and six months ended April 1, 2017 increased due to interest incurred of \$6,108 and \$12,018, respectively, related to the tranche B term loan, \$1,007 and \$2,022, respectively, from amortization of capitalized debt issuance costs and \$399 and \$834, respectively, related to the TEUs.

**Other Income (Expense), Net**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Other income (expense), net	\$ 666	\$ 107	\$ 559	522.4%	\$ (163)	\$ (203)	\$ 40	19.7%

The increase in other income (expense), net for the three months ended April 1, 2017 was primarily driven by gains on foreign currency transactions.

Other income (expense), net for the six months ended April 1, 2017 was relatively flat.

**Provision for Income Taxes**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Provision for income taxes	\$ 1,461	\$ 1,223	\$ 238	19.5%	\$ 1,937	\$ 2,539	\$ (602)	(23.7)%
Effective Rate	16.9%	29.0%			17.9%	14.7%		

The effective tax rate was lower for the three months ended April 1, 2017 primarily due to changes in certain foreign tax rates, a more favorable geographic mix of earnings with earnings in foreign jurisdictions generally taxed at lower rates than the U.S. and a lower annual forecasted income before taxes relative to the U.S. R&D tax credit in the current period. The effective tax rate was higher for the six months ended April 1, 2017 primarily due to a discrete benefit of \$2,283 recognized during the six months ended April 2, 2016 related to the enactment of legislation on December 18, 2015 that made the U.S. R&D tax credit permanent. This was partially offset by changes in certain foreign tax rates, lower income before taxes and a more favorable geographic mix of earnings for the six months ended April 1, 2017.

**Net Income**

(in thousands, except per share data)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Net income	\$ 7,199	\$ 2,998	\$ 4,201	140.1%	\$ 8,904	\$ 14,772	\$ (5,868)	(39.7)%
Diluted earnings per share	\$ 0.38	\$ 0.20	\$ 0.18	90.0%	\$ 0.47	\$ 0.99	\$ (0.52)	(52.5)%

Net income for the three months ended April 1, 2017 increased due to higher gross profit, partially offset by higher operating expenses and increased interest expense. The improvement in diluted EPS was driven by continued focus on project execution and the contribution from the PCB acquisition, which was partially offset by China investigation expenses, the issuance of common stock and TEUs in the third quarter of fiscal year 2016, PCB acquisition integration expenses and restructuring costs.

Net income for the six months ended April 1, 2017 declined due to higher gross profit being more than offset by higher operating expenses and increased interest expense. The decline in diluted EPS was driven by PCB acquisition, which included a \$7,724 fair value adjustment related to the acquired inventory of PCB recorded in the first quarter of fiscal year 2017, restructuring costs, the issuance of common stock and TEUs in the third quarter of fiscal year 2016 and China investigation expenses.

**Segment Results**
**Test Segment**
**Results of Operations**

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

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	Estimated		April 2, 2016	April 1, 2017	Estimated		April 2, 2016
		Business Change	Currency Translation			Business Change	Currency Translation	
<b>Revenue</b>	\$ 123,840	\$ 12,053	\$ (2,010)	\$ 113,797	\$ 254,966	\$ 24,580	\$ (2,221)	\$ 232,607
<b>Cost of sales</b>	79,106	431	(1,953)	80,628	163,398	7,029	(2,050)	158,419
<b>Gross profit</b>	44,734	11,622	(57)	33,169	91,568	17,551	(171)	74,188
Gross margin	36.1%			29.1%	35.9%			31.9%
<b>Operating expenses</b>								
Selling and marketing	17,338	444	(262)	17,156	34,408	1,089	(260)	33,579
General and administrative	15,686	5,922	(178)	9,942	28,623	8,750	(355)	20,228
Research and development	5,343	993	(6)	4,356	10,454	2,184	(9)	8,279
<b>Total operating expenses</b>	38,367	7,359	(446)	31,454	73,485	12,023	(624)	62,086
<b>Income from operations</b>	\$ 6,367	\$ 4,263	\$ 389	\$ 1,715	\$ 18,083	\$ 5,528	\$ 453	\$ 12,102

**Revenue**

(in thousands)	Three Months Ended			Six Months Ended				
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Revenue	\$ 123,840	\$ 113,797	\$ 10,043	8.8%	\$ 254,966	\$ 232,607	\$ 22,359	9.6%

Revenue for the three and six months ended April 1, 2017 increased by 8.8% and 9.6%, respectively, primarily due to focus on project execution and backlog conversion, partially offset by the unfavorable impact of currency translation. Excluding the impact of currency translation, revenue increased 10.6% for each of the three and six months ended April 1, 2017, as the revenue improvement in the Americas and Asia regions more than offset the decline in the Europe region.

**Gross Profit**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Gross profit	\$ 44,734	\$ 33,169	\$ 11,565	34.9%	\$ 91,568	\$ 74,188	\$ 17,380	23.4%
Gross margin	36.1%	29.1%	7.0	ppts	35.9%	31.9%	4.0	ppts

Gross profit for the three and six months ended April 1, 2017 increased by 34.9% and 23.4%, respectively, primarily due to a focus on project execution and higher revenue volume. The gross margin rate increased 7.0 and 4.0 percentage points, respectively, primarily due to focus on project execution and direct labor resource utilization, increased sales volume and decreased warranty claims, partially offset by ongoing investments in engineering resources. Excluding the impact of currency translation, gross margin increased 6.5 and 3.8 percentage points, respectively.

**Selling and Marketing Expense**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Selling and marketing	\$ 17,338	\$ 17,156	\$ 182	1.1%	\$ 34,408	\$ 33,579	\$ 829	2.5%
% of Revenue	14.0%	15.1%			13.5%	14.4%		

Selling and marketing expense for the three months ended April 1, 2017 increased by 1.1% primarily due to China investigation expenses of \$385 and higher compensation costs, partially offset by the favorable impact of currency translation. Excluding the impact of currency translation and China investigation expenses, selling and marketing expense increased 0.3%.

The selling and marketing expense increase of 2.5% for the six months ended April 1, 2017 was primarily driven by higher compensation expenses and China investigation expenses of \$385, partially offset by a decrease in stock-based compensation expense due to a delay in our annual equity grant. Excluding the impact of currency translation and China investigation expenses, selling and marketing expense increased 2.1%.

**General and Administrative Expense**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
General and administrative	\$ 15,686	\$ 9,942	\$ 5,744	57.8%	\$ 28,623	\$ 20,228	\$ 8,395	41.5%
% of Revenue	12.7%	8.7%			11.2%	8.7%		

General and administrative expense for the three months ended April 1, 2017 increased by 57.8% primarily due to the China investigation expenses of \$6,169, partially offset by a decrease in stock-based compensation expense due to a delay in our annual equity grant and the favorable impact of currency translation. Excluding the impact of currency translation and China investigation expenses, general and administrative expense decreased 2.5%.

General and administrative expense increased by 41.5% for the six months ended April 1, 2017 primarily due to the China investigation expenses of \$8,145 and increased bad debt expense, partially offset by a decrease in stock-based compensation expense due to a delay in our annual equity grant and the favorable impact of currency translation. Excluding the impact of currency translation and China investigation expenses, general and administrative expense increased 3.0%.

**Research and Development Expense**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Research and development	\$ 5,343	\$ 4,356	\$ 987	22.7%	\$ 10,454	\$ 8,279	\$ 2,175	26.3%
% of Revenue	4.3%	3.8%			4.1%	3.6%		

Research and development (R&D) expense for the three and six months ended April 1, 2017 increased by 22.7% and 26.3%, respectively, primarily due to additional focused R&D spending to meet certain market needs and China investigation expenses of \$205 in both periods. Excluding the impact of currency translation and China investigation expense, R&D expense increased 18.1% and 23.9%, respectively.

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**Income from Operations**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Income from operations	\$ 6,367	\$ 1,715	\$ 4,652	271.3%	\$ 18,083	\$ 12,102	\$ 5,981	49.4%
% of Revenue	5.1%	1.5%			7.1%	5.2%		

Income from operations for the three and six months ended April 1, 2017 increased by 271.3% and 49.4%, respectively, due to an increase in gross profit from higher revenue and improvements on prior year project execution inefficiencies, partially offset by higher operating expenses which included \$6,759 and \$8,735, respectively, of expenses related to the China investigation.

**Sensors Segment**

**Results of Operations**

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

(in thousands)	Three Months Ended				
	April 1, 2017	Estimated			April 2, 2016
		Business Change	Acquisition / Restructuring <sup>1</sup>	Currency Translation	
<b>Revenue</b>	\$ 69,584	\$ 4,668	\$ 42,227	\$ (612)	\$ 23,301
<b>Cost of sales</b>	35,462	2,173	22,247	(284)	11,326
<b>Gross profit</b>	34,122	2,495	19,980	(328)	11,975
Gross margin	49.0%				51.4%
<b>Operating expenses</b>					
Selling and marketing	13,289	(71)	9,566	(52)	3,846
General and administrative	7,870	(1,721)	5,554	(40)	4,077
Research and development	3,918	111	2,440	(29)	1,396
<b>Total operating expenses</b>	25,077	(1,681)	17,560	(121)	9,319
<b>Income (loss) from operations</b>	\$ 9,045	\$ 4,176	\$ 2,420	\$ (207)	\$ 2,656

(in thousands)	Six Months Ended				
	April 1, 2017	Estimated			April 2, 2016
		Business Change	Acquisition / Restructuring <sup>1</sup>	Currency Translation	
<b>Revenue</b>	\$ 137,737	\$ 5,516	\$ 87,458	\$ (229)	\$ 44,992
<b>Cost of sales</b>	76,985	2,862	52,695	(97)	21,525
<b>Gross profit</b>	60,752	2,654	34,763	(132)	23,467
Gross margin	44.1%				52.2%
<b>Operating expenses</b>					
Selling and marketing	26,689	(498)	19,048	62	8,077
General and administrative	18,956	(1,795)	14,003	(5)	6,753
Research and development	7,488	13	4,740	(32)	2,767
<b>Total operating expenses</b>	53,133	(2,280)	37,791	25	17,597
<b>Income (loss) from operations</b>	\$ 7,619	\$ 4,934	\$ (3,028)	\$ (157)	\$ 5,870

<sup>1</sup> 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				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Revenue	\$ 69,584	\$ 23,301	\$ 46,283	198.6%	\$ 137,737	\$ 44,992	\$ 92,745	206.1%

Revenue increased by 198.6% and 206.1%, respectively, during the three and six months ended April 1, 2017 primarily due to increased sales volume as a result of the acquisition of PCB and organic growth in position sensors. Excluding the impact of currency translation and the impact of the PCB acquisition, revenue was up 20.0% and 12.3%, respectively, due to increased sales in all regions.

**Gross Profit**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Gross profit	\$ 34,122	\$ 11,975	\$ 22,147	184.9%	\$ 60,752	\$ 23,467	\$ 37,285	158.9%
Gross margin	49.0%	51.4%	(2.4)	ppts	44.1%	52.2%	(8.1)	ppts

Gross profit increased by 184.9% during the three months ended April 1, 2017 primarily due to increased revenue volume as a result of the PCB acquisition and increased revenue volume in our legacy Sensors business. The gross margin rate declined 2.4 percentage points primarily due to the gross profit contribution from the PCB acquisition, additional labor costs incurred from the movement of production in Machida, Japan to the United States due to the closing of the Machida facility and restructuring costs of \$254, partially offset by leverage on increased organic revenue volume. Excluding the impact of currency translation, the PCB acquisition and restructuring costs, the gross margin rate increased 0.3 percentage points.

Gross profit increased by 158.9% for the six months ended April 1, 2017 primarily due to increased revenue volume as a result of the PCB acquisition and increased revenue volume in our legacy Sensors business. The gross margin rate declined 8.1 percentage points primarily due to the gross profit contribution from the PCB acquisition, which included a \$7,724 fair value adjustment on the acquired inventory recognized in the first quarter of fiscal year 2017, additional labor costs incurred from the movement of production in Machida, Japan to the United States due to the closing of the Machida facility and restructuring costs of \$580. Excluding the impact of currency translation, the PCB acquisition and restructuring costs, the gross margin rate declined 0.5 percentage points.

**Selling and Marketing Expense**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Selling and marketing	\$ 13,289	\$ 3,846	\$ 9,443	245.5%	\$ 26,689	\$ 8,077	\$ 18,612	230.4%
% of Revenue	19.1%	16.5%			19.4%	18.0%		

The increase of 245.5% and 230.4%, respectively, in selling and marketing expense for the three and six months ended April 1, 2017 was primarily driven by the addition of PCB expenses and restructuring costs, partially offset by a decrease in compensation expense. Excluding the impact of currency translation, PCB expenses and restructuring costs, selling and marketing expense declined 1.8% and 6.2%, respectively.

**General and Administrative Expense**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
General and administrative	\$ 7,870	\$ 4,077	\$ 3,793	93.0%	\$ 18,956	\$ 6,753	\$ 12,203	180.7%
% of Revenue	11.3%	17.5%			13.8%	15.0%		

General and administrative expense for the three and six months ended April 1, 2017 increased by 93.0% and 180.7%, respectively, primarily driven by the addition of PCB expenses and restructuring costs, partially offset by non-recurring PCB acquisition-related expenses of \$1,351 incurred in the prior year and a decrease in compensation expense. Excluding the impact of currency translation, all PCB expenses and restructuring costs, general and administrative expense decreased 13.6% and 8.2%, respectively.

**Research and Development Expense**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Research and development	\$ 3,918	\$ 1,396	\$ 2,522	180.7%	\$ 7,488	\$ 2,767	\$ 4,721	170.6%
% of Revenue	5.6%	6.0%			5.4%	6.1%		

R&D expense increased 180.7% for the three months ended April 1, 2017 primarily driven by the addition of PCB expenses and increased spending to support new projects. Excluding the impact of currency translation, PCB expenses and restructuring costs, R&D expense increased 8.0%.

R&D expense increased by 170.6% for the six months ended April 1, 2017 primarily driven by the addition of PCB expenses and increased spending to support new projects, partially offset by lower compensation from headcount reductions. Excluding the impact of currency translation, PCB expenses and restructuring costs, R&D expense increased 0.5%.

**Income from Operations**

(in thousands)	Three Months Ended				Six Months Ended			
	April 1, 2017	April 2, 2016	Increased / (Decreased)		April 1, 2017	April 2, 2016	Increased / (Decreased)	
			\$	%			\$	%
Income from operations	\$ 9,045	\$ 2,656	\$ 6,389	240.5%	\$ 7,619	\$ 5,870	\$ 1,749	29.8%
% of Revenue	13.0%	11.4%			5.5%	13.0%		

Income from operations increased 240.5% in the three months ended April 1, 2017 primarily due to increased organic gross profit, the current year PCB contribution to income from operations and non-recurring PCB acquisition-related costs of \$1,351 incurred in the prior year. Excluding the impact of currency translation, the PCB acquisition and restructuring expenses, income from operations increased 70.5% driven by an increase in gross profit and lower operating expenses in our legacy Sensors business from lower compensation expense.

Income from operations increased 29.8% for the six months ended April 1, 2017 primarily due to increased organic gross profit, a reduction in operating expenses and non-recurring PCB acquisition-related expenses of \$1,351 incurred in the prior year, partially offset by the \$7,724 fair value adjustment on the acquired inventory related to the acquisition of PCB recorded in the first quarter of fiscal year 2017 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 and restructuring expenses, income from operations increased 49.6% driven by increased gross profit and a decrease in operating expenses.



### **Cash Flow Comparison**

Total cash and cash equivalents increased \$12,653 for the six months ended April 1, 2017 primarily due to an increase of \$24,118 in working capital resulting from general timing of purchases and payments consisting of a \$14,437 increase in receipts of customer advances and a \$15,233 increase in cash receipts from accounts and unbilled contracts receivable, partially offset by \$3,627 in payments of accounts payable and a \$1,925 change in inventory. The increase in cash and cash equivalents was also driven by \$16,832 of depreciation and amortization and a \$7,724 fair value adjustment to acquired inventory, partially offset by dividend payments of \$9,955, investments of \$9,318 in property and equipment, \$6,319 in accrued payroll and related cost payments, a \$4,197 payment on TEU debt, a \$3,383 reduction in deferred income taxes and a \$3,055 increase in prepaid expenses.

Total cash and cash equivalents increased \$11,579 for the six months ended April 2, 2016 primarily driven by a reduction of \$24,677 in working capital requirements consisting of a \$32,494 increase in customer advances, \$3,635 increase in accounts payable, partially offset by a \$9,352 and \$2,100 increase in inventories and unbilled receivables, respectively. \$14,772 of net income and \$9,886 in depreciation and amortization also contributed to the increase in cash and cash equivalents. The increase was partially offset by the purchase of \$18,362 of our common stock, investment in property and equipment of \$11,197 and dividend payments of \$4,513.

*Cash flows from operating activities* provided cash of \$41,175 and \$40,854 for the six months ended April 1, 2017 and April 2, 2016, respectively.

Cash provided by operating activities for the six months ended April 1, 2017 was primarily generated from \$16,832 of depreciation and amortization, \$15,233 increased cash receipts on accounts and unbilled contract receivables, \$14,437 increased advance payments received from customers, \$8,904 net income and a \$7,724 fair value adjustment to acquired inventory. The cash received was partially offset by \$9,329 in other assets and liabilities due to timing, \$6,319 increased accrued payroll and related cost payments, \$3,627 increase in accounts payable resulting from general timing of purchases and payments and a \$3,383 decrease in deferred income taxes.

Cash provided by operating activities for the six months ended April 2, 2016 was primarily generated from \$32,494 in increased advanced payments received from customers, \$14,772 in net income, \$9,886 of depreciation and amortization and \$3,635 from increased accounts payable resulting from general timing of purchases and payments. The cash received was partially offset by \$10,600 in other assets and liabilities due to timing and \$9,352 in increased inventories to support future revenue.

*Cash flows from investing activities* used cash of \$9,293 and \$9,877 for the six months ended April 1, 2017 and April 2, 2016, respectively, primarily for the purchase of property and equipment to support business growth.

*Cash flows from financing activities* used cash of \$16,455 and \$20,144 for the six months ended April 1, 2017 and April 2, 2016, respectively.

Cash used by financing activities for the six months ended April 1, 2017 was primarily driven by dividend payments of \$9,955, a \$4,197 payment on TEU debt and a \$2,300 payment on the Tranche B term loan.

Cash used by financing activities for the six months ended April 2, 2016 was primarily driven by the purchase of shares under our share purchase program and stock-based compensation arrangements for \$18,362, as well as to pay dividends of \$4,513. The cash used was partially offset by \$2,560 in proceeds from stock option exercises and share purchases under our ESPP.

### **Liquidity and Capital Resources**

We had cash and cash equivalents of \$97,433 as of April 1, 2017. Of this amount, approximately \$33,926 was located in North America, \$33,585 in Europe and \$29,922 in Asia. Of the \$63,507 of cash located outside of North America, approximately \$37,590 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 April 1, 2017, we held no short-term investments.

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At April 1, 2017, our capital structure consisted of \$13,441 in short-term debt, \$465,047 in long-term debt and \$404,044 in shareholders' equity. The Consolidated Balance Sheet also includes \$18,472 of unamortized debt issuance costs at April 1, 2017. Total interest-bearing debt at April 1, 2017 was \$478,488. On July 5, 2016, we entered into a credit agreement with a consortium of financial institutions (the Credit Agreement). The Credit Agreement provides for senior secured credit facilities consisting of a Revolving Credit Facility and a Term Facility. The maturity date of the Revolving Credit Facility is July 5, 2021 and the maturity date of the loans under the Term Facility is July 5, 2023, unless a term loan lender agrees to extend the maturity date pursuant to a loan modification agreement made in accordance with the terms of the Credit Agreement.

Under the Credit Agreement, we are subject to customary affirmative and negative covenants, including restrictions on our ability to incur debt, create liens, dispose of assets, make investments, loans, advances, guarantees and acquisitions, enter into transactions with affiliates and enter into any restrictive agreements and customary event defaults (including payment defaults, covenant defaults, change of control defaults and bankruptcy defaults). The Credit Agreement also contains financial covenants, including the ratio of consolidated total indebtedness to consolidated earnings before interest, taxes, depreciation and amortization (EBITDA), as well as the ratio of consolidated EBITDA to consolidated interest expense. These covenants restrict our ability to pay dividends and purchase outstanding shares of common stock. At April 1, 2017 and October 1, 2016, we were in compliance with these financial covenants.

Shareholders' equity decreased by \$1,216 during the six months ended April 1, 2017, primarily due to \$10,034 in dividends declared, \$2,500 in other comprehensive loss and \$1,482 in purchases and retirements of our common stock, partially offset by net income of \$8,904, stock-based compensation of \$2,365, employee exercise of stock options of \$1,157 and employee stock purchases of \$515.

### **Off-Balance Sheet Arrangements**

As of April 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,

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income or loss, earnings or loss per share, the payment or nonpayment of dividends, capital structure, the adequacy of our liquidity and reserves, the continued listing of our shares of common stock on NASDAQ, the anticipated level of expenditures required and other statements concerning future financial performance; (ii) statements of our plans and objectives by our management or Board of Directors, including those relating to products or services, merger or acquisition activity and the potential impact of newly acquired businesses; (iii) statements of assumptions underlying such statements; (iv) statements regarding business relationships with vendors, customers or collaborators or statements relating to our order cancellation history, our ability to convert our backlog of undelivered orders into revenue, the timing of purchases, competitive advantages and growth in end markets; (v) statements relating to the potential business and financial impact that our internal investigation in China may have on our financial condition, results of operations and internal controls; (vi) statements regarding our ability to report additional operating segments in the future; and (vii) statements regarding products, their characteristics, fluctuations in the costs of raw materials for products, our geographic footprint, performance, sales potential or effect in the hands of customers. Words such as “believes,” “anticipates,” “expects,” “intends,” “targeted,” “should,” “potential,” “goals,” “strategy,” and similar expressions are intended to identify forward-looking statements, but are not the exclusive means of identifying such statements.

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

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

#### **Foreign Currency Exchange Risk**

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

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

A hypothetical 10% appreciation or depreciation in foreign currencies against the U.S. dollar, assuming all other variables are held constant, would result in an increase or decrease in revenue of approximately \$13,988 for the six months ended April 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 in the Consolidated Balance Sheets. We recognize gains and losses associated with the fair value of cash flow hedges at the time a gain or loss is recognized on the hedged exposure in the Consolidated Statements of Income or at the time the cash flow hedge is determined to be ineffective. The associated mark-to-market gains and losses are reclassified from accumulated other comprehensive income to the same line item in the Consolidated Statements of Income upon which the underlying hedged transaction is reported. Net gains and losses on foreign currency transactions, included in the accompanying Consolidated Statements of Income, were a net loss of \$1,245 in the six months ended April 1, 2017 and a net loss of \$1,313 in the six months ended April 2, 2016. See Note 7 to the Consolidated Financial Statements included in Item 1 of Part I of this Quarterly Report on Form 10-Q.

#### **Interest Rates**

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

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

As of April 1, 2017, we had cash and cash equivalents of \$97,433, most of which was invested in interest-bearing bank deposits or money market funds, with interest rates that are reset every 1 to 89 days. A hypothetical increase or decrease of 1% in market interest rates, assuming all other variables were held constant, would increase or decrease interest income by approximately \$45 for the six months ended April 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 one percentage point in floating interest rates, assuming all other variables were held constant, would increase future interest expense by approximately \$1,756 on an annualized basis. We have mitigated a portion of this risk by swapping the variable rate for a fixed rate on our term debt. See Note 7 to the Consolidated Financial Statements included in Item 1 of Part I of this Quarterly Report on Form 10-Q.

**Item 4. Controls and Procedures**

(a) Evaluation of Disclosure Controls and Procedures

Our management, including our Chief Executive Officer and Chief Financial Officer, have conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act) as of April 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 April 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.

We acquired PCB on July 5, 2016, and management excluded PCB from its assessment of internal control over financial reporting as of October 1, 2016 and our evaluation of disclosure controls and procedures as of April 1, 2017. PCB represented \$691,477 of our consolidated total assets at April 1, 2017 and \$87,458 of our consolidated revenue for the six months ended April 1, 2017.

(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

Other than the actions described under "Remediation of Material Weakness in Internal Control over Financial Reporting," there were no other changes in the Company's internal control over financial reporting during the second quarter of fiscal year 2017 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting. We continue to implement the remediation plan outlined above to remediate the material weakness identified as part of our annual 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.

## PART II – OTHER INFORMATION

### Item 1. Legal Proceedings

#### ***Internal Investigation Related to China Operations***

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

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

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

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

#### ***Government Investigation***

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

#### ***Litigation***

We are subject to various claims, legal actions and complaints arising in the ordinary course of business. We believe the final resolution of legal matters outstanding as of April 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**

The following table presents repurchases of our equity securities we made during the fiscal quarter ended April 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
January 1, 2017 - February 4, 2017	—	\$ —	—	438
February 5, 2017 - March 4, 2017	—	\$ —	—	438
March 5, 2017 - April 1, 2017	—	\$ —	—	438
Total	—	\$ —	—	

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

**Item 6. Exhibits**

<b>Exhibit Number</b>	<b>Description</b>
10.1	Form of Consent Memorandum, effective as of January 24, 2017, executed by the lenders party thereto and JPMorgan Chase Bank, N.A. as administrative agent, and acknowledged and agreed to by the Company, incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed January 24, 2017.
10.2	Mutual Separation and Release Agreement dated April 18, 2017, by and between MTS Systems Corporation and Catherine L. Powell, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed April 18, 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: May 8, 2017

/s/ JEFFREY A. GRAVES

Jeffrey A. Graves

President and Chief Executive Officer

(Principal Executive Officer)

Date: May 8, 2017

/s/ JEFFREY P. OLDENKAMP

Jeffrey P. Oldenkamp

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: May 8, 2017

/s/ JEFFREY A. GRAVES

Jeffrey A. Graves

President and Chief Executive Officer

## SARBANES-OXLEY SECTION 302 CERTIFICATION

I, Jeffrey P. Oldenkamp, certify that:

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

Date: May 8, 2017

/s/ JEFFREY P. OLDENKAMP

Jeffrey P. Oldenkamp

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 April 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: May 8, 2017

/s/ JEFFREY A. GRAVES

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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, Jeffrey P. Oldenkamp, the Chief Financial Officer of MTS Systems Corporation (the "Company"), has executed this Certification in connection with the filing with the Securities and Exchange Commission of the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended April 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: May 8, 2017

/s/ JEFFREY P. OLDENKAMP

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Jeffrey P. Oldenkamp

Senior Vice President and Chief Financial Officer

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

