
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2019

OR

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

For the transition period from _____ to _____

Commission File Number: 0-21184



MICROCHIP TECHNOLOGY INCORPORATED
(Exact Name of Registrant as Specified in Its Charter)

Delaware

86-0629024

(State or Other Jurisdiction of Incorporation or Organization)

(IRS Employer Identification No.)

**2355 W. Chandler Blvd., Chandler, AZ 85224-6199
(480) 792-7200**

(Address, Including Zip Code, and Telephone Number,
Including Area Code, of Registrant's
Principal Executive Offices)

Indicate by checkmark 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 the 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, a 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 ☒
Non-accelerated filer ☐

Accelerated filer ☐
Smaller reporting company ☐
Emerging growth company ☐

(Do not check if a smaller reporting company)

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). (Check One)

Yes ☐ No ☒

Shares Outstanding of Registrant's Common Stock

<u>Title of Each Class</u>	<u>Trading Symbol</u>	<u>Name of Each Exchange on Which Registered</u>	October 31, 2019
Common Stock, \$0.001 par value	MCHP	NASDAQ Stock Market LLC (Nasdaq Global Select Market)	238,977,636 shares

MICROCHIP TECHNOLOGY INCORPORATED AND SUBSIDIARIES

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

MICROCHIP TECHNOLOGY INCORPORATED AND SUBSIDIARIES CONDENSED CONSOLIDATED BALANCE SHEETS

(in millions, except share and per share amounts)
(unaudited)

ASSETS	September 30, 2019	March 31, 2019
Cash and cash equivalents	\$ 401.8	\$ 428.6
Short-term investments	3.3	2.3
Accounts receivable, net	848.6	880.6
Inventories	734.2	711.7
Other current assets	189.9	191.6
Total current assets	2,177.8	2,214.8
Property, plant and equipment, net	937.0	996.7
Goodwill	6,664.6	6,663.9
Intangible assets, net	6,187.3	6,685.6
Long-term deferred tax assets	1,662.0	1,677.2
Other assets	229.8	111.8
Total assets	\$ 17,858.5	\$ 18,350.0
LIABILITIES AND STOCKHOLDERS' EQUITY		
Accounts payable	\$ 235.6	\$ 226.4
Accrued liabilities	800.5	787.3
Current portion of long-term debt	1,387.3	1,360.8
Total current liabilities	2,423.4	2,374.5
Long-term debt	8,415.3	8,946.2
Long-term income tax payable	716.5	756.2
Long-term deferred tax liability	577.9	706.1
Other long-term liabilities	364.1	279.5
Stockholders' equity:		
Preferred stock, \$0.001 par value; authorized 5,000,000 shares; no shares issued or outstanding	—	—
Common stock, \$0.001 par value; authorized 450,000,000 shares; 253,232,909 shares issued and 238,763,453 shares outstanding at September 30, 2019; 253,232,909 shares issued and 237,589,501 shares outstanding at March 31, 2019	0.2	0.2
Additional paid-in capital	2,731.5	2,679.6
Common stock held in treasury: 14,469,456 shares at September 30, 2019; 15,643,408 shares at March 31, 2019	(545.2)	(582.2)
Accumulated other comprehensive loss	(22.3)	(20.7)
Retained earnings	3,197.1	3,210.6
Total stockholders' equity	5,361.3	5,287.5
Total liabilities and stockholders' equity	\$ 17,858.5	\$ 18,350.0

See accompanying notes to condensed consolidated financial statements

MICROCHIP TECHNOLOGY INCORPORATED AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF INCOME
(in millions, except per share amounts)
(unaudited)

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
Net sales	\$ 1,337.8	\$ 1,432.5	\$ 2,660.4	\$ 2,644.9
Cost of sales (1)	510.3	743.2	1,017.7	1,313.6
Gross profit	827.5	689.3	1,642.7	1,331.3
Research and development (1)	219.8	221.9	438.9	393.8
Selling, general and administrative (1)	172.3	176.6	340.2	340.7
Amortization of acquired intangible assets	248.2	169.9	496.7	303.6
Special charges and other, net (1)	3.6	18.2	11.7	58.3
Operating expenses	643.9	586.6	1,287.5	1,096.4
Operating income	183.6	102.7	355.2	234.9
Losses on equity method investments	—	(0.1)	—	(0.1)
Other income (expense):				
Interest income	1.0	0.9	1.7	6.6
Interest expense	(129.6)	(138.6)	(262.2)	(229.0)
Loss on settlement of debt	(0.1)	(4.1)	(2.0)	(4.1)
Other (loss) income, net	(1.4)	(0.2)	1.3	(10.0)
Income (loss) before income taxes	53.5	(39.4)	94.0	(1.7)
Income tax benefit	(55.4)	(135.7)	(65.6)	(133.7)
Net income	\$ 108.9	\$ 96.3	\$ 159.6	\$ 132.0
Basic net income per common share	\$ 0.46	\$ 0.41	\$ 0.67	\$ 0.56
Diluted net income per common share	\$ 0.43	\$ 0.38	\$ 0.63	\$ 0.52
Dividends declared per common share	\$ 0.3660	\$ 0.3640	\$ 0.7315	\$ 0.7275
Basic common shares outstanding	238.4	235.8	238.1	235.5
Diluted common shares outstanding	255.3	251.8	254.6	252.0
(1) Includes share-based compensation expense as follows:				
Cost of sales	\$ 5.2	\$ 3.9	\$ 10.1	\$ 7.5
Research and development	\$ 22.3	\$ 19.7	\$ 41.8	\$ 33.8
Selling, general and administrative	\$ 17.8	\$ 17.8	\$ 34.1	\$ 29.5
Special charges and other, net	\$ —	\$ 1.2	\$ —	\$ 17.1

See accompanying notes to condensed consolidated financial statements

MICROCHIP TECHNOLOGY INCORPORATED AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions)
(unaudited)

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
Net income	\$ 108.9	\$ 96.3	\$ 159.6	\$ 132.0
Components of other comprehensive (loss) income:				
Available-for-sale securities:				
Unrealized holding losses, net of tax effect	—	—	—	(5.6)
Reclassification of realized transactions, net of tax effect	—	—	—	5.6
Defined benefit plans:				
Actuarial gains (losses) related to defined benefit pension plans, net of tax (provision) benefit	2.5	(0.9)	1.7	3.5
Reclassification of realized transactions, net of tax effect	0.2	0.2	0.4	0.5
Change in net foreign currency translation adjustment	(2.7)	(1.1)	(2.4)	(1.4)
Other comprehensive (loss) income, net of tax effect	—	(1.8)	(0.3)	2.6
Comprehensive income	\$ 108.9	\$ 94.5	\$ 159.3	\$ 134.6

See accompanying notes to condensed consolidated financial statements

MICROCHIP TECHNOLOGY INCORPORATED AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(in millions)
(unaudited)

	Six Months Ended September 30,	
	2019	2018
Cash flows from operating activities:		
Net income	\$ 159.6	\$ 132.0
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	604.7	393.8
Deferred income taxes	(110.9)	(71.6)
Share-based compensation expense related to equity incentive plans	86.0	87.9
Loss on settlement of debt	2.0	4.1
Amortization of debt discount	60.2	56.3
Amortization of debt issuance costs	8.5	7.5
Losses on equity method investments	—	0.1
Impairment of intangible assets	0.5	3.1
(Gains) losses on available-for-sale investments and marketable equity securities, net	(1.0)	6.2
Amortization of premium on available-for-sale investments	—	(0.2)
Changes in operating assets and liabilities, excluding impact of acquisitions:		
Decrease in accounts receivable	32.1	65.4
(Increase) decrease in inventories	(20.2)	261.5
Decrease in accounts payable and accrued liabilities	(8.4)	(37.8)
Change in other assets and liabilities	(0.9)	(25.1)
Change in income tax payable	(35.6)	(93.3)
Net cash provided by operating activities	776.6	789.9
Cash flows from investing activities:		
Purchases of available-for-sale investments	—	(167.7)
Maturities of available-for-sale investments	—	75.9
Sales of available-for-sale investments	—	1,376.6
Acquisition of Microsemi, net of cash acquired	—	(7,850.6)
Investments in other assets	(13.6)	(8.9)
Proceeds from sale of assets	0.5	0.1
Capital expenditures	(41.6)	(161.4)
Net cash used in investing activities	(54.7)	(6,736.0)
Cash flows from financing activities:		
Proceeds from issuance of 2023 and 2021 Senior Notes	—	1,989.5
Proceeds from borrowings on term loan facility	—	3,000.0
Repayments of term loan facility	(188.0)	(267.0)
Proceeds from borrowings on revolving loan under credit facility	427.0	3,632.5
Repayments of revolving loan under credit facility	(812.0)	(532.5)
Repayment of debt assumed in Microsemi acquisition	—	(2,056.9)
Deferred financing costs	(1.8)	(72.7)
Payment of cash dividends	(174.4)	(171.4)
Proceeds from sale of common stock	27.5	20.3
Tax payments related to shares withheld for vested restricted stock units	(26.6)	(36.9)
Capital lease payments	(0.4)	(0.4)
Net cash (used in) provided by financing activities	(748.7)	5,504.5
Net decrease in cash and cash equivalents	(26.8)	(441.6)
Cash and cash equivalents, and restricted cash at beginning of period ⁽²⁾	428.6	901.3
Cash and cash equivalents, and restricted cash at end of period ⁽²⁾	\$ 401.8	\$ 459.7

Supplemental disclosure of cash flow information

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	Six Months Ended September 30,	
	2019	2018
Non-cash activities:		
Right-of-use assets obtained in exchange of lease liabilities	\$ 17.3	\$ —
Cash paid for:		
Operating lease payments in operating cash flows	\$ 13.1	\$ —

⁽²⁾ Schedule of restricted cash

The following table presents the balance of restricted cash which consists of cash denominated in a foreign currency and restricted in use due to a foreign taxing authority requirement (in millions):

	September 30, 2019	March 31, 2019
Restricted cash	\$ 37.3	\$ 38.4

See accompanying notes to condensed consolidated financial statements

MICROCHIP TECHNOLOGY INCORPORATED AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(in millions)
(unaudited)

	Common Stock and Additional Paid-in- Capital		Common Stock Held in Treasury		Accumulated Other Comprehensive Income	Retained Earnings	Total Equity
	Shares	Amount	Shares	Amount			
Balance at March 31, 2018	253.2	\$ 2,562.7	18.2	\$ (662.6)	\$ (17.6)	\$ 1,397.3	\$ 3,279.8
Net income	—	—	—	—	—	35.7	35.7
Other comprehensive income	—	—	—	—	4.4	—	4.4
Adoption of ASU 2016-01, cumulative adjustment	—	—	—	—	(1.7)	1.7	—
Adoption of ASU 2016-16, cumulative adjustment	—	—	—	—	—	1,558.1	1,558.1
Adoption of ASC 606, cumulative adjustment	—	—	—	—	—	241.9	241.9
Non-cash consideration, exchange of employee stock awards - Microsemi acquisition	—	53.9	—	—	—	—	53.9
Proceeds from sales of common stock through employee equity incentive plans	0.7	6.4	—	—	—	—	6.4
Restricted stock unit and stock appreciation right withholdings	(0.2)	(16.8)	—	—	—	—	(16.8)
Treasury stock used for new issuances	(0.5)	(14.9)	(0.5)	14.9	—	—	—
Share-based compensation	—	45.9	—	—	—	—	45.9
Cash dividend	—	—	—	—	—	(85.5)	(85.5)
Balance at June 30, 2018	253.2	2,637.2	17.7	(647.7)	(14.9)	3,149.2	5,123.8
Net income	—	—	—	—	—	96.3	96.3
Other comprehensive loss	—	—	—	—	(1.8)	—	(1.8)
Proceeds from sales of common stock through employee equity incentive plans	0.9	13.9	—	—	—	—	13.9
Restricted stock unit and stock appreciation right withholdings	(0.2)	(20.1)	—	—	—	—	(20.1)
Treasury stock used for new issuances	(0.7)	(22.3)	(0.7)	22.3	—	—	—
Share-based compensation	—	44.0	—	—	—	—	44.0
Cash dividend	—	—	—	—	—	(85.9)	(85.9)
Balance at September 30, 2018	253.2	\$ 2,652.7	17.0	\$ (625.4)	\$ (16.7)	\$ 3,159.6	\$ 5,170.2
Balance at March 31, 2019	253.2	\$ 2,679.8	15.6	\$ (582.2)	\$ (20.7)	\$ 3,210.6	\$ 5,287.5
Net income	—	—	—	—	—	50.7	50.7
Other comprehensive income	—	—	—	—	(0.3)	—	(0.3)
Adoption of ASU 2018-02, cumulative adjustment	—	—	—	—	(1.3)	1.3	—
Proceeds from sales of common stock through employee equity incentive plans	0.5	7.3	—	—	—	—	7.3
Restricted stock unit and stock appreciation right withholdings	(0.1)	(11.4)	—	—	—	—	(11.4)
Treasury stock used for new issuances	(0.4)	(13.8)	(0.4)	13.8	—	—	—
Share-based compensation	—	41.6	—	—	—	—	41.6
Cash dividend	—	—	—	—	—	(87.1)	(87.1)
Balance at June 30, 2019	253.2	2,703.5	15.2	(568.4)	(22.3)	3,175.5	5,288.3
Net Income	—	—	—	—	—	108.9	108.9
Other comprehensive income	—	—	—	—	—	—	—
Proceeds from sales of common stock through employee equity incentive plans	0.9	20.2	—	—	—	—	20.2

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	Common Stock and Additional Paid-in- Capital		Common Stock Held in Treasury		Accumulated Other Comprehensive Income	Retained Earnings	Total Equity
	Shares	Amount	Shares	Amount			
Restricted stock unit and stock appreciation right withholdings	(0.2)	(15.2)	—	—	—	—	(15.2)
Treasury stock used for new issuances	(0.7)	(23.2)	(0.7)	23.2	—	—	—
Share-based compensation	—	46.4	—	—	—	—	46.4
Cash dividend	—	—	—	—	—	(87.3)	(87.3)
Balance at September 30, 2019	253.2	\$ 2,731.7	14.5	\$ (545.2)	\$ (22.3)	\$ 3,197.1	\$ 5,361.3

See accompanying notes to condensed consolidated financial statements

MICROCHIP TECHNOLOGY INCORPORATED AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Note 1. Basis of Presentation

The accompanying unaudited condensed consolidated financial statements include the accounts of Microchip Technology Incorporated and its majority-owned and controlled subsidiaries (the Company). All intercompany balances and transactions have been eliminated in consolidation. All dollar amounts in the financial statements and tables in these notes, except per share amounts, are stated in millions of U.S. dollars unless otherwise noted.

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America (US GAAP), pursuant to the rules and regulations of the Securities and Exchange Commission (the SEC). The information furnished herein reflects all adjustments which are, in the opinion of management, of a normal recurring nature and necessary for a fair statement of the results for the interim periods reported. Certain information and footnote disclosures normally included in audited consolidated financial statements have been condensed or omitted pursuant to such SEC rules and regulations. It is suggested that these condensed consolidated financial statements be read in conjunction with the audited consolidated financial statements and the notes thereto included in the Company's Annual Report on Form 10-K for the fiscal year ended March 31, 2019. As further discussed in Note 3, on May 29, 2018, the Company completed its acquisition of Microsemi Corporation (Microsemi) and the Company's fiscal 2019 financial results include Microsemi's results beginning as of such acquisition date. The results of operations for the three and six months ended September 30, 2019 are not indicative of the results that may be expected for the fiscal year ending March 31, 2020 or for any other period.

Note 2. Recently Issued Accounting Pronouncements

Recently Adopted Accounting Pronouncements

On April 1, 2019, the Company adopted Accounting Standards Codification Topic 842, *Leases*. This standard requires lessees to recognize a lease liability and a right-of-use asset on the balance sheet and aligns many of the underlying principles of the new lessor model with those in Topic 606, *Revenue from Contracts with Customers*. Topic 842 is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2018, with early adoption permitted. The Company adopted Topic 842 using the retrospective cumulative effect adjustment transition method by recording right-of-use assets of \$124.6 million, accrued lease liabilities of \$39.4 million and other long-term liabilities of \$97.9 million. Under this method, periods prior to fiscal 2020 remain unchanged. The Company applied the package of practical expedients to leases that commenced before the effective date whereby the Company elected to not reassess the following: (i) whether any expired or existing contracts contain leases; (ii) the lease classification for any expired or existing leases; and (iii) initial direct costs for any existing leases. See Note 11 for further information and disclosures related to the adoption of this standard.

In February 2018, the FASB issued ASU 2018-02, *Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*. This guidance provides an option to reclassify from accumulated other comprehensive income to retained earnings the stranded tax effects resulting from the Tax Cuts and Jobs Act of 2017 (the "Act"). This ASU is effective for all entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The Company adopted the standard and elected to reclassify the income tax effects of the Act from accumulated other comprehensive income to retained earnings effective April 1, 2019. The cumulative impact of adoption resulted in an immaterial change to retained earnings.

Recently Issued Accounting Pronouncements Not Yet Adopted

In January 2017, the FASB issued ASU 2017-04-*Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*, which simplifies the accounting for goodwill impairment. The guidance removes Step 2 of the goodwill impairment test, which requires a hypothetical purchase price allocation. A goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. The amendment is effective for annual periods and interim periods within those annual periods, beginning after December 15, 2019, and early adoption is permitted. The Company does not expect this standard to have an impact on its condensed consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13-*Financial Instruments - Credit Losses: Measurement of Credit Losses on Financial Instruments*. This standard requires entities to use a current lifetime expected credit loss methodology to measure impairments of certain financial assets. Using this methodology will result in earlier recognition of losses than under the

current incurred loss approach, which required waiting to recognize a loss until it is probable of having been incurred. The amendments in ASU 2016-13 broaden the information that an entity must consider in developing its expected credit loss estimate for assets measured either collectively or individually and can include forecasted information. There are other provisions within the standard affecting how impairments of other financial assets may be recorded and presented, as well as expanded disclosures. ASU 2016-13 is effective for interim and annual periods beginning after December 15, 2019, and permits early adoption, but not before December 15, 2018. The standard is to be applied using a modified retrospective approach. The Company is currently evaluating the impact the adoption of this standard will have on its condensed consolidated financial statements.

Note 3. Business Acquisitions

Acquisition of Microsemi

On May 29, 2018, the Company completed its acquisition of Microsemi Corporation, a publicly traded company headquartered in Aliso Viejo, California. The Company paid an aggregate of approximately \$8.19 billion in cash to the stockholders of Microsemi. The total consideration transferred in the acquisition, including approximately \$53.9 million of non-cash consideration for the exchange of certain share-based payment awards of Microsemi for stock awards of the Company, was approximately \$8.24 billion. In addition to the consideration transferred, the Company recognized in its consolidated financial statements \$3.23 billion in liabilities of Microsemi consisting of debt, taxes payable and deferred, restructuring, and contingent and other liabilities of which \$2.06 billion of existing debt was paid off. The Company financed the purchase price using approximately \$8.10 billion of borrowings consisting of \$3.10 billion under its amended and restated revolving line of credit (the "Revolving Credit Facility"), \$3.00 billion of term loans ("Term Loan Facility") provided under the Company's amended and restated credit agreement (the "Credit Agreement"), and \$2.00 billion in newly issued senior secured notes. The Company incurred \$22.0 million in acquisition costs related to the acquisition. As a result of the acquisition, Microsemi became a wholly owned subsidiary of the Company. Microsemi offers a comprehensive portfolio of semiconductor and system solutions for aerospace and defense, communications, data center and industrial markets. The Company's primary reason for this acquisition was to expand the Company's range of solutions, products and capabilities by extending its served available market.

The acquisition was accounted for under the acquisition method of accounting, with the Company identified as the acquirer, and the operating results of Microsemi have been included in the Company's consolidated financial statements as of the closing date of the acquisition. Under the acquisition method of accounting, the aggregate amount of consideration paid by the Company was allocated to Microsemi's net tangible assets and intangible assets based on their estimated fair values as of May 29, 2018. The excess of the purchase price over the value of the net tangible assets and intangible assets was recorded to goodwill. The factors contributing to the recognition of goodwill were based upon the Company's conclusion that there are strategic and synergistic benefits that are expected to be realized from the acquisition. The goodwill has been allocated to the Company's semiconductor products reporting segment. None of the goodwill related to the Microsemi acquisition is deductible for tax purposes. The Company retained independent third-party appraisers to assist management in its valuation of the acquired assets and liabilities.

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The table below represents the allocation of the purchase price to the net assets acquired based on their estimated fair values, as well as the associated estimated useful lives of the acquired intangible assets (in millions).

Assets acquired

Cash and cash equivalents	\$	340.0
Accounts receivable		215.6
Inventories		576.2
Other current assets		85.2
Property, plant and equipment		201.5
Goodwill		4,364.9
Purchased intangible assets		5,634.5
Long-term deferred tax assets		5.9
Other assets		53.3
Total assets acquired		11,477.1

Liabilities assumed

Accounts payable	(233.8)
Other current liabilities	(149.3)
Long-term debt	(2,056.9)
Deferred tax liabilities	(565.1)
Long-term income tax payable	(177.7)
Other long-term liabilities	(49.8)
Total liabilities assumed	(3,232.6)
Purchase price allocated	<u>\$ 8,244.5</u>

Purchased Intangible Assets

	Weighted Average Useful Life (in years)	May 29, 2018 (in millions)
Core and developed technology	15	\$ 4,569.1
In-process research and development	—	847.1
Customer-related	12	200.2
Backlog	1	12.3
Other	4	5.8
Total purchased intangible assets		<u>\$ 5,634.5</u>

Purchased intangible assets include core and developed technology, in-process research and development, customer-related intangibles, acquisition-date backlog and other intangible assets.

The estimated fair values of the core and developed technology and in-process research and development were determined based on the present value of the expected cash flows to be generated by the respective existing technology or future technology. The core and developed technology intangible assets are being amortized in a manner based on the expected cash flows used in the initial determination of fair value.

In-process research and development is capitalized until such time as the related projects are completed or abandoned at which time the capitalized amounts will begin to be amortized or written off.

Customer-related intangible assets consist of Microsemi's contractual relationships and customer loyalty related to its distributor and end-customer relationships. The fair values of the customer-related intangibles were determined using the distributor method, a form of the income approach based on distributor margin and expected attrition and revenue growth for Microsemi's existing customers as of the acquisition date. Customer relationships are being amortized in a manner based on the estimated cash flows associated with the existing customers and anticipated retention rates.

Backlog relates to the value of orders not yet shipped by Microsemi at the acquisition date, and the fair values were determined based on the estimated profit associated with those orders. Backlog related assets have a one year useful life and are being amortized on a straight-line basis over that period.

The total weighted average amortization period of intangible assets acquired as a result of the Microsemi transaction is 13 years. Amortization expense associated with acquired intangible assets is not deductible for tax purposes. Thus, approximately \$856.7 million was established as a net deferred tax liability for the future amortization of the intangible assets.

Note 4. Segment Information

The Company's reportable segments are semiconductor products and technology licensing. The Company does not allocate operating expenses, interest income, interest expense, other income or expense, or provision for or benefit from income taxes to these segments for internal reporting purposes, as the Company does not believe that allocating these expenses is beneficial in evaluating segment performance. Additionally, the Company does not allocate assets to segments for internal reporting purposes as it does not manage its segments by such metrics.

The following table represents net sales and gross profit for each segment for the three and six months ended September 30, 2019 (in millions):

	Three Months Ended September 30, 2019		Six Months Ended September 30, 2019	
	Net Sales	Gross Profit	Net Sales	Gross Profit
Semiconductor products	\$ 1,314.6	\$ 804.3	\$ 2,618.6	\$ 1,600.9
Technology licensing	23.2	23.2	41.8	41.8
Total	<u>\$ 1,337.8</u>	<u>\$ 827.5</u>	<u>\$ 2,660.4</u>	<u>\$ 1,642.7</u>

The following table represents net sales and gross profit for each segment for the three and six months ended September 30, 2018 (in millions):

	Three Months Ended September 30, 2018		Six Months Ended September 30, 2018	
	Net Sales	Gross Profit	Net Sales	Gross Profit
Semiconductor products	\$ 1,394.3	\$ 651.1	\$ 2,580.0	\$ 1,266.4
Technology licensing	38.2	38.2	64.9	64.9
Total	<u>\$ 1,432.5</u>	<u>\$ 689.3</u>	<u>\$ 2,644.9</u>	<u>\$ 1,331.3</u>

Note 5. Net Sales

The following table represents the Company's net sales by product line (in millions):

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
Microcontrollers	\$ 697.8	\$ 778.6	\$ 1,406.1	\$ 1,500.9
Analog, interface, mixed signal and timing products	393.9	419.2	780.3	751.1
Field-programmable gate array products	93.2	70.8	184.2	108.7
Licensing, memory and other	152.9	163.9	289.8	284.2
Total net sales	<u>\$ 1,337.8</u>	<u>\$ 1,432.5</u>	<u>\$ 2,660.4</u>	<u>\$ 2,644.9</u>

The product lines listed above are included entirely in the Company's semiconductor product segment with the exception of the licensing, memory and other product line, which includes products from both the semiconductor product and technology licensing segments.

The following table represents the Company's net sales by contract type (in millions).

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
Distributors	\$ 666.1	\$ 712.4	\$ 1,331.2	\$ 1,358.0
Direct customers	648.5	681.9	1,287.4	1,222.0
Licensees	23.2	38.2	41.8	64.9
Total net sales	<u>\$ 1,337.8</u>	<u>\$ 1,432.5</u>	<u>\$ 2,660.4</u>	<u>\$ 2,644.9</u>

Distributors are customers that buy products with the intention of reselling them. Distributors generally have a distributor agreement with the Company to govern the terms of the relationship. Direct customers are non-distributor customers, which generally do not have a master sales agreement with the Company. The Company's direct customers primarily consist of original equipment manufacturers (OEMs) and, to a lesser extent, contract manufacturers. Licensees are customers of the Company's technology licensing segment, which include purchasers of intellectual property and customers that have licensing agreements to use the Company's SuperFlash® embedded flash and Smartbits® one time programmable NVM technologies. All of the contract types listed in the table above are included in the Company's semiconductor product segment with the exception of licensees, which is the technology licensing segment.

Substantially all of the Company's net sales are recognized from contracts with customers.

Semiconductor Product Segment

For contracts related to the purchase of semiconductor products, the Company satisfies its performance obligation when control of the ordered product transfers to the customer. The timing of the transfer of control depends on the agreed upon shipping terms with the customer, but generally occurs upon shipment, which is when physical possession of the product has been transferred and legal title of the product transfers to the customer. Payment is generally due within 30 days of the ship date. Payment is generally collected after the Company satisfies its performance obligation, therefore contract liabilities are uncommon. Also, the Company usually does not record contract assets because the Company has an unconditional right to payment upon satisfaction of the performance obligation, and therefore, a receivable is more commonly recorded than a contract asset. Refer to Note 10 for the opening and closing balances of the Company's receivables. As contracts with customers generally have an expected duration of one year or less, the balance of open performance obligations as of period end that will be recognized as revenue subsequent to September 30, 2020 is immaterial.

Generally, there is only a single performance obligation in the Company's contracts with customers for semiconductor products; as such, the entire transaction price is allocated to the single performance obligation and allocation of the transaction price to individual performance obligations is not necessary. The consideration received from customers is fixed, with the

exception of consideration from certain distributors. Certain of the Company's distributors are granted price concessions and return rights, which result in variable consideration. The amount of revenue recognized for sales to these certain distributors is adjusted for estimates of the price concessions and return rights that are expected to be claimed. These estimates are based on the recent history of price concessions and stock rotations.

Technology Licensing Segment

The technology licensing segment includes sales and licensing of the Company's intellectual property. For contracts related to the sale of the Company's intellectual property, the Company satisfies its performance obligation and recognizes revenue when control of the intellectual property transfers to the customer. For contracts related to the licensing of the Company's technology, the Company satisfies its performance obligation and recognizes revenue as usage of the license occurs. The transaction price is fixed by the license agreement. Payment is collected after the Company satisfies its performance obligation, and therefore no contract liabilities are recorded. The Company does not record contract assets due to the fact that the Company has an unconditional right to payment upon satisfaction of the performance obligation, and therefore, the Company recognizes a receivable instead of a contract asset. Refer to Note 10 for the opening and closing balances of the Company's receivables.

Note 6. Special Charges and Other, Net

The following table summarizes activity included in the "special charges and other, net" caption on the Company's condensed consolidated statements of income (in millions):

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
Restructuring				
Employee separation costs	\$ 0.6	\$ 12.1	\$ 7.3	\$ 57.2
Impairment charges	—	1.5	0.5	3.5
Contract exit costs	0.5	4.0	0.5	(3.0)
Other	0.3	0.6	1.2	0.6
Legal contingencies	2.2	—	2.2	—
Total	<u>\$ 3.6</u>	<u>\$ 18.2</u>	<u>\$ 11.7</u>	<u>\$ 58.3</u>

The Company continuously evaluates its existing operations in an attempt to identify and realize cost savings opportunities and operational efficiencies. This same approach is applied to businesses that are acquired by the Company and often the operating models of acquired companies are not as efficient as the Company's operating model which enables the Company to realize significant savings and efficiencies. As a result, following an acquisition, the Company will from time to time incur restructuring expenses; however, the Company is often not able to estimate the timing or amount of such costs in advance of the period in which they occur. The primary reason for this is that the Company regularly reviews and evaluates each position, contract and expense against the Company's strategic objectives, long-term operating targets and other operational priorities. Decisions related to restructuring activities are made on a "rolling basis" during the course of the integration of an acquisition whereby department managers, executives and other leaders work together to evaluate each of these expenses and make recommendations. As a result of this approach, at the time of an acquisition, the Company is not able to estimate the future amount of expected employee separation or exit costs that it will incur in connection with its restructuring activities.

The Company's restructuring expenses during the three and six months ended September 30, 2019 and September 30, 2018 were primarily related to the Company's most recent business acquisitions, and resulted from workforce, property and other operating expense rationalizations as well as combining product roadmaps and manufacturing operations. These expenses were for employee separation costs and intangible asset impairment charges. The impairment charges in fiscal 2019 were primarily recognized as a result of writing off intangible assets purchased from Microsemi prior to the close of the acquisition and other intangible assets that were impaired as a result of changes in the combined product roadmaps after the acquisition that affected the use and life of the assets. Additional costs will be incurred in the future as additional synergies or operational efficiencies are identified in connection with the Microsemi transaction or other previous acquisitions. In this regard, the Company estimates it will incur costs of \$15 million to \$25 million associated with restructuring certain of its wafer fabrication operations over the next year. The Company is not able to estimate the amount of other such future expenses at this time.

All of the Company's restructuring activities occurred in its semiconductor products segment. The Company incurred \$112.9 million in costs since the start of fiscal 2017 in connection with employee separation activities, of which \$0.6 million

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and \$7.3 million were incurred during the three and six months ended September 30, 2019, respectively, and \$12.1 million and \$57.2 million were incurred during the three and six months ended September 30, 2018, respectively. The Company could incur future expenses as additional synergies or operational efficiencies are identified. The Company is not able to estimate future expenses, if any, to be incurred in employee separation costs. The Company has incurred \$40.6 million in costs in connection with contract exit activities since the start of fiscal 2017 which includes expense of \$0.5 million for each of three and six months ended September 30, 2019, respectively, compared to an expense of \$4.0 million and income of \$3.0 million for three and six months ended September 30, 2018, respectively.

The following is a roll forward of accrued restructuring charges for the six months ended September 30, 2019 (in millions):

	Restructuring		Non- Restructuring	
	Employee Separation Costs	Exit Costs	Exit Costs	Total
Balance at March 31, 2019	\$ 12.9	\$ 19.2	\$ 15.7	\$ 47.8
Charges	7.3	0.5	—	7.8
Payments	(8.1)	(3.2)	(2.4)	(13.7)
Non-cash - Other	0.6	0.6	0.2	1.4
Effect of adoption of ASC 842	—	(12.5)	—	(12.5)
Balance at September 30, 2019	<u>\$ 12.7</u>	<u>\$ 4.6</u>	<u>\$ 13.5</u>	<u>\$ 30.8</u>
Current				\$ 21.2
Non-current				9.6
Total				<u>\$ 30.8</u>

The liability for restructuring and other exit costs of \$30.8 million is included in accrued liabilities and other long-term liabilities, on the Company's consolidated balance sheets as of September 30, 2019.

Note 7. Investments

The Company's investments are intended to establish a high-quality portfolio that preserves principal, meets liquidity needs, avoids inappropriate concentrations, and delivers an appropriate yield in relationship to the Company's investment guidelines and market conditions.

As of September 30, 2019 and March 31, 2019, the Company had short-term investments of \$3.3 million and \$2.3 million, respectively, consisting of marketable equity securities. The Company had no available-for-sale debt securities at September 30, 2019 and March 31, 2019.

There were no sales of available-for-sale debt securities during the six months ended September 30, 2019. The Company sold available-for-sale debt securities for proceeds of \$1.38 billion during the year ended March 31, 2019 to help finance its acquisition of Microsemi. The Company recognized losses of \$5.6 million on available-for-sale debt securities during the year ended March 31, 2019. The Company determines the cost of available-for-sale debt securities sold on a first-in first-out (FIFO) basis at the individual security level for sales from multiple lots. For sales of marketable equity securities, the Company uses an average cost basis at the individual security level. Gains and losses recognized in earnings are credited or charged to other income (loss), net on the condensed consolidated statements of income.

Note 8. Fair Value Measurements

Accounting rules for fair value clarify that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, the Company utilizes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

- Level 1- Observable inputs such as quoted prices in active markets;
- Level 2- Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly; and

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Level 3- Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

Marketable Debt Instruments

Marketable debt instruments include instruments such as corporate bonds and debt, government agency bonds, bank deposits, municipal bonds, and money market mutual funds. When the Company uses observable market prices for identical securities that are traded in less active markets, the Company classifies its marketable debt instruments as Level 2. When observable market prices for identical securities are not available, the Company prices its marketable debt instruments using non-binding market consensus prices that are corroborated with observable market data; quoted market prices for similar instruments; or pricing models, such as a discounted cash flow model, with all significant inputs derived from or corroborated with observable market data. Non-binding market consensus prices are based on the proprietary valuation models of pricing providers or brokers. These valuation models incorporate a number of inputs, including non-binding and binding broker quotes; observable market prices for identical or similar securities; and the internal assumptions of pricing providers or brokers that use observable market inputs and, to a lesser degree, unobservable market inputs. The Company corroborates non-binding market consensus prices with observable market data using statistical models when observable market data exists. The discounted cash flow model uses observable market inputs, such as LIBOR-based yield curves, currency spot and forward rates, and credit ratings.

Assets Measured at Fair Value on a Recurring Basis

Assets measured at fair value on a recurring basis at September 30, 2019 are as follows (amounts in millions):

	Quoted Prices in Active Markets for Identical Instruments (Level 1)	Significant Other Observable Inputs (Level 2)	Total Balance
Assets			
Cash equivalents:			
Money market mutual funds	\$ 1.1	\$ —	\$ 1.1
Short-term investments:			
Marketable equity securities	3.3	—	3.3
Total assets measured at fair value	<u>\$ 4.4</u>	<u>\$ —</u>	<u>\$ 4.4</u>

Assets measured at fair value on a recurring basis at March 31, 2019 are as follows (amounts in millions):

	Quoted Prices in Active Markets for Identical Instruments (Level 1)	Significant Other Observable Inputs (Level 2)	Total Balance
Assets			
Cash equivalents:			
Money market mutual funds	\$ 8.3	\$ —	\$ 8.3
Short-term investments:			
Marketable equity securities	2.3	—	2.3
Total assets measured at fair value	<u>\$ 10.6</u>	<u>\$ —</u>	<u>\$ 10.6</u>

There were no transfers between Level 1 or Level 2 during the three and six months ended September 30, 2019 or the fiscal year ended March 31, 2019. There were no assets measured on a recurring basis during the three and six months ended September 30, 2019 or the fiscal year ended March 31, 2019 using significant unobservable inputs (Level 3).

Assets and Liabilities Measured and Recorded at Fair Value on a Non-Recurring Basis

The Company's non-marketable equity, cost method investments, certain acquired liabilities and non-financial assets, such as intangible assets, assets held for sale and property, plant and equipment, are recorded at fair value on a non-recurring basis. These assets are subject to fair value adjustments in certain circumstances, for example, when there is evidence of impairment.

The Company's non-marketable and cost method investments are monitored on a quarterly basis for impairment charges. The fair values of these investments have been determined as Level 3 fair value measurements because the valuations use unobservable inputs that require management's judgment due to the absence of quoted market prices. There were no impairment charges recognized on these investments during the three and six months ended September 30, 2019 and September 30, 2018. These investments are included in other assets on the consolidated balance sheets.

The fair value measurements related to the Company's non-financial assets, such as intangible assets, assets held for sale and property, plant and equipment are based on available market prices at the measurement date based on transactions of similar assets and third-party independent appraisals, less costs to sell where appropriate. The Company classifies these measurements as Level 2.

Note 9. Fair Value of Financial Instruments

The carrying amount of cash equivalents approximates fair value because their maturity is less than three months. Management believes the carrying amount of the equity and cost-method investments materially approximated fair value at September 30, 2019 based upon unobservable inputs. The fair values of these investments have been determined as Level 3 fair value measurements. The fair values of the Company's line of credit borrowings are estimated using discounted cash flow analyses, based on the Company's current incremental borrowing rates for similar types of borrowing arrangements and approximate carrying value excluding debt issuance costs. Based on the borrowing rates currently available to the Company for bank loans with similar terms and average maturities, the fair value of the Company's line of credit borrowings at September 30, 2019 approximated the carrying value and are considered Level 2 in the fair value hierarchy described in Note 8. The carrying amount of accounts receivable, accounts payable and accrued liabilities approximates fair value due to the short-term maturity of the amounts and are considered Level 2 in the fair value hierarchy.

Fair Value of Subordinated Convertible Debt, Senior Secured Notes, and Term Loan Facility

The Company measures the fair value of its senior and junior subordinated convertible debt and senior secured notes for disclosure purposes. These fair values are based on observable market prices for this debt, which is traded in less active markets and are therefore classified as a Level 2 fair value measurement.

The following table shows the carrying amounts and fair values of the Company's senior and junior subordinated convertible debt, senior secured notes, and term loan facility as of September 30, 2019 and March 31, 2019 (in millions).

	September 30, 2019		March 31, 2019	
	Carrying Amount ⁽¹⁾	Fair Value	Carrying Amount ⁽¹⁾	Fair Value
2023 Senior Secured Notes	\$ 987.1	\$ 1,055.0	\$ 985.4	\$ 1,020.1
2021 Senior Secured Notes	\$ 990.2	\$ 1,022.5	\$ 987.4	\$ 1,008.1
Term Loan Facility	\$ 1,707.5	\$ 1,723.5	\$ 1,892.1	\$ 1,911.5
2017 Senior Convertible Debt	\$ 1,522.8	\$ 2,666.5	\$ 1,493.6	\$ 2,285.4
2015 Senior Convertible Debt	\$ 1,387.3	\$ 3,270.2	\$ 1,360.8	\$ 2,810.6
2017 Junior Convertible Debt	\$ 340.8	\$ 888.6	\$ 335.9	\$ 740.8

⁽¹⁾ The carrying amounts presented are net of debt discounts and debt issuance costs (see Note 14 Debt and Credit Facility for further information).

Note 10. Other Financial Statement Details**Accounts Receivable**

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Accounts receivable consists of the following (in millions):

	September 30, 2019	March 31, 2019
Trade accounts receivable	\$ 844.0	\$ 875.8
Other	7.9	6.8
Total accounts receivable, gross	851.9	882.6
Less allowance for doubtful accounts	3.3	2.0
Total accounts receivable, net	<u>\$ 848.6</u>	<u>\$ 880.6</u>

Inventories

The components of inventories consist of the following (in millions):

	September 30, 2019	March 31, 2019
Raw materials	\$ 78.1	\$ 74.5
Work in process	457.0	413.0
Finished goods	199.1	224.2
Total inventories	<u>\$ 734.2</u>	<u>\$ 711.7</u>

Inventories are valued at the lower of cost and net realizable value using the first-in, first-out method. Inventory impairment charges establish a new cost basis for inventory and charges are not subsequently reversed to income even if circumstances later suggest that increased carrying amounts are recoverable.

Property, Plant and Equipment

Property, plant and equipment consists of the following (in millions):

	September 30, 2019	March 31, 2019
Land	\$ 83.4	\$ 83.4
Building and building improvements	653.0	647.6
Machinery and equipment	2,128.0	2,095.5
Projects in process	113.6	119.2
Total property, plant and equipment, gross	2,978.0	2,945.7
Less accumulated depreciation and amortization	2,041.0	1,949.0
Total property, plant and equipment, net	<u>\$ 937.0</u>	<u>\$ 996.7</u>

Depreciation expense attributed to property, plant and equipment was \$39.5 million and \$85.7 million for the three and six months ended September 30, 2019, respectively, compared to \$47.2 million and \$85.2 million for the three and six months ended September 30, 2018, respectively.

Accrued Liabilities

Accrued liabilities consists of the following (in millions):

	September 30, 2019	March 31, 2019
Accrued compensation and benefits	\$ 166.3	\$ 133.2
Income taxes payable	48.6	46.9
Sales related reserves	326.5	366.9
Current portion of lease liabilities	40.5	—
Accrued expenses and other liabilities	218.6	240.3
Total accrued liabilities	<u>\$ 800.5</u>	<u>\$ 787.3</u>

Note 11. Leases

Effective April 1, 2019, the Company adopted the new lease accounting standard using the modified retrospective approach. The Company elected the package of practical expedients permitted under the transition guidance with the new standard, which among other things, allows the Company to carry forward historical lease classification. The Company elected to apply the short-term measurement and recognition exemption in which right-of-use (“ROU”) assets and lease liabilities are not recognized for short-term leases. Adoption of this standard resulted in recording of net operating lease ROU assets and corresponding operating lease liabilities of \$124.6 million and \$137.3 million, respectively. The net ROU asset includes the effect of reclassifying a portion of facilities-related restructuring reserves as an offset in accordance with the transition guidance. The standard did not materially affect the condensed consolidated statements of income and had no impact on the condensed consolidated statements of cash flows.

The Company determines if an arrangement is a lease at its inception. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. Operating lease ROU assets also include any initial direct costs and prepayments less lease incentives. Lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise such options. As the Company's leases generally do not provide an implicit rate, the Company uses its collateralized incremental borrowing rate based on the information available at the lease commencement date, including lease term, in determining the present value of lease payments. Lease expense for these leases is recognized on a straight-line basis over the lease term.

Operating lease arrangements are comprised primarily of real estate and equipment agreements for which the ROU assets are included in other assets and the corresponding lease liabilities, depending on their maturity, are included in accrued liabilities or other long-term liabilities in the condensed consolidated balance sheets. There are certain immaterial finance leases recorded in the condensed consolidated balance sheets. The Company has elected to account for the lease and non-lease components as a single lease component.

The details of the Company's operating leases are as follows (in millions):

	Three Months Ended September 30, 2019	Six Months Ended September 30, 2019
Operating lease expense	\$ 11.3	\$ 24.5
Variable lease expense	2.7	5.5
Short-term lease expense	2.6	4.8
Total lease expense	<u>\$ 16.6</u>	<u>\$ 34.8</u>

The Company's leases are included as a component of the following balance sheet lines (in millions):

	September 30, 2019
Other assets:	
Right-of-use assets	\$ 134.8
Total lease assets	<u>\$ 134.8</u>
Accrued liabilities:	
Current portion of lease liabilities	\$ 40.5
Other long-term liabilities:	
Non-current portion of lease liabilities	111.8
Total lease liabilities	<u>\$ 152.3</u>

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The following table presents the maturities of lease liabilities as of September 30, 2019 (in millions):

Fiscal year ending March 31,	Operating Leases
Remainder of 2020	\$ 24.9
2021	41.7
2022	36.8
2023	21.0
2024	14.4
Thereafter	28.4
Total lease payments	\$ 167.2
Less: Imputed lease interests	14.9
Total lease liabilities	\$ 152.3

The following table represents future minimum lease obligations under non-cancelable operating leases as of March 31, 2019 (in millions):

Fiscal year ending March 31,	Operating Leases
2020	\$ 49.0
2021	38.2
2022	30.3
2023	18.0
2024	9.1
Thereafter	22.6
Total	\$ 167.2

The Company's weighted-average remaining lease-term and weighted-average discount rate are as follows (in millions):

	As of September 30, 2019
Weighted average remaining lease-term	4.7
Weighted average discount rate	4.6%

Note 12. Intangible Assets and Goodwill

Intangible assets consist of the following (in millions):

	September 30, 2019		
	Gross Amount	Accumulated Amortization	Net Amount
Core and developed technology	\$ 7,347.4	\$ (1,526.2)	\$ 5,821.2
Customer-related	917.1	(616.1)	301.0
In-process research and development	9.6	—	9.6
Distribution rights and other	84.6	(29.1)	55.5
Total	\$ 8,358.7	\$ (2,171.4)	\$ 6,187.3

	March 31, 2019		
	Gross Amount	Accumulated Amortization	Net Amount
Core and developed technology	\$ 7,339.2	\$ (1,102.2)	\$ 6,237.0
Customer-related	917.1	(544.0)	373.1
In-process research and development	7.7	—	7.7
Distribution rights and other	81.4	(13.6)	67.8
Total	<u>\$ 8,345.4</u>	<u>\$ (1,659.8)</u>	<u>\$ 6,685.6</u>

The following is an expected amortization schedule for the intangible assets for remainder of fiscal 2020 through fiscal 2024, absent any future acquisitions or impairment charges (in millions):

Fiscal Year Ending March 31,	Projected Amortization Expense
2020	\$516.1
2021	\$970.1
2022	\$894.9
2023	\$682.7
2024	\$616.0

The Company amortizes intangible assets over their expected useful lives, which range between 1 and 15 years. Amortization expense attributed to intangible assets are assigned to cost of sales and operating expenses as follows (in millions):

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
Amortization expense charged to cost of sales	\$ 2.4	\$ 2.1	\$ 4.6	\$ 3.1
Amortization expense charged to operating expense	255.7	171.7	514.4	305.5
Total amortization expense	<u>\$ 258.1</u>	<u>\$ 173.8</u>	<u>\$ 519.0</u>	<u>\$ 308.6</u>

The Company recognized impairment charges of \$0.5 million in the six months ended September 30, 2019, compared to \$1.2 million and \$3.1 million in the three and six months ended September 30, 2018, respectively. There were no impairment charges in the three months ended September 30, 2019.

Goodwill activity for the six months ended September 30, 2019 was as follows (amounts in millions):

	Semiconductor Products Reporting Unit	Technology Licensing Reporting Unit
Balance at March 31, 2019	\$ 6,644.7	\$ 19.2
Additions	0.7	—
Balance at September 30, 2019	<u>\$ 6,645.4</u>	<u>\$ 19.2</u>

At March 31, 2019, the Company applied a qualitative goodwill impairment test to its two reporting units, concluding it was not more likely than not that goodwill was impaired. Through September 30, 2019, the Company has never recorded an impairment charge against its goodwill balance.

Note 13. Income Taxes

The Company accounts for incomes taxes in accordance with ASC 740. The provision or benefit for income taxes is attributable to U.S. federal, state, and foreign income taxes. The Company's effective tax rate used for interim periods is based on an estimated annual effective tax rate including the tax effect of items required to be recorded discretely in the interim periods in which those items occur. The Company's effective tax rates for the six months ended September 30, 2019 and

September 30, 2018 were not meaningful due to the amount of pre-tax income, and income tax benefits recorded during the period.

The Company's effective tax rate for the three and six months ended September 30, 2019 is lower compared to the prior year primarily due to significant non-recurring discrete benefits related to releases of uncertain tax positions and Microsemi integration. The Company's effective tax rate is different than the statutory rates in the U.S. due to foreign income taxed at different rates than the U.S., changes in uncertain tax benefit positions, changes to valuation allowances, generation of tax credits, and the impact of the Global Intangible Low-Taxed Income ("GILTI") tax in the United States. In addition, the Company has numerous tax holidays it receives related to its Thailand manufacturing operations based on its investment in property, plant and equipment in Thailand, as well as Microsemi's tax holiday in Malaysia that effectively reduces its income tax rate in that jurisdiction. The Company's tax holiday periods in Thailand expire at various times in the future; however, the Company actively seeks to obtain new tax holidays. The Company does not expect the future expiration of any of its tax holiday periods in Thailand to have a material impact on its effective tax rate. Microsemi's tax holiday in Malaysia was granted in 2009 and is effective through December 2019, subject to continued compliance with the tax holiday's requirements. The Company is actively seeking to obtain a new tax holiday in Malaysia. The material components of foreign income taxed at a rate lower than the U.S. are earnings accrued in Thailand, Malta and Ireland.

The Company files U.S. federal, U.S. state, and foreign income tax returns. For U.S. federal, and in general for U.S. state tax returns, the fiscal 2007 and later tax years remain effectively open for examination by tax authorities. For foreign tax returns, the Company is generally no longer subject to income tax examinations for years prior to fiscal 2007.

The Company records benefits for uncertain tax positions based on an assessment of whether it is more likely than not that the tax positions will be sustained based on their technical merits under currently enacted law. If this threshold is not met, no tax benefit of the uncertain tax position is recognized. If this threshold is met, the Company recognizes the largest amount of the tax benefit that is more likely than not to be realized upon ultimate settlement. The Company believes that it has appropriate support for the income tax positions taken and to be taken on its tax returns and that its accruals for tax liabilities are adequate for all open years based on an assessment of many factors including past experience and interpretations of tax laws applied to the facts of each matter.

The Company believes it maintains appropriate reserves to offset any potential income tax liabilities that may arise upon final resolution of matters for open tax years. If such reserve amounts ultimately prove to be unnecessary, the resulting reversal of such reserves could result in tax benefits being recorded in the period the reserves are no longer deemed necessary. If such amounts prove to be less than an ultimate assessment, a future charge to expense would be recorded in the period in which the assessment is determined.

Note 14. Debt and Credit Facility

Debt obligations included in the condensed consolidated balance sheets consisted of the following (in millions):

	Coupon Interest Rate	Effective Interest Rate	Fair Value of Liability Component at Issuance ⁽¹⁾	September 30, 2019	March 31, 2019
<i>Senior Secured Indebtedness</i>					
Revolving Credit Facility				\$ 2,881.5	\$ 3,266.5
Term Loan Facility				1,723.5	1,911.5
2023 Notes, maturing June 1, 2023 ("2023 Notes")	4.333%	4.7%		1,000.0	1,000.0
2021 Notes, maturing June 1, 2021 ("2021 Notes")	3.922%	4.5%		1,000.0	1,000.0
Total Senior Secured Indebtedness				6,605.0	7,178.0
<i>Senior Subordinated Convertible Debt - Principal Outstanding</i>					
2017 Senior Convertible Debt, maturing February 15, 2027 ("2017 Senior Convertible Debt")	1.625%	6.0%	\$1,396.3	2,070.0	2,070.0
2015 Senior Convertible Debt, maturing February 15, 2025 ("2015 Senior Convertible Debt")	1.625%	5.9%	\$1,160.1	1,725.0	1,725.0
<i>Junior Subordinated Convertible Debt - Principal Outstanding</i>					
2017 Junior Convertible Debt, maturing February 15, 2037 ("2017 Junior Convertible Debt")	2.250%	7.4%	\$321.1	686.3	686.3
Total Convertible Debt				4,481.3	4,481.3
Gross long-term debt including current maturities				11,086.3	11,659.3
Less: Debt discount ⁽²⁾				(1,208.6)	(1,268.7)
Less: Debt issuance costs ⁽³⁾				(75.1)	(83.6)
Net long-term debt including current maturities				9,802.6	10,307.0
Less: Current maturities ⁽⁴⁾				(1,387.3)	(1,360.8)
Net long-term debt				\$ 8,415.3	\$ 8,946.2

⁽¹⁾ As each of the convertible debt instruments may be settled in cash upon conversion, for accounting purposes, they were bifurcated into a liability component and an equity component, which are both initially recorded at fair value. The amount allocated to the equity component is the difference between the principal value of the instrument and the fair value of the liability component at issuance. The resulting debt discount is being amortized to interest expense at the respective effective interest rate over the contractual term of the debt.

⁽²⁾ The unamortized discount consists of the following (in millions):

	September 30, 2019	March 31, 2019
2023 Notes	\$ (4.0)	\$ (4.4)
2021 Notes	(3.0)	(3.8)
2017 Senior Convertible Debt	(533.4)	(561.9)
2015 Senior Convertible Debt	(325.8)	(351.4)
2017 Junior Convertible Debt	(342.4)	(347.2)
Total unamortized discount	\$ (1,208.6)	\$ (1,268.7)

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⁽³⁾ Debt issuance costs consist of the following (in millions):

	September 30, 2019	March 31, 2019
Revolving Credit Facility	\$ (14.6)	\$ (14.7)
Term Loan Facility	(16.0)	(19.4)
2023 Notes	(8.9)	(10.2)
2021 Notes	(6.8)	(8.8)
2017 Senior Convertible Debt	(13.8)	(14.5)
2015 Senior Convertible Debt	(11.9)	(12.8)
2017 Junior Convertible Debt	(3.1)	(3.2)
Total debt issuance costs	<u>\$ (75.1)</u>	<u>\$ (83.6)</u>

⁽⁴⁾ Current maturities consist of the liability component of the 2015 Senior Convertible Debt as the debentures were convertible as of September 30, 2019 and March 31, 2019.

Expected maturities relating to the Company's long-term debt as of September 30, 2019 are as follows (in millions):

Fiscal year ending March 31,	Expected Maturities
2020	\$ —
2021	—
2022	1,000.0
2023	—
2024	3,881.5
Thereafter	6,204.8
Total	<u>\$ 11,086.3</u>

Ranking of Convertible Debt - The Senior Subordinated Convertible Debt and Junior Subordinated Convertible Debt (collectively, the Convertible Debt) are unsecured obligations which are subordinated in right of payment to the amounts outstanding under the Company's Credit Facility and Senior Secured Notes (as defined below). The Junior Subordinated Convertible Debt is expressly subordinated in right of payment to any existing and future senior debt of the Company (including the Credit Facility, the Senior Secured Notes, and the Senior Subordinated Convertible Debt) and is structurally subordinated in right of payment to the liabilities of the Company's subsidiaries. The Senior Subordinated Convertible Debt is subordinated to the Credit Facility and the Senior Secured Notes; ranks senior to the Company's indebtedness that is expressly subordinated in right of payment to it, including the Junior Subordinated Convertible Debt; ranks equal in right of payment to any of the Company's unsubordinated indebtedness that does not provide that it is senior to the Senior Subordinated Convertible Debt; ranks junior in right of payment to any of the Company's secured, unsubordinated indebtedness to the extent of the value of the assets securing such indebtedness; and is structurally subordinated to all indebtedness and other liabilities of the Company's subsidiaries.

Summary of Conversion Features - Each series of Convertible Debt is convertible, subject to certain conditions, into cash, shares of the Company's common stock or a combination thereof, at the Company's election, at specified Conversion Rates (see table below), adjusted for certain events including the declaration of cash dividends. Except during the three-month period immediately preceding the maturity date of the applicable series of Convertible Debt, each series of Convertible Debt is convertible only upon the occurrence of (1) such time as the closing price of the Company's common stock exceeds the Conversion Price (see table below) by 130% for 20 days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding fiscal quarter or (2) during the 5 business day period after any 10 consecutive trading day period, or the measurement period, in which the trading price per \$1,000 principal amount of notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of the Company's common stock and the conversion rate on each such trading day or (3) upon the occurrence of certain corporate events specified in the indenture of such series of Convertible Debt. In addition, for each series, if at the time of conversion the applicable price of the Company's common stock exceeds the applicable Conversion Price at such time, the applicable Conversion Rate will be increased by up to an additional maximum incremental shares rate, as determined pursuant to a formula specified in the indenture for the applicable series of Convertible Debt, and as adjusted for cash dividends paid since the issuance of such series of Convertible Debt. However, in no event will the applicable Conversion Rate exceed the applicable Maximum Conversion Rate specified in the indenture for the applicable series of Convertible Debt (see table below).

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The following table sets forth the applicable Conversion Rates adjusted for dividends declared since issuance of such series of Convertible Debt and the applicable Incremental Share Factors and Maximum Conversion Rates as adjusted for dividends paid since the applicable issuance date:

Dividend adjusted rates as of September 30, 2019				
	Conversion Rate	Approximate Conversion Price	Incremental Share Factor	Maximum Conversion Rate
2017 Senior Convertible Debt ⁽¹⁾	10.3801	\$ 96.34	5.1900	14.7916
2015 Senior Convertible Debt ⁽¹⁾	16.1870	\$ 61.78	8.0935	22.6617
2017 Junior Convertible Debt ⁽¹⁾	10.5654	\$ 94.65	5.2828	14.7916

⁽¹⁾ As of September 30, 2019, the 2017 Senior Convertible Debt and the 2017 Junior Convertible Debt were not convertible. As of September 30, 2019, the holders of the 2015 Senior Convertible Debt have the right to convert their debentures between October 1, 2019 and December 31, 2019 because the Company's common stock price has exceeded the Conversion Price by 130% for the specified period of time during the quarter ended September 30, 2019. If a holder of 2015 Senior Convertible Debt were to convert their debentures on October 1, 2019, the adjusted Conversion Rate would be increased to 18.7147 to include an additional maximum incremental share rate per the terms of the indenture. As of September 30, 2019, the 2015 Senior Convertible Debt had a value if converted above par of \$1.30 billion.

The Company may not redeem any series of Convertible Debt prior to the relevant maturity date and no sinking fund is provided for any series of Convertible Debt. Upon the occurrence of a fundamental change as defined in the applicable indenture of such series of Convertible Debt, holders of such series may require the Company to purchase all or a portion of their Convertible Debt for cash at a price equal to 100% of the principal amount plus any accrued and unpaid interest.

Interest expense consists of the following (in millions):

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
Debt issuance amortization	\$ 3.3	\$ 3.8	\$ 6.6	\$ 5.7
Debt discount amortization	0.7	0.7	1.4	0.9
Interest expense	74.9	85.7	153.6	125.9
Total interest expense on Senior Secured Indebtedness	78.9	90.2	161.6	132.5
Debt issuance amortization	1.0	0.9	1.9	1.8
Debt discount amortization	29.6	27.9	58.8	55.4
Coupon interest expense	19.3	19.3	38.6	38.6
Total interest expense on Convertible Debt	49.9	48.1	99.3	95.8
Other interest expense	0.8	0.3	1.3	0.7
Total interest expense	\$ 129.6	\$ 138.6	\$ 262.2	\$ 229.0

The remaining period over which the unamortized debt discount will be recognized as non-cash interest expense is 7.4 years, 5.4 years, and 17.4 years for the 2017 Senior Convertible Debt, 2015 Senior Convertible Debt and 2017 Junior Convertible Debt, respectively.

Senior Secured Notes

In May 2018, the Company issued \$1.00 billion aggregate principal amount of 3.922% Senior Secured Notes due 2021 (the "2021 Notes") and \$1.00 billion aggregate principal amount of 4.333% Senior Secured Notes due 2023 (the "2023 Notes", and together with the 2021 Notes, the "Senior Secured Notes") to qualified institutional buyers in a Rule 144A offering. In connection with the issuance of these instruments, the Company incurred issuance costs of \$24.4 million and recorded a debt discount of \$10.5 million for fees deducted from the proceeds, which will both be amortized using the effective interest method over the term of the debt. The 2021 Notes mature on June 1, 2021 and the 2023 Notes mature on June 1, 2023. Interest on the 2021 Notes accrues at a rate of 3.922% per annum, payable semi-annually in arrears on June 1 and December 1 of each year, commencing on December 1, 2018. Interest on the 2023 Notes accrues at a rate of 4.333% per annum, payable semi-annually in arrears on June 1 and December 1 of each year, commencing on December 1, 2018.

The Company may, at its option, redeem some or all of the 2021 Notes prior to June 1, 2021 at a price equal to the greater of (a) 100% of the principal amount of the 2021 Notes redeemed or (b) the sum of the present value of all remaining scheduled payments of principal and interest (discounted in accordance with the indenture for the 2021 Notes) that would have been due on the redeemed 2021 Notes, in each case, plus accrued and unpaid interest to, but excluding, the redemption date. The Company may, at its option, redeem some or all of the 2023 Notes, (i) if prior to May 1, 2023 (one month prior to the maturity date of the 2023 Notes), at a price equal to the greater of (a) 100% of the principal amount of the 2023 Notes redeemed or (b) the sum of the present value of all remaining scheduled payments of principal and interest (discounted in accordance with the indenture for the 2023 Notes) that would have been due on the redeemed 2023 Notes, in each case, plus accrued and unpaid interest to, but excluding, the redemption date, and (ii) if on or after May 1, 2023 (one month prior to maturity of the 2023 Notes), at a redemption price equal to 100% of the principal amount of the notes redeemed, plus accrued and unpaid interest to, but excluding, the redemption date.

If the Company experiences a specified change of control triggering event, the Company must offer to repurchase the Notes at a price equal to 101% of the principal amount of the Notes repurchased, plus accrued and unpaid interest, if any, to, but excluding, the repurchase date.

The Notes are guaranteed by certain of the Company's subsidiaries (each such guarantee, a "Note Guarantee") that have also guaranteed the obligations under the Company's Credit Facility and under the Term Loan Facility (the Term Loan Facility together with the Credit Facility, the "Senior Credit Facilities") that was entered into in connection with the financing of the Microsemi acquisition.

The Notes and the Note Guarantees are secured, on a pari passu first lien basis with the Senior Credit Facilities, by substantially all of the tangible and intangible assets (other than certain excluded assets) of the Company and the guarantors that secure obligations under the Senior Credit Facilities, in each case subject to certain thresholds, exceptions and permitted liens, as set forth in the indenture for the Senior Secured Notes and the Security Agreement, dated May 29, 2018, by and among the Company, the subsidiary guarantors party thereto and the Collateral Agent (the "Security Agreement").

Credit Facility

In September 2019, the Company amended the Company's Credit Agreement to, among other things, reduce the margin added to the interest rate on revolving loans under the Credit Agreement to 0.0% to 0.75% for base rate loans and 1.0% to 1.75% for the LIBOR rate loans, in each case determined based on the Company's senior leverage ratio. The amendment also allows the Company the option to refinance the term loans or revolving loans under the Credit Agreement up to a certain dollar limit and the option to factor receivables and certain related assets as further explained below. The amendment reduced the commitments for the Revolving Credit Facility thereunder to \$3.57 billion from \$3.60 billion at June 30, 2019. In connection with the amendment of the Credit Agreement, the Company incurred issuance costs of \$1.75 million, which will be amortized using the effective interest method over the term of the debt.

The Credit Agreement provides for a revolving loan facility in an aggregate principal amount of approximately \$3.57 billion, with a \$250.0 million foreign currency sublimit, a \$50.0 million letter of credit sublimit and a \$25.0 million swingline loan sublimit. The Credit Agreement consists of approximately \$3.57 billion of revolving loan commitments that terminate on May 18, 2023 (the "2023 Maturity Date"). The \$244.3 million of revolving loan commitments that would have terminated on February 4, 2020 were canceled in the fiscal year ended March 31, 2019. The Revolving Loans bear interest, at the Company's option, at the base rate plus a spread of 0.00% to 0.75% or an adjusted LIBOR rate (based on one, two, three or six-month interest periods) plus a spread of 1.00% to 1.75%, in each case with such spread being determined based on the consolidated senior leverage ratio for the preceding four fiscal quarter period.

The Credit Agreement permits the Company to engage in replacement financing in an aggregate principal amount not to exceed \$2.0 billion incurred or issued to effect a refinancing or replacement of the initial Term Loans or payoff of other indebtedness and may have a maturity date that is at least three years after the date of incurrence or issuance of such replacement financing. The Credit Agreement allows the Company the sale, transfer or assignment of securitization assets in connection with qualified factoring transactions to the borrower or any subsidiary in an aggregate face amount that does not exceed an outstanding amount of \$600 million at any time. The Credit Agreement permits the Company to add one or more incremental term loan facilities (in addition to the loans under the Term Loan Facility) and/or increase the commitments under the Revolving Credit Facility from time to time, subject, in each case, to the receipt of additional commitments from existing and/or new lenders and pro forma compliance with a consolidated senior leverage ratio set forth in the Credit Agreement.

The Company's obligations under the Credit Agreement are guaranteed by certain of its subsidiaries meeting materiality thresholds set forth in the Credit Agreement. To secure the Company's obligations under the Credit Agreement and the

subsidiary guarantors' obligations under the guarantees, the Company and each of the subsidiary guarantors has granted a security interest in substantially all its assets subject to certain exceptions and limitations.

In May 2018, the Company borrowed \$3.0 billion aggregate principal amount of loans under the Term Loan Facility ("Term Loans"). In connection with such borrowings, the Company incurred issuance costs of \$34.7 million which will be amortized using the effective interest method over the term of the debt. The Credit Agreement provides for quarterly amortization payments of the Term Loans on the last business day of each March, June, September and December, commencing with the last business day of the first full fiscal quarter to occur after the Microsemi acquisition effective date, equal to 0.25% of the aggregate original principal amount of the Term Loans. In addition, the Credit Agreement requires mandatory prepayments of the Term Loans from the incurrence of debt not otherwise permitted to be incurred under the Credit Agreement, certain asset sales and certain excess cash flow. Mandatory prepayments with excess cash flow (as defined in the Credit Agreement) are required to be made beginning with the Company's fiscal year ending March 31, 2020 in an amount equal to 50%, 25% or 0% of the excess cash flow for such fiscal year, depending on the Company's senior leverage ratio. The Company may prepay the Term Loans at any time without premium or penalty. Term Loans repaid or prepaid may not be reborrowed. The Company voluntarily prepaid \$188.0 million of principal under the Term Loan Facility in the six months ended September 30, 2019, which resulted in a loss on settlement of debt of approximately \$1.9 million consisting of unamortized financing fees. During fiscal 2019, the Company voluntarily prepaid \$1.09 billion of principal under the Term Loan Facility of which \$500.0 million was from funds borrowed under its Revolving Credit Facility, and such transactions resulted in a loss on settlement of debt of approximately \$11.5 million consisting of unamortized financing fees.

Interest is due and payable in arrears quarterly for loans bearing interest at the base rate and at the end of an interest period (or at each three-month interval in the case of loans with interest periods greater than three months) in the case of loans bearing interest at the adjusted LIBOR rate. Principal, together with all accrued and unpaid interest, is due and payable on the 2023 Maturity Date in the case of revolving loans under the Credit Agreement and May 29, 2025 in the case of the Term Loans. The Company pays a quarterly commitment fee on the available but unused portion of the Revolving Credit Facility which is calculated on the average daily available balance during the period. The Company may prepay the loans and terminate the commitments, in whole or in part, at any time without premium or penalty, subject to certain conditions including minimum amounts in the case of commitment reductions and reimbursement of certain costs in the case of prepayments of LIBOR loans.

The Credit Agreement contains customary affirmative and negative covenants, including covenants that limit or restrict the Company and its subsidiaries' ability to, among other things, incur subsidiary indebtedness, grant liens, merge or consolidate, dispose of assets, make investments, make acquisitions, enter into certain transactions with affiliates, pay dividends or make distributions, repurchase stock, enter into restrictive agreements and enter into sale and leaseback transactions, in each case subject to customary exceptions for a credit facility of this size and type. The Company is also required to maintain compliance with a senior leverage ratio, a total leverage ratio and an interest coverage ratio, all measured quarterly and calculated on a consolidated basis. At September 30, 2019, the Company was in compliance with these financial covenants.

The financial covenants include limits on the Company's consolidated total leverage ratio and senior leverage ratio. The maximum Total Leverage Ratio (capitalized terms not otherwise defined in this Form 10-Q have the meaning of the defined terms in the applicable agreements), measured quarterly, cannot exceed (a) 6.75 to 1.00 for any such period ended on or after the Microsemi Acquisition Closing Date to (but excluding) the first anniversary of the Microsemi Acquisition Closing Date, (b) 6.25 to 1.00 for any such period ended on or after the first anniversary of the Microsemi Acquisition Closing Date to (but excluding) the second anniversary of the Microsemi Acquisition Closing Date to (but excluding) the second anniversary of the Microsemi Acquisition Closing Date and (c) 5.75 to 1.00 for any such period ended on or after the second anniversary of the Microsemi Acquisition Closing Date. The total leverage ratio is calculated as Consolidated Total Indebtedness, excluding the Junior Convertible Debt up to a \$700 million maximum, to Consolidated EBIDTA for a period of four consecutive quarters. The Credit Agreement also requires that the Senior Leverage Ratio, measured quarterly, not exceed (a) 4.75 to 1.00 for any such period ended from (and including) the Microsemi Acquisition Closing Date to (but excluding) the first anniversary of the Microsemi Acquisition Closing Date, (b) 4.25 to 1.00 for any such period ended on or after the first anniversary of the Microsemi Acquisition Closing Date to (but excluding) the second anniversary of the Microsemi Acquisition Closing Date and (c) 3.75 to 1.00 for any such period ended on or after the second anniversary of the Microsemi Acquisition Closing Date. The senior leverage ratio is calculated as Consolidated Senior Indebtedness to Consolidated EBIDTA for four consecutive quarters. The Company is also required to comply with a Minimum Interest Coverage Ratio of at least 3.25 to 1.00 for any period ended on or after the Microsemi Acquisition Closing Date, measured quarterly.

The Credit Agreement includes customary events of default that include, among other things, non-payment defaults, inaccuracy of representations and warranties, covenant defaults, cross default to material indebtedness, bankruptcy and insolvency defaults, material judgment defaults, ERISA defaults and a change of control default. The occurrence of an event of default could result in the acceleration of the obligations under the Credit Agreement. Under certain circumstances, a default

interest rate will apply on all obligations during the existence of an event of default under the Revolving Credit Facility at a per annum rate equal to 2.00% above the applicable interest rate for any overdue principal and 2.00% above the rate applicable for base rate loans for any other overdue amounts.

Note 15. Pension Plans

The Company has defined benefit pension plans that cover certain French and German employees. Most of these defined pension plans, which were acquired in the Atmel and Microsemi acquisitions, are unfunded. Plan benefits are provided in accordance with local statutory requirements. Benefits are based on years of service and employee compensation levels. Pension liabilities and charges are based upon various assumptions, updated annually, including discount rates, future salary increases, employee turnover, and mortality rates. The Company's French pension plan provides for termination benefits paid to covered French employees only at retirement, and consists of approximately one to five months of salary. The Company's German pension plan provides for defined benefit payouts for covered German employees following retirement.

The aggregate net pension expense relating to these plans is as follows (in millions):

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
Service costs	\$ 0.4	\$ 0.4	\$ 0.8	\$ 0.8
Interest costs	0.2	0.2	0.4	0.5
Amortization of actuarial loss	0.2	0.2	0.4	0.5
Net pension period cost	<u>\$ 0.8</u>	<u>\$ 0.8</u>	<u>\$ 1.6</u>	<u>\$ 1.8</u>

Interest costs and amortization of actuarial losses are recorded in the other income, net line item in the condensed consolidated statements of income. The Company's net periodic pension cost for fiscal 2020 is expected to be approximately \$3.3 million. Cash funding for benefits paid was \$0.4 million and \$0.6 million for the three and six months ended September 30, 2019, respectively, and \$0.2 million and \$0.4 million for the three and six months ended September 30, 2018, respectively. The Company expects total contributions to these plans to be approximately \$1.3 million in fiscal 2020.

Note 16. Contingencies

In the ordinary course of the Company's business, it is exposed to various liabilities as a result of contracts, product liability, customer claims, governmental investigations and other matters. Additionally, the Company is involved in a limited number of legal actions, both as plaintiff and defendant. Consequently, the Company could incur uninsured liability in any of those actions. The Company also periodically receives notifications from various third parties alleging infringement of patents or other intellectual property rights, or from customers requesting reimbursement for various costs. With respect to pending legal actions to which the Company is a party and other claims, although the outcomes are generally not determinable, the Company believes that the ultimate resolution of these matters will not have a material adverse effect on its financial position, cash flows or results of operations. Litigation, governmental investigations and disputes relating to the semiconductor industry are not uncommon, and the Company is, from time to time, subject to such litigation, governmental investigations and disputes. As a result, no assurances can be given with respect to the extent or outcome of any such litigation, governmental investigations or disputes in the future.

In connection with its acquisition of Microsemi, which closed on May 29, 2018, the Company became involved with the following legal matters:

Federal Shareholder Class Action Litigation. Beginning on September 14, 2018, the Company and certain of its officers were named in two putative shareholder class action lawsuits filed in the United States District Court for the District of Arizona, captioned Jackson v. Microchip Technology Inc., et al., Case No. 2:18-cv-02914-JJT and Maknissian v. Microchip Technology Inc., et al., Case No. 2:18-cv-02924-JJT. On November 13, 2018, the Maknissian complaint was voluntarily dismissed. The Jackson complaint is allegedly brought on behalf of a putative class of purchasers of Microchip common stock between March 2, 2018 and August 9, 2018. The complaint asserts claims for alleged violations of the federal securities laws and generally alleges that the defendants issued materially false and misleading statements and failed to disclose material adverse facts about the Company's business, operations, and prospects during the putative class period. The complaint seeks, among other things, compensatory damages and attorneys' fees and costs on behalf of the putative class. On December 11,

2018, the Court issued an order appointing the lead plaintiff. An amended complaint was filed on February 22, 2019. Defendants filed a motion to dismiss the amended complaint on April 1, 2019.

Federal Derivative Litigation. On December 17, 2018, a shareholder derivative lawsuit was filed against certain of the Company's officers and directors in the United States District Court for the District of Arizona, captioned *Kistenmacher v. Sanghi, et al.*, Case No. 18-cv-04720. The Company was named as a nominal defendant. The complaint generally alleged that defendants breached their fiduciary duties by, among other things, making or causing the Company to make false and misleading statements and omissions regarding the Microsemi acquisition, the Company's business, operations, and prospects, and a purported failure to maintain internal controls. The complaint further alleged that certain defendants engaged in insider trading. The complaint asserted causes of action for alleged violations of Section 14(a) of the Securities Exchange Act, breach of fiduciary duties, and unjust enrichment and sought unspecified monetary damages, corporate governance reforms, restitution, and attorneys' fees and costs. Defendants filed motions to dismiss on July 23, 2019. On September 13, 2019, the court granted the parties' stipulation of voluntary dismissal dismissing the case without prejudice.

State Derivative Litigation. On January 22, 2019, a shareholder derivative lawsuit was filed against certain of the Company's officers and directors in the Superior Court of Arizona for Maricopa County, captioned *Reid v. Sanghi, et al.*, Case No. CV2019-002389. The Company is named as a nominal defendant. The complaint generally alleges that defendants breached their fiduciary duties by, among other things, purportedly failing to conduct adequate due diligence regarding Microsemi prior to its acquisition, misrepresenting the Company's business prospects and health, and engaging in improper practices, and further alleges that certain defendants engaged in insider trading. The complaint asserts causes of action for breach of fiduciary duty, waste, and unjust enrichment and seeks unspecified monetary damages, corporate governance reforms, equitable and/or injunctive relief, restitution, and attorneys' fees and costs. This case was stayed on May 23, 2019 to allow the Federal Derivative Litigation to address certain overlapping issues. Following the dismissal of the Federal Derivative Litigation, on October 1, 2019, the court granted the parties' joint request for a temporary stay through December 2, 2019.

Peterson, et al. v. Sanghi, et al. On October 9, 2018, four former officers of Microsemi Corporation filed a lawsuit in the Superior Court of California in Orange County against the Company, Steve Sanghi, Eric Bjornholt, Ganesh Moorthy and Mitch Little asserting claims for slander per se, libel per se, trade libel, and violations of California Business and Professions Code Section 17200 ("UCL"). Among other things, the plaintiffs in this matter allege that statements the Microchip executives made about excess shipments of products by Microsemi into the distribution channel were defamatory and that Microchip executives, including Mr. Sanghi, made false statements about Microsemi's shipments of products into the distribution channel, about certain Microsemi business practices and about the relative strength of the financial results of Microchip and Microsemi for the June 2018 quarter. On November 8, 2018, defendants removed the action to the United States District Court for the Central District of California, Case No. 18-cv-02000-JLS. Defendants moved to dismiss, and, following the Court's ruling, Plaintiffs filed an amended complaint that dropped the trade libel and UCL claims. The plaintiffs are seeking compensatory damages in excess of \$100 million, punitive damages in excess of \$300 million, as well as injunctive relief, and attorneys' fees and costs. Discovery has begun, and the Court has set a Final Pretrial Conference date of May 22, 2020.

Governmental Investigations. The Department of Justice and the Securities and Exchange Commission are investigating matters relating to the Company's acquisition of Microsemi. The Company believes that the investigations relate to distribution channel issues and business practices at Microsemi and the allegations made by the plaintiffs in the *Peterson v. Sanghi* lawsuit described above.

As a result of its acquisition of Atmel, which closed April 4, 2016, the Company became involved with the following legal matters:

Continental Claim ICC Arbitration. On December 29, 2016, Continental Automotive GmbH ("Continental") filed a Request for Arbitration with the ICC, naming as respondents the Company's subsidiaries Atmel Corporation, Atmel SARL, Atmel Global Sales Ltd., and Atmel Automotive GmbH (collectively, "Atmel"). The Request alleges that a quality issue affecting Continental airbag control units in certain recalled vehicles stems from allegedly defective Atmel application specific integrated circuits ("ASICs"). Continental seeks to recover from Atmel all related costs and damages incurred as a result of the vehicle manufacturers' airbag control unit-related recalls, currently alleged to be \$210 million. The Company's Atmel subsidiaries intend to defend this action vigorously.

Southern District of New York Action by LFoundry Rousset ("LFR") and LFR Employees. On March 4, 2014, LFR and Jean-Yves Guerrini, individually and on behalf of a putative class of LFR employees, filed an action in the United States District Court for the Southern District of New York (the "District Court") against the Company's Atmel subsidiary, French subsidiary, Atmel Rousset S.A.S. ("Atmel Rousset"), and LFoundry GmbH ("LF"), LFR's German parent. The case purports to relate to Atmel Rousset's June 2010 sale of its wafer manufacturing facility in Rousset, France to LF, and LFR's subsequent

insolvency, and later liquidation, more than three years later. The District Court dismissed the case on August 21, 2015, and the United States Court of Appeals for the Second Circuit affirmed the dismissal on June 27, 2016. On July 25, 2016, the plaintiffs filed a notice of appeal from the District Court's June 27, 2016 denial of their motion for relief from the dismissal judgment. On May 19, 2017, the United States Court of Appeals for the Second Circuit affirmed the June 27, 2016 order dismissing the case.

Individual Labor Actions by former LFR Employees. In June 2010, Atmel Rousset sold its wafer manufacturing business in Rousset, France to LFoundry GmbH ("LF"), the German parent of LFoundry Rousset ("LFR"). LFR then leased the Atmel Rousset facility to conduct the manufacture of wafers. More than three years later, LFR became insolvent and later liquidated. In the wake of LFR's insolvency and liquidation, over 500 former employees of LFR have filed individual labor actions against Atmel Rousset in a French labor court. The Company's Atmel Rousset subsidiary believes that each of these actions is entirely devoid of merit, and, further, that any assertion by any of the Claimants of a co-employment relationship with the Atmel Rousset subsidiary is based substantially on the same specious arguments that the Paris Commercial Court summarily rejected in 2014 in related proceedings. The Company's Atmel Rousset subsidiary therefore intends to defend vigorously against each of these claims. Additionally, complaints have been filed in a regional court in France on behalf of the same group of employees against Microchip Technology Rousset, Atmel Switzerland Sarl, Atmel Corporation and Microchip Technology Incorporated alleging that the sale of the Atmel Rousset production unit to LF was fraudulent and should be voided. Furthermore, new claims have been filed in a regional court in France on behalf of a subset of this same group of employees against Microchip Technology Incorporated and Atmel Corporation. These claims are specious and the defendant entities therefore intend to defend vigorously against these claims.

The Company accrues for claims and contingencies when losses become probable and reasonably estimable. As of the end of each applicable reporting period, the Company reviews each of its matters and, where it is probable that a liability has been or will be incurred, the Company accrues for all probable and reasonably estimable losses. Where the Company can reasonably estimate a range of losses it may incur regarding such a matter, the Company records an accrual for the amount within the range that constitutes its best estimate. If the Company can reasonably estimate a range but no amount within the range appears to be a better estimate than any other, the Company uses the amount that is the low end of such range. As of September 30, 2019, the Company's estimate of the aggregate potential liability that is possible but not probable is approximately \$100 million in excess of amounts accrued.

The Company's technology license agreements generally include an indemnification clause that indemnifies the licensee against liability and damages (including legal defense costs) arising from any claims of patent, copyright, trademark or trade secret infringement by the Company's proprietary technology. The terms of these indemnification provisions approximate the terms of the outgoing technology license agreements, which are typically perpetual unless terminated by either party for breach. The possible amount of future payments the Company could be required to make based on agreements that specify indemnification limits, if such indemnifications were required on all of these agreements, is approximately \$165 million. There are some licensing agreements in place that do not specify indemnification limits. As of September 30, 2019, the Company had not recorded any liabilities related to these indemnification obligations and the Company believes that any amounts that it may be required to pay under these agreements in the future will not have a material adverse effect on its financial position, cash flows or results of operations.

As reported in the Company's Annual Report on Form 10-K for the fiscal year ended March 31, 2019, the Company learned of an ongoing compromise of its computer networks by what is believed to be sophisticated hackers. The Company engaged experienced legal counsel and a leading forensic investigatory firm with experience in such matters. The Company has taken steps to identify malicious activity on its network including a compromise of its network and, in May 2019, the Company began implementing a containment plan. The Company is continuing to evaluate the effectiveness of the containment plan and the amount and content of the information that was compromised and to implement additional remedial actions. At this time, the Company does not believe that this IT system compromise has had a material adverse effect on its business or resulted in any material damage to it and the Company does not currently believe that such matters will have a material adverse effect on its financial position, cash flows or results of operations. However, until the Company completes its evaluation of the amount and type of data that was compromised, there can be no assurance as to what the impact of this IT system compromise will be.

Note 17. Derivative Instruments

Freestanding Derivative Forward Contracts

The Company has international operations and is thus subject to foreign currency rate fluctuations. Approximately 99% of the Company's sales are U.S. Dollar denominated. However, a significant amount of the Company's expenses and liabilities are denominated in foreign currencies and subject to foreign currency rate fluctuations. To help manage the risk of changes in foreign currency rates, the Company periodically enters into derivative contracts comprised of foreign currency forward contracts to hedge its asset and liability foreign currency exposure and a portion of its foreign currency operating expenses. Foreign exchange rate fluctuations after the effects of hedging activity resulted in net losses of \$2.8 million and \$0.3 million for the three and six months ended September 30, 2019, respectively, compared to a net loss of \$4.4 million for the six months ended September 30, 2018. As of September 30, 2019, the Company had foreign currency forward contracts outstanding with a notional amount of \$250.0 million and \$30.1 million to economically hedge certain balance sheet exposures related to the Malaysian ringgit and Taiwanese dollar, respectively. The fair value of these contracts was immaterial as of September 30, 2019. As of March 31, 2019, the Company had no foreign currency forward contracts outstanding. The Company recognized an immaterial amount of net losses and gains on foreign currency forward contracts in each of the three and six months ended September 30, 2019 and 2018. Gains and losses from changes in the fair value of these foreign currency forward contracts and foreign currency exchange rate fluctuations are credited or charged to other income (loss), net. The Company does not apply hedge accounting to its foreign currency derivative instruments.

Commodity Price Risk

The Company is exposed to fluctuations in prices for energy that it consumes, particularly electricity and natural gas. The Company also enters into variable-priced contracts for some purchases of electricity and natural gas, on an index basis. The Company seeks, or may seek, to partially mitigate these exposures through fixed-price contracts. These contracts meet the characteristics of derivative instruments, but generally qualify for the "normal purchases or normal sales" exception under authoritative guidance and require no mark-to-market adjustment.

Note 18. Accumulated Other Comprehensive Loss

The following table presents the changes in the components of accumulated other comprehensive loss (AOCI), net of tax, for the six months ended September 30, 2019 (in millions):

	Unrealized holding gains (losses) available-for-sale debt securities	Defined benefit pension plans	Foreign Currency	Total
Accumulated other comprehensive income (loss) at March 31, 2019	\$ 0.2	\$ (6.2)	\$ (14.7)	\$ (20.7)
Impact of change in accounting principle	(0.2)	(1.1)	—	(1.3)
Opening Balance as of April 1, 2019	—	(7.3)	(14.7)	(22.0)
Other comprehensive income (loss) before reclassifications	—	1.7	(2.4)	(0.7)
Amounts reclassified from accumulated other comprehensive income (loss)	—	0.4	—	0.4
Net other comprehensive income (loss)	—	2.1	(2.4)	(0.3)
Accumulated other comprehensive loss at September 30, 2019	\$ —	\$ (5.2)	\$ (17.1)	\$ (22.3)

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The table below details where reclassifications of realized transactions out of AOCI are recorded on the condensed consolidated statements of income (in millions):

Description of AOCI Component	Related Statements of Income Line	Three Months Ended September 30,		Six Months Ended September 30,	
		2019	2018	2019	2018
Unrealized losses on available-for-sale debt securities	Other (loss) income, net	\$ —	\$ —	\$ —	\$ (5.6)
Amortization of actuarial loss	Other (loss) income, net	(0.2)	(0.2)	(0.4)	(0.5)
Reclassification of realized transactions, net of taxes	Net income	<u>\$ (0.2)</u>	<u>\$ (0.2)</u>	<u>\$ (0.4)</u>	<u>\$ (6.1)</u>

Note 19. Share-Based Compensation

Share-Based Compensation Expense

The following table presents the details of the Company's share-based compensation expense (in millions):

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
Cost of sales ⁽¹⁾	\$ 5.2	\$ 3.9	\$ 10.1	\$ 7.5
Research and development	22.3	19.7	41.8	33.8
Selling, general and administrative	17.8	17.8	34.1	29.5
Special charges and other, net	—	1.2	—	17.1
Pre-tax effect of share-based compensation	45.3	42.6	86.0	87.9
Income tax benefit	9.9	9.0	19.0	19.1
Net income effect of share-based compensation	<u>\$ 35.4</u>	<u>\$ 33.6</u>	<u>\$ 67.0</u>	<u>\$ 68.8</u>

⁽¹⁾ During the three and six months ended September 30, 2019, \$5.5 million and \$10.3 million, respectively, of share-based compensation expense was capitalized to inventory, and \$5.2 million and \$10.1 million, respectively, of previously capitalized share-based compensation expense in inventory was sold. During the three and six months ended September 30, 2018, \$4.4 million and \$7.9 million, respectively, of share-based compensation expense was capitalized to inventory and \$3.9 million and \$7.5 million, respectively, of previously capitalized share-based compensation expense in inventory was sold.

Microsemi Acquisition-related Equity Awards

In connection with its acquisition of Microsemi on May 29, 2018, the Company assumed certain restricted stock units (RSUs), stock appreciation rights (SARs), and stock options granted by Microsemi. The assumed awards were measured at the acquisition date based on the estimated fair value, which was a total of \$175.4 million. A portion of that fair value, \$53.9 million, which represented the pre-acquisition vested service provided by employees to Microsemi, was included in the total consideration transferred as part of the acquisition. As of the acquisition date, the remaining portion of the fair value of those awards was \$121.5 million, representing post-acquisition share-based compensation expense that will be recognized as these employees provide service over the remaining vesting periods. During the six months ended September 30, 2018, the Company recognized \$40.2 million of share-based compensation expense in connection with the acquisition of Microsemi, of which \$1.6 million was capitalized into inventory and \$17.1 million was due to the accelerated vesting of outstanding equity awards upon termination of certain Microsemi employees.

Note 20. Net Income Per Common Share

The following table sets forth the computation of basic and diluted net income per common share (in millions, except per share amounts):

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	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
Net income	\$ 108.9	\$ 96.3	\$ 159.6	\$ 132.0
Basic weighted average common shares outstanding	238.4	235.8	238.1	235.5
Dilutive effect of stock options and RSUs	3.6	4.3	3.6	4.2
Dilutive effect of 2015 Senior Convertible Debt	13.3	11.7	12.9	12.3
Dilutive effect of 2017 Senior Convertible Debt	—	—	—	—
Dilutive effect of 2017 Junior Convertible Debt	—	—	—	—
Diluted weighted average common shares outstanding	255.3	251.8	254.6	252.0
Basic net income per common share	\$ 0.46	\$ 0.41	\$ 0.67	\$ 0.56
Diluted net income per common share	\$ 0.43	\$ 0.38	\$ 0.63	\$ 0.52

The Company computed basic net income per common share based on the weighted average number of common shares outstanding during the period. The Company computed diluted net income per common share based on the weighted average number of common shares outstanding plus potentially dilutive common shares outstanding during the period.

Potentially dilutive common shares from employee equity incentive plans are determined by applying the treasury stock method to the assumed exercise of outstanding stock options and the assumed vesting of outstanding RSUs. Weighted average common shares exclude the effect of option shares which are not dilutive. There were no anti-dilutive option shares for each of the three and six months ended September 30, 2019 and 2018.

Diluted weighted average common shares outstanding for the three and six months ended September 30, 2019 includes 13.3 million shares and 12.9 million shares, respectively, compared to 11.7 million shares and 12.3 million shares, respectively, for the three and six months ended September 30, 2018 issuable upon the exchange of the Company's 2015 Senior Convertible Debt. There were no shares issuable upon the exchange of the Company's 2017 Senior Convertible Debt or the Company's 2017 Junior Convertible Debt. The convertible debt has no impact on diluted net income per common share unless the average price of the Company's common stock exceeds the conversion price because the Company intends to settle the principal amount of the debentures in cash upon conversion. Prior to conversion, the Company will include, in the diluted net income per common share calculation, the effect of the additional shares that may be issued when the Company's common stock price exceeds the conversion price using the treasury stock method. The following is the weighted average conversion price per share used in calculating the dilutive effect (See Note 14 for details on the convertible debt):

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
2015 Senior Convertible Debt	\$ 61.92	\$ 63.02	\$ 62.05	\$ 63.14
2017 Senior Convertible Debt	\$ 96.55	\$ 98.27	\$ 96.76	\$ 98.47
2017 Junior Convertible Debt	\$ 94.86	\$ 96.55	\$ 95.06	\$ 96.74

Note 21. Stock Repurchase Activity

In January 2016, the Company's Board of Directors authorized an increase to the existing share repurchase program to 15.0 million shares of common stock. There were no repurchases of common stock during the three and six months ended September 30, 2019. There is no expiration date associated with this repurchase program. As of September 30, 2019, approximately 14.5 million shares remained as treasury shares with the balance of the shares being used to fund share issuance requirements under the Company's equity incentive plans.

Note 22. Dividends

A quarterly cash dividend of \$0.3660 per share was paid on September 4, 2019 in the aggregate amount of \$87.3 million. A quarterly cash dividend of \$0.3665 per share was declared on November 5, 2019 and will be paid on December 5, 2019 to stockholders of record as of November 21, 2019. The Company expects the December 2019 payment of its quarterly cash dividend to be approximately \$87.7 million.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Note Regarding Forward-looking Statements

This report, including "Part I – Item 2 Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Part II - Item 1A Risk Factors" contains certain forward-looking statements that involve risks and uncertainties, including statements regarding our strategy, financial performance and revenue sources. We use words such as "anticipate," "believe," "plan," "expect," "future," "continue," "intend" and similar expressions to identify forward-looking statements. Our actual results could differ materially from the results anticipated in these forward-looking statements as a result of certain factors including those set forth under "Risk Factors," beginning at page 53 and elsewhere in this Form 10-Q. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. You should not place undue reliance on these forward-looking statements. We disclaim any obligation to update information contained in any forward-looking statement. These forward-looking statements include, without limitation, statements regarding the following:

- The effects that uncertain global economic conditions and fluctuations in the global credit and equity markets may have on our financial condition and results of operations;
- The effects and amount of competitive pricing pressure on our product lines and modest pricing declines in certain of our more mature proprietary product lines;
- Our ability to moderate future average selling price declines;
- The effect of product mix, capacity utilization, yields, fixed cost absorption, competition and economic conditions on gross margin;
- The amount of, and changes in, demand for our products and those of our customers;
- The impact of trade restrictions and changes in tariffs, including those impacting China;
- Our expectation that in the future we will acquire additional businesses that we believe will complement our existing businesses;
- Our expectation that in the future we will enter into joint development agreements or other business or strategic relationships with other companies;
- The level of orders that will be received and shipped within a quarter, including the impact of our product lead times;
- Our expectation that our December 2019 days of inventory levels will be flat to up 13 days compared to the September 2019 levels. Our belief that our existing level of inventory will allow us to maintain competitive lead times and provide strong delivery performance to our customers;
- The effect that distributor and customer inventory holding patterns will have on us;
- Our belief that customers recognize our products and brand name and use distributors as an effective supply channel;
- Anticipating increased customer requirements to meet voluntary criteria related to the reduction or elimination of substances in our products;
- Our belief that our direct sales personnel combined with our distributors provide an effective means of reaching our customer base;
- The accuracy of our estimates of the useful life and values of our property, assets and other liabilities;
- Our ability to increase the proprietary portion of our analog, interface, mixed signal and timing product lines and the effect of such an increase;
- Our belief that our processes afford us both cost-effective designs in existing and derivative products and greater functionality in new product designs;
- The impact of any supply disruption we may experience;
- Our ability to effectively utilize our facilities at appropriate capacity levels and anticipated costs;
- That we adjust capacity utilization to respond to actual and anticipated business and industry-related conditions;
- That manufacturing costs will be reduced by transition to advanced process technologies;
- Our ability to maintain manufacturing yields;
- Continuing our investments in new and enhanced products;
- The cost effectiveness of using our own assembly and test operations;
- Our anticipated level of capital expenditures;
- Continuation and amount of quarterly cash dividends;
- The sufficiency of our existing sources of liquidity to finance anticipated capital expenditures and otherwise meet our anticipated cash requirements, and the effects that our contractual obligations are expected to have on them;
- The impact of seasonality on our business;

- Our belief that our IT system compromise has not had a material adverse effect on our business or resulted in any material damage to us;
- Our expectation that we will continue to be the target of attacks on our data, attempts to breach our security and attempts to introduce malicious software into our IT systems;
- The accuracy of our estimates used in valuing employee equity awards;
- That the resolution of legal actions will not have a material effect on our business, and the accuracy of our assessment of the probability of loss and range of potential loss;
- The recoverability of our deferred tax assets;
- The adequacy of our tax reserves to offset any potential tax liabilities, having the appropriate support for our income tax positions and the accuracy of our estimated tax rate;
- Our belief that the expiration of any tax holidays will not have a material impact on our overall tax expense or effective tax rate;
- Our belief that the estimates used in preparing our condensed consolidated financial statements are reasonable;
- Our actions to vigorously and aggressively defend and protect our intellectual property on a worldwide basis;
- Our ability to obtain patents and intellectual property licenses and minimize the effects of litigation;
- The level of risk we are exposed to for product liability claims or indemnification claims;
- The effect of fluctuations in market interest rates on our income and/or cash flows;
- The effect of fluctuations in currency rates;
- That we could determine to repatriate some of our offshore earnings in future periods to fund stockholder dividends, share repurchases, acquisitions or other corporate activities;
- Our intention to satisfy the lesser of the principal amount or the conversion value of our debentures in cash;
- Our intention to invest substantially all of our foreign subsidiary earnings, as well as our capital in our foreign subsidiaries, indefinitely outside of the U.S. in those jurisdictions in which we would incur significant, additional costs upon repatriation of such amounts.
- Changes to the taxation of undistributed foreign earnings could change our future intentions regarding reinvestment of such earnings;
- Our belief that the effect the new tax laws will have on low-taxed income of foreign subsidiaries will have the most significant, adverse impact;
- Our intent to maintain a high-quality investment portfolio that preserves principal, meets liquidity needs, avoids inappropriate concentrations and delivers an appropriate yield; and
- Our ability to collect accounts receivable.

Our actual results could differ materially from the results anticipated in these forward-looking statements as a result of certain factors including those set forth in "Item 1A – Risk Factors," and elsewhere in this Form 10-Q. Although we believe that the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. You should not place undue reliance on these forward-looking statements. We disclaim any obligation to update the information contained in any forward-looking statement.

Introduction

The following discussion should be read in conjunction with the condensed consolidated financial statements and the related notes that appear elsewhere in this document.

We begin our Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) with a summary of our overall business strategy to give the reader an overview of the goals of our business and the overall direction of our business and products. This is followed by a discussion of the Critical Accounting Policies and Estimates that we believe are important to understanding the assumptions and judgments incorporated in our reported financial results. We then discuss our Results of Operations for the three and six months ended September 30, 2019 compared to the three and six months ended September 30, 2018. We then provide an analysis of changes in our balance sheet and cash flows, and discuss our financial commitments in sections titled "Liquidity and Capital Resources," and "Off-Balance Sheet Arrangements."

Acquisition of Microsemi

On May 29, 2018, we completed our acquisition of Microsemi Corporation, a publicly traded company headquartered in Aliso Viejo, California. We paid an aggregate of approximately \$8.19 billion in cash to the stockholders of Microsemi. The total consideration transferred in the acquisition, including approximately \$53.9 million of non-cash consideration for the exchange of certain share-based payment awards of Microsemi for stock awards of Microchip, was approximately \$8.24 billion. In addition to the consideration transferred, we recognized in our consolidated financial statements \$3.23 billion in liabilities of Microsemi consisting of debt, taxes payable and deferred, pension obligations, restructuring, and contingent and other liabilities of which \$2.06 billion of existing debt was paid off. We financed the purchase price using approximately \$8.10 billion of borrowings consisting of \$3.10 billion of loans under our revolving line of credit (the "Revolving Credit Facility"), \$3.00 billion of term loans ("Term Loan Facility") provided under our amended and restated Credit Agreement, and \$2.00 billion in newly issued senior secured notes. We incurred \$22.0 million in costs related to the acquisition. As a result of the acquisition, Microsemi became a wholly owned subsidiary of Microchip. Microsemi offers a comprehensive portfolio of semiconductor and system solutions for aerospace and defense, communications, data center and industrial markets. Our primary reason for this acquisition was to expand our range of solutions, products and capabilities by extending our served available market.

For further details, see the discussion in Note 3 of our condensed consolidated financial statements included in this report.

Material Weaknesses in Internal Controls

As discussed in Item 4 "Controls and Procedures" in this report on Form 10-Q, in the fourth quarter of fiscal 2019, we identified a material weakness in our internal controls related to accounting for income taxes and we also identified a material weakness in our internal controls related to IT system access. Internal controls related to such matters are important to accurately reflect our financial position and results of operations in our financial reports. We are in the process of remediating the material weaknesses, but our efforts may not be successful. If we are unable to remediate the material weaknesses in an appropriate and timely manner, or if we identify additional control deficiencies that individually or together constitute significant deficiencies or material weaknesses, our ability to accurately record, process, and report financial information and consequently, our ability to prepare financial statements within required time periods, could be adversely affected. Failure to maintain effective internal controls could result in violations of applicable securities laws, stock exchange listing requirements, and the covenants under our debt agreements, subject us to litigation and investigations, negatively affect investor confidence in our financial statements, and adversely impact our stock price and ability to access capital markets. For additional information, refer to Item 4 "Controls and Procedures."

IT System Compromise

As reported in our March 31, 2019 Form 10-K, we learned of an ongoing compromise of our computer networks by what is believed to be sophisticated hackers. We engaged experienced legal counsel and a leading forensic investigatory firm with experience in such matters. We have taken steps to identify malicious activity on our network including a compromise of our network and, in May 2019, we began implementing a containment plan. We are continuing to evaluate the effectiveness of the containment plan and the amount and content of the information that was compromised and to implement additional remedial actions. At this time, we do not believe that this IT system compromise has had a material adverse effect on our business or resulted in any material damage to us and we do not currently believe that such matters will have a material adverse effect on our financial position, cash flows or results of operations. However, until we complete our evaluation of the amount and type of data that was compromised, there can be no assurance as to what the impact of this IT system compromise will be.

Strategy

Our goal is to be a worldwide leader in providing specialized semiconductor products for a wide variety of embedded control applications. Our strategic focus is on embedded control solutions, including general purpose and specialized 8-bit, 16-bit, and 32-bit microcontrollers, 32-bit microprocessors, field-programmable gate array (FPGA) products, a broad spectrum of high-performance linear, mixed-signal, power management, thermal management, discrete diodes and MOSFETS, radio frequency (RF), timing, timing systems, safety, security, wired connectivity and wireless connectivity devices, as well as Serial Electrically Erasable Programmable Read Only Memory (EEPROM), Serial Flash memories, Parallel Flash memories, Serial Electrically Erasable Random Access Memory (EERAM) and Serial Static Random Access Memory (SRAM). We also license Flash-IP solutions that are incorporated in a broad range of products. We provide highly cost-effective embedded control solutions that also offer the advantages of small size, high performance, extreme low power usage, wide voltage range operation, mixed signal integration and ease of development, thus enabling timely and cost-effective integration of our solutions by our customers in their end products. We license our SuperFlash technology and other technologies to wafer

foundries, integrated device manufacturers and design partners throughout the world for use in the manufacture of advanced microcontroller products, gate array, radio frequency (RF) and analog products that require embedded non-volatile memory.

We sell our products to a broad base of domestic and international customers across a variety of industries. The principal markets that we serve include consumer, automotive, industrial, aerospace, office communication, and computing. Our business is subject to fluctuations based on economic conditions within these markets.

Our manufacturing operations include wafer fabrication, wafer probe and assembly and test. The ownership of a substantial portion of our manufacturing resources is an important component of our business strategy, enabling us to maintain a high level of manufacturing control resulting in us being one of the lowest cost producers in the embedded control industry. By owning wafer fabrication facilities and assembly and test operations, and by employing statistical process control techniques, we have been able to achieve and maintain high production yields. Direct control over manufacturing resources allows us to shorten our design and production cycles. This control also allows us to capture a portion of the wafer manufacturing and the assembly and test profit margin. We do outsource a significant portion of our manufacturing requirements to third parties. Our acquisition of Microsemi significantly increased the amount of our outsourced manufacturing requirements.

We employ proprietary design and manufacturing processes in developing our embedded control products. We believe our processes afford us both cost-effective designs in existing and derivative products and greater functionality in new product designs. While many of our competitors develop and optimize separate processes for their logic and memory product lines, we use a common process technology for both microcontroller and non-volatile memory products. This allows us to more fully leverage our process research and development costs and to deliver new products to market more rapidly. Our engineers utilize advanced computer-aided design tools and software to perform circuit design, simulation and layout, and our in-house photomask and wafer fabrication facilities enable us to rapidly verify design techniques by processing test wafers quickly and efficiently.

We are committed to continuing our investment in new and enhanced products, including development systems, and in our design and manufacturing process technologies. We believe these investments are significant factors in maintaining our competitive position. Our current research and development activities focus on the design of new microcontrollers, digital signal controllers, memory, analog and mixed-signal products, FPGAs, timing systems, Flash-IP, development systems, software and application-specific software libraries. We are also developing new design and process technologies to achieve further cost reductions and performance improvements in our products.

We market and sell our products worldwide primarily through a network of direct sales personnel and distributors. Our distributors focus primarily on servicing the product and technical support requirements of a broad base of diverse customers. We believe that our direct sales personnel combined with our distributors provide an effective means of reaching this broad and diverse customer base. Our direct sales force focuses primarily on major strategic accounts in three geographical markets: the Americas, Europe and Asia. We currently maintain sales and support centers in major metropolitan areas in North America, Europe and Asia. We believe that a strong technical service presence is essential to the continued development of the embedded control market. Many of our client engagement managers (CEMs), embedded system engineers (ESEs), and sales management personnel have technical degrees and have been previously employed in an engineering environment. We believe that the technical knowledge of our sales force is a key competitive advantage in the sale of our products. The primary mission of our ESE team is to provide technical assistance to strategic accounts and to conduct periodic training sessions for CEMs and distributor sales teams. ESEs also frequently conduct technical seminars for our customers in major cities around the world, and work closely with our distributors to provide technical assistance and end-user support.

See "Our operating results are impacted by both seasonality and the wide fluctuation of supply and demand in the semiconductor industry," on page 57 for discussion of the impact of seasonality on our business.

Critical Accounting Policies and Estimates

General

Our discussion and analysis of our financial condition and results of operations is based upon our condensed consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the U.S. We review the accounting policies we use in reporting our financial results on a regular basis. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent liabilities. On an ongoing basis, we evaluate our estimates, including those related to revenue recognition, business combinations, share-based compensation, inventories, income taxes, senior and junior

subordinated convertible debt and contingencies. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Our results may differ from these estimates due to actual outcomes being different from those on which we based our assumptions. We review these estimates and judgments on an ongoing basis. We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our condensed consolidated financial statements.

Revenue Recognition

We generate revenue primarily from sales of our semiconductor products to distributors and non-distributor customers (direct customers) and, to a lesser extent, from royalties paid by licensees of our intellectual property. We apply the following five-step approach to determine the timing and amount of revenue recognition: (1) identify the contract with the customer, (2) identify performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract, and (5) recognize revenue when the performance obligation is satisfied.

Sales to our distributors are governed by a distributor agreement, a purchase order, and an order acknowledgment. Sales to distributors do not meet the definition of a contract, as defined by Accounting Standard Codification Topic 606 (ASC 606), until the distributor has sent in a purchase order, we have acknowledged the order, we have deemed the collectability of the consideration to be probable, and legally enforceable rights and obligations have been created; this generally occurs 30 days prior to the estimated ship date. As is customary in the semiconductor industry, we offer price concessions and stock rotation rights to many of our distributors. As these are forms of variable consideration, we estimate the amount of consideration to which we will be entitled using recent historical data and applying the expected value method. Usually, there is only a single performance obligation in the contract, and therefore the entire transaction price is allocated to the single performance obligation. After the transaction price has been allocated, we recognize revenue when the performance obligation is satisfied. Substantially all of the revenue generated from contracts with distributors is recognized at the time risk and title of the inventory transfers to the distributor.

Sales to our direct customers are generally governed by a purchase order and an order acknowledgment. Sales to direct customers usually do not meet the definition of a contract, as defined by ASC 606, until shipment of the product occurs. Generally, the transaction price associated with contracts with direct customers is set at the standalone selling price and is not variable. Usually, there is only a single performance obligation in the contract, and therefore the entire transaction price is allocated to the single performance obligation. After the transaction price has been allocated, we recognize revenue when the performance obligation is satisfied. Substantially all of the revenue generated from contracts with direct customers is recognized at the time risk and title of the inventory transfers to the customer.

Revenue generated from our licensees is governed by licensing agreements. Our primary performance obligation related to these agreements is to provide the licensee the right to use the intellectual property. The final transaction price is determined by multiplying the usage of the license by the royalty, which is fixed in the licensing agreement. Revenue is recognized as usage of the license occurs.

Business Combinations

All of our business combinations are accounted for at fair value under the acquisition method of accounting. Under the acquisition method of accounting, (i) acquisition-related costs, except for those costs incurred to issue debt or equity securities, will be expensed in the period incurred; (ii) non-controlling interests will be valued at fair value at the acquisition date; (iii) in-process research and development will be recorded at fair value as an intangible asset at the acquisition date and amortized once the technology reaches technological feasibility; (iv) restructuring costs associated with a business combination will be expensed subsequent to the acquisition date; and (v) changes in deferred tax asset valuation allowances and income tax uncertainties after the acquisition date will be recognized through income tax expense. The measurement of the fair value of assets acquired and liabilities assumed requires significant judgment. The valuation of intangible assets, in particular, requires that we use valuation techniques such as the income approach. The income approach includes the use of a discounted cash flow model, which includes discounted cash flow scenarios and requires the following significant estimates: revenue, expenses, capital spending and other costs, and discount rates based on the respective risks of the cash flows. Under the acquisition method of accounting, the aggregate amount of consideration we pay for a company is allocated to net tangible assets and intangible assets based on their estimated fair values as of the acquisition date. The excess of the purchase price over the value of the net tangible assets and intangible assets is recorded to goodwill. On an annual basis, we test goodwill for impairment and through September 30, 2019, we have never recorded an impairment charge against our goodwill balance.

Share-based Compensation

We measure at fair value and recognize compensation expense for all share-based payment awards, including grants of employee stock options, restricted stock units (RSUs) and employee stock purchase rights, to be recognized in our financial statements based on their respective grant date fair values. We utilize RSUs as our primary equity incentive compensation instrument for employees. Share-based compensation cost is measured on the grant date based on the fair market value of our common stock discounted for expected future dividends and is recognized as expense on a straight-line basis over the requisite service periods. Total share-based compensation expense recognized during the six months ended September 30, 2019 was \$86.0 million, of which \$75.9 million was reflected in operating expenses and \$10.1 million was reflected in cost of sales. Total share-based compensation included in our inventory balance was \$14.5 million at September 30, 2019.

If there are any modifications or cancellations of the underlying unvested securities, we may be required to accelerate, increase or cancel any remaining unearned share-based compensation expense. Future share-based compensation expense and unearned share-based compensation will increase to the extent that we grant additional equity awards to employees or we assume unvested equity awards in connection with acquisitions.

Inventories

Inventories are valued at the lower of cost or net realizable value using the first-in, first-out method. We write down our inventory for estimated obsolescence or unmarketable inventory in an amount equal to the difference between the cost of inventory and the estimated net realizable value based upon assumptions about future demand and market conditions. If actual market conditions are less favorable than those we projected, additional inventory write-downs may be required. Inventory impairment charges establish a new cost basis for inventory and charges are not subsequently reversed to income even if circumstances later suggest that increased carrying amounts are recoverable. In estimating our inventory obsolescence, we primarily evaluate estimates of demand over a 12-month period and record impairment charges for inventory on hand in excess of the estimated 12-month demand. Estimates for projected 12-month demand are generally based on the average shipments of the prior three-month period, which are then annualized to adjust for any potential seasonality in our business. The estimated 12-month demand is compared to our most recently developed sales forecast to further reconcile the 12-month demand estimate. Management reviews and adjusts the estimates as appropriate based on specific situations. For example, demand can be adjusted up for new products for which historic sales are not representative of future demand. Alternatively, demand can be adjusted down to the extent any existing products are being replaced or discontinued.

In periods where our production levels are substantially below our normal operating capacity, the reduced production levels of our manufacturing facilities are charged directly to cost of sales. As a result of production being below normal operating levels in our wafer fabrication facilities, approximately \$16.2 million was charged to cost of sales in the six months ended September 30, 2019. During the six months ended September 30, 2018, we operated at below normal capacity levels resulting in an unabsorbed capacity charge of \$5.0 million.

Income Taxes

As part of the process of preparing our condensed consolidated financial statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. This process involves estimating our actual current tax exposure together with assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are included within our consolidated balance sheets. We must then assess the likelihood that our deferred tax assets will be recovered from future taxable income within the relevant jurisdiction and to the extent we believe that recovery is not likely, we must establish a valuation allowance. We provided valuation allowances for certain of our deferred tax assets, where it is more likely than not that some portion, or all of such assets, will not be realized.

Various taxing authorities in the U.S. and other countries in which we do business scrutinize the tax structures employed by businesses. Companies of our size and complexity are regularly audited by the taxing authorities in the jurisdictions in which they conduct significant operations. We are currently being audited by the tax authorities in the United States and in various foreign jurisdictions. At this time, we do not know what the outcome of these audits will be. We record benefits for uncertain tax positions based on an assessment of whether it is more likely than not that the tax positions will be sustained based on their technical merits under currently enacted law. If this threshold is not met, no tax benefit of the uncertain tax position is recognized. If the threshold is met, we recognize the largest amount of the tax benefit that is more than 50% likely to be realized upon ultimate settlement.

The accounting model as defined in Accounting Standards Codification ("ASC") 740 related to the valuation of uncertain tax positions requires us to presume that the tax position will be examined by the relevant taxing authority that has full knowledge of all relevant information and that each tax position will be evaluated without consideration of the possibility of offset or aggregation with other positions. The recognition requirement for the liability exists even if we believe the possibility of examination by a taxing authority or discovery of the related risk matters is remote or where we have a long history of the taxing authority not performing an exam or overlooking an issue. We will record an adjustment to a previously recorded position if new information or facts related to the position are identified in a subsequent period. All adjustments to the positions are recorded through the income statement. Generally, adjustments will be recorded in periods subsequent to the initial recognition if the taxing authority has completed an audit of the period that results in the position being effectively settled or if the statute of limitation expires. Due to the inherent uncertainty in the estimation process and in consideration of the criteria of the accounting model, amounts recognized in the financial statements in periods subsequent to the initial recognition may significantly differ from the estimated exposure of the position under the accounting model.

Senior and Junior Subordinated Convertible Debt

We separately account for the liability and equity components of our senior and junior subordinated convertible debt in a manner that reflects our nonconvertible debt (unsecured debt) borrowing rate when interest cost is recognized. This results in a bifurcation of a component of the debt, classification of that component in equity and the accretion of the resulting discount on the debt to be recognized as part of interest expense in our consolidated statements of income. Lastly, we include the dilutive effect of the shares of our common stock issuable upon conversion of the outstanding senior and junior subordinated convertible debt in our diluted income per share calculation regardless of whether the market price triggers or other contingent conversion features have been met. We apply the treasury stock method as we have the intent and have adopted an accounting policy to settle the principal amount of the senior and junior subordinated convertible debentures in cash. This method results in incremental dilutive shares when the average fair value of our common stock for a reporting period exceeds the conversion prices per share and adjusts as dividends are recorded in the future.

Contingencies

In the ordinary course of our business, we are exposed to various liabilities as a result of contracts, product liability, customer claims, governmental investigations and other matters. Additionally, we are involved in a limited number of legal actions, both as plaintiff and defendant. Consequently, we could incur uninsured liability in any of those actions. We also periodically receive notifications from various third parties alleging infringement of patents or other intellectual property rights, or from customers requesting reimbursement for various costs. With respect to pending legal actions to which we are a party and other claims, although the outcomes are generally not determinable, we believe that the ultimate resolution of these matters will not have a material adverse effect on our financial position, cash flows or results of operations. Litigation, governmental investigations and disputes relating to the semiconductor industry are not uncommon, and we are, from time to time, subject to such litigation, governmental investigations and disputes. As a result, no assurances can be given with respect to the extent or outcome of any such litigation, governmental investigations or disputes in the future.

We accrue for claims and contingencies when losses become probable and reasonably estimable. As of the end of each applicable reporting period, we review each of our matters and, where it is probable that a liability has been or will be incurred, we accrue for all probable and reasonably estimable losses. Where we can reasonably estimate a range of losses we may incur regarding such a matter, we record an accrual for the amount within the range that constitutes our best estimate. If we can reasonably estimate a range but no amount within the range appears to be a better estimate than any other, we use the amount that is the low end of such range. Contingencies of an acquired company that exist as of the date of the acquisition are measured at fair value if determinable, which generally is based on a probability weighted model. If fair value is not determinable, contingencies of an acquired company are recognized when they become probable and reasonably estimable.

Results of Operations

The following table sets forth certain operational data as a percentage of net sales for the periods covered by this report:

	Three Months Ended September 30,		Six Months Ended September 30,	
	2019	2018	2019	2018
Net sales	100.0%	100.0%	100.0%	100.0%
Cost of sales	38.1	51.9	38.3	49.7
Gross profit	61.9	48.1	61.7	50.3
Research and development	16.4	15.5	16.5	14.9
Selling, general and administrative	12.9	12.3	12.8	12.9
Amortization of acquired intangible assets	18.6	11.9	18.7	11.5
Special charges and other, net	0.3	1.2	0.3	2.1
Operating income	13.7%	7.2%	13.4%	8.9%

Net Sales

We operate in two industry segments and engage primarily in the design, development, manufacture and sale of semiconductor products as well as the licensing of our SuperFlash and other technologies. We sell our products to distributors and original equipment manufacturers, referred to as OEMs, in a broad range of markets, perform ongoing credit evaluations of our customers and generally require no collateral. In certain circumstances, a customer's financial condition may require collateral, and, in such cases, the collateral would be typically provided by letters of credit.

The following table summarizes our net sales for the periods covered by this report (dollars in millions):

	Three Months Ended September 30,			Six Months Ended September 30,		
	2019	2018	% Change	2019	2018	% Change
Net sales	\$ 1,337.8	\$ 1,432.5	(6.6)%	\$ 2,660.4	\$ 2,644.9	0.6%

The decrease in net sales in the three months ended September 30, 2019 compared to the three months ended September 30, 2018 was primarily due to adverse demand fluctuations in the markets we serve, which were negatively impacted by general economic conditions, trade restrictions and adverse changes in tariffs.

The increase in net sales in the six months ended September 30, 2019 compared to the six months ended September 30, 2018 was due primarily to our acquisition of Microsemi as the September 30, 2019 results included two full quarters of Microsemi net sales compared to four months of Microsemi net sales in the six months ended September 30, 2018. The timing of the acquisition closing accounted for an increase of approximately 8% in our net sales. This increase was partially offset by adverse demand fluctuations in the markets we serve, which were negatively impacted by general economic conditions, trade restrictions and adverse changes in tariffs. Excluding the impact of the timing of the acquisition of Microsemi, these adverse conditions negatively affected net sales by approximately 7% compared to the same period in the prior year.

We sell a large number of products to a large and diverse customer base and, excluding the impact of our Microsemi acquisition, there was not any product, customer or market that accounted for a material portion of the change. The overall average selling price of our products is affected by pricing declines over the life of individual products; however, variations in our product and geographic mix of sales can cause wider fluctuations in our overall average selling price in any given period. The overall average selling price of our products increased significantly during the three and six months ended September 30, 2019 compared to the three and six months ended September 30, 2018 due to our acquisition of Microsemi, whose average selling price is higher than the average selling price of our historical business due to the types of products they offer and the types of customers and markets they serve.

Key factors impacting the amount of net sales during the three and six months ended September 30, 2019 compared to the three and six months ended September 30, 2018 include:

- our acquisition of Microsemi, which closed on May 29, 2018;
- global economic conditions in the markets we serve;

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- trade restrictions and adverse changes in tariffs;
- semiconductor industry conditions;
- our new product offerings that have increased our served available market;
- customers' increasing needs for the flexibility offered by our programmable solutions;
- inventory holding patterns of our customers, including distributors; and
- increasing semiconductor content in our customers' products.

Net sales by product line for the periods covered by this report were as follows (dollars in millions):

	Three Months Ended September 30,				Six Months Ended September 30,			
	2019	%	2018	%	2019	%	2018	%
Microcontrollers	\$ 697.8	52.2	\$ 778.6	54.3	\$ 1,406.1	52.9	\$ 1,500.9	56.7
Analog, interface, mixed signal and timing products	393.9	29.4	419.2	29.3	780.3	29.3	751.1	28.4
Field-programmable gate array products	93.2	7.0	70.8	4.9	184.2	6.9	108.7	4.1
Licensing, memory and other	152.9	11.4	163.9	11.5	289.8	10.9	284.2	10.8
Total net sales	<u>\$ 1,337.8</u>	<u>100.0</u>	<u>\$ 1,432.5</u>	<u>100.0</u>	<u>\$ 2,660.4</u>	<u>100.0</u>	<u>\$ 2,644.9</u>	<u>100.0</u>

Microcontrollers

Our microcontroller product line represents the largest component of our total net sales. Microcontrollers and associated application development systems accounted for approximately 52.2% and 52.9% of our net sales for the three and six months ended September 30, 2019, respectively, compared to approximately 54.3% and 56.7% of our net sales for the three and six months ended September 30, 2018, respectively. The decreases are due to adverse demand fluctuations in the markets we serve and our acquisition of Microsemi, whose microcontroller product line accounted for a relatively low percentage of its total net sales.

Net sales of our microcontroller products decreased 10.4% and 6.3% in the three and six months ended September 30, 2019, respectively, compared to the three and six months ended September 30, 2018. These sales decreases were due primarily to adverse demand fluctuations in the markets we serve, partially offset by our acquisition of Microsemi.

Historically, average selling prices in the semiconductor industry decrease over the life of any particular product. The overall average selling prices of our microcontroller products have remained relatively constant over time due to the proprietary nature of these products. We have experienced, and expect to continue to experience, moderate pricing pressure in certain microcontroller product lines, primarily due to competitive conditions. We have in the past been able to, and expect in the future to be able to, moderate average selling price declines in our microcontroller product lines by introducing new products with more features and higher prices. We may be unable to maintain average selling prices for our microcontroller products as a result of increased pricing pressure in the future, which would adversely affect our operating results. The average selling price of our microcontroller products is affected by these trends; however, variations in our product and geographic mix of sales can cause wider fluctuations in the average selling price of our microcontroller products in any given period.

Analog, Interface, Mixed Signal and Timing Products

Sales of our analog, interface, mixed signal and timing products accounted for approximately 29.4% and 29.3% of our net sales for the three and six months ended September 30, 2019, respectively, compared to approximately 29.3% and 28.4% of our net sales for the three and six months ended September 30, 2018, respectively. The increases are due primarily to our acquisition of Microsemi, whose analog, interface, mixed signal and timing product line accounted for a relatively high percentage of its total net sales.

Net sales of our analog, interface, mixed signal and timing products decreased 6.0% for the three months ended September 30, 2019 and increased 3.9% in the six months ended September 30, 2019, respectively, compared to the three and six months ended September 30, 2018. The decrease for the three months ended September 30, 2019 compared to the three months ended September 30, 2018 is due primarily to adverse demand conditions in the markets we serve. The increase for the six months ended September 30, 2019 compared to the six months ended September 30, 2018 is due primarily to our acquisition of Microsemi, partially offset by adverse demand conditions in the markets we serve.

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Analog, interface, mixed signal and timing products can be proprietary or non-proprietary in nature. Currently, we consider a majority of our analog, interface, mixed signal and timing products to be proprietary in nature, where prices are relatively stable, similar to the pricing stability experienced in our microcontroller products. The non-proprietary portion of our analog, interface, mixed signal and timing business will experience price fluctuations, driven primarily by the current supply and demand for those products. We may be unable to maintain the average selling prices of our analog, interface, mixed signal and timing products as a result of increased pricing pressure in the future, which would adversely affect our operating results. We anticipate the proprietary portion of our analog, interface, mixed signal and timing products will increase over time.

Field-Programmable Gate Array (FPGA) Products

Our FPGA product line was primarily acquired as part of our acquisition of Microsemi on May 29, 2018. Sales of our FPGA products accounted for approximately 7.0% and 6.9% of our net sales for the three and six months ended September 30, 2019, respectively, compared to approximately 4.9% and 4.1% of our net sales for the three and six months ended September 30, 2018, respectively. These increases are due primarily to our acquisition of Microsemi.

Net sales of our FPGA products increased 31.6% and 69.5% in the three and six months ended September 30, 2019, respectively, compared to the three and six months ended September 30, 2018. These sales increases were due primarily to customer demand conditions and our acquisition of Microsemi. FPGA product pricing has historically been relatively stable because they are proprietary products with significant design in complexity and they are frequently designed into long-lived end applications.

Licensing, Memory and Other

Licensing, memory and other (LMO) includes royalties associated with licenses for the use of our SuperFlash and other technologies, sales of our intellectual property, fees for engineering services, memory products, manufacturing services (wafer foundry and assembly and test subcontracting), legacy application specific integrated circuits, and products for aerospace applications. Revenue from these services and products accounted for approximately 11.4% and 10.9% of our net sales for the three and six months ended September 30, 2019, respectively, compared to approximately 11.5% and 10.8% of our net sales for the three and six months ended September 30, 2018, respectively.

Net sales related to these services and products decreased 6.7% in the three months ended September 30, 2019 and increased 2.0% in the six months ended September 30, 2019, respectively, compared to the three and six months ended September 30, 2018. LMO net sales can fluctuate over time based on general economic and semiconductor industry conditions as well as changes in demand for our licenses, engineering services, memory products, and manufacturing services (wafer foundry and assembly and test subcontracting).

Distribution

Distributors accounted for approximately 49.8% and 50.0% of our net sales in the three and six months ended September 30, 2019, respectively, and approximately 49.7% and 51.3% of our net sales in the three and six months ended September 30, 2018, respectively. With the exception of Arrow Electronics, our largest distributor, which represented 11% of our net sales in the three and six months ended September 30, 2019, no other distributor or end customer accounted for more than 10% of our net sales in the three and six months ended September 30, 2019. In the three and six months ended September 30, 2018, no distributor or end customer accounted for more than 10% of our net sales. Our distributors focus primarily on servicing the product requirements of a broad base of diverse customers. We believe that distributors provide an effective means of reaching this broad and diverse customer base. We believe that customers recognize Microchip for its products and brand name and use distributors as an effective supply channel.

Generally, we do not have long-term agreements with our distributors and we, or our distributors, may terminate our relationships with each other with little or no advance notice. The loss of, or the disruption in the operations of, one or more of our distributors could reduce our future net sales in a given quarter and could result in an increase in inventory returns.

At September 30, 2019, our distributors maintained 30 days of inventory of our products compared to 35 days at March 31, 2019. Over the past ten fiscal years, the days of inventory maintained by our distributors have fluctuated between approximately 27 days and 47 days. Inventory holding patterns at our distributors may have a material impact on our net sales.

Sales by Geography

Sales by geography for the periods covered by this report were as follows (dollars in millions):

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	Three Months Ended September 30,				Six Months Ended September 30,			
	2019	%	2018	%	2019	%	2018	%
Americas	\$ 354.7	26.5	\$ 350.2	24.4	\$ 701.3	26.4	\$ 621.2	23.5
Europe	303.1	22.7	329.2	23.0	594.2	22.3	618.2	23.4
Asia	680.0	50.8	753.1	52.6	1,364.9	51.3	1,405.5	53.1
Total net sales	<u>\$ 1,337.8</u>	<u>100.0</u>	<u>\$ 1,432.5</u>	<u>100.0</u>	<u>\$ 2,660.4</u>	<u>100.0</u>	<u>\$ 2,644.9</u>	<u>100.0</u>

Americas sales include sales to customers in the U.S., Canada, Central America and South America. Sales to foreign customers accounted for approximately 79% of our total net sales in each of the three and six months ended September 30, 2019 compared to approximately 80% and 82% of our total net sales in each of the three and six months ended September 30, 2018, respectively. Substantially all of our foreign sales are U.S. dollar denominated. Sales to customers in Asia have generally increased over time due to many of our customers transitioning their manufacturing operations to Asia and growth in demand from the emerging Asian market; however, sales to Asia in dollars and as a percentage of our total net sales decreased in the three and six months ended September 30, 2019 compared to the three and six months ended September 30, 2018 due to our acquisition of Microsemi, whose sales to customers in Asia accounted for a smaller portion of their total net sales than Microchip's historical business, and to a lesser extent, trade restrictions and adverse changes in tariffs. Sales to customers in the Americas increased as a percentage of total sales in the three and six months ended September 30, 2019 compared to the three and six months ended September 30, 2018 due to our acquisition of Microsemi, which had more concentration in the aerospace and defense industry in the Americas. Our sales force in the Americas and Europe supports a significant portion of the design activity for products which are ultimately shipped to Asia.

Gross Profit

Our gross profit in the three months ended September 30, 2019 was \$827.5 million, or 61.9% of net sales, compared to \$689.3 million, or 48.1% of net sales, in the three months ended September 30, 2018. Our gross profit in the six months ended September 30, 2019 was \$1,642.7 million, or 61.7% of net sales, compared to \$1,331.3 million, or 50.3% of net sales, in the six months ended September 30, 2018.

The most significant factors affecting our gross profit percentage in the periods covered by this Form 10-Q were:

- charges of approximately \$182.1 million and \$289.6 million, respectively, in the three and six months ended September 30, 2018 related to the recognition of acquired inventory at fair value as a result of our acquisition of Microsemi which increased the value of our acquired inventory and subsequently increased our cost of sales and reduced our gross margins when the related revenue was recognized;
- unabsorbed capacity charges of \$8.9 million and \$16.2 million due to operating at below normal capacity in three and six months ended September 30, 2019, respectively;
- unabsorbed capacity charges of \$5.0 million due to operating at below normal capacity in the three and six months ended September 30, 2018; and
- fluctuations in the product mix of microcontrollers, analog, interface, mixed signal and timing products, FPGA products, memory products and technology licensing.

Other factors that impacted our gross profit percentage in the periods covered by this Form 10-Q include:

- continual cost reductions in wafer fabrication and assembly and test manufacturing, such as new manufacturing technologies and more efficient manufacturing techniques; and
- economic market conditions and product mix.

We adjust our wafer fabrication and assembly and test capacity utilization as required to respond to actual and anticipated business and industry-related conditions. When production levels are below normal capacity, which we measure as a percentage of the capacity of the installed equipment, we charge cost of sales for the unabsorbed capacity. During the three and six months ended September 30, 2019, we operated at below normal capacity levels resulting in an unabsorbed capacity charge of \$8.9 million and \$16.2 million, respectively. During three and six months ended September 30, 2018, we operated at below normal capacity levels resulting in an unabsorbed capacity charge of \$5.0 million.

The process technologies utilized in our wafer fabrication facilities impact our gross margins. Our wafer fabrication facility located in Tempe, Arizona (Fab 2) currently utilizes various manufacturing process technologies, but predominantly utilizes our 0.5 micron to 1.0 micron processes. Our wafer fabrication facility located in Gresham, Oregon (Fab 4)

predominantly utilizes our 0.13 micron to 0.5 micron processes. We continue to transition products to more advanced process technologies to reduce future manufacturing costs. All of our production in Fab 2 and Fab 4 has been on 8-inch wafers during the periods covered by this report. We consider normal capacity at Fab 2 and Fab 4 to be 90% to 95%. Our wafer fabrication facility in Colorado Springs, Colorado (Fab 5) currently utilizes processes between 0.25 micron and 1.0 micron that run on 6-inch wafers. We consider normal capacity at Fab 5 to be 70% to 75%.

Our overall inventory levels were \$734.2 million at September 30, 2019, compared to \$711.7 million at March 31, 2019. We maintained 131 days of inventory on our balance sheet at September 30, 2019 compared to 128 days of inventory at March 31, 2019. We expect our days of inventory levels in the December 2019 quarter to be flat to up 13 days compared to the September 2019 levels. We believe our existing level of inventory will allow us to maintain competitive lead times and provide strong delivery performance to our customers.

We anticipate that our gross margins will fluctuate over time, driven primarily by capacity utilization levels, the overall product mix of microcontroller, analog, interface, mixed signal and timing products, FPGA products, memory products and technology licensing revenue and the percentage of net sales of each of these products in a particular quarter, as well as manufacturing yields, fixed cost absorption, and competitive and economic conditions in the markets we serve.

We operate assembly and test facilities in Thailand, the Philippines, and other locations throughout the world. Approximately 45% of our assembly requirements were performed in our internal assembly facilities in each of the three and six months ended September 30, 2019 compared to approximately 36% and 37% during the three and six months ended September 30, 2018, respectively. Approximately 54% of our test requirements were performed in our internal test facilities during each of the three and six months ended September 30, 2019 compared to approximately 45% and 48% during the three and six months ended September 30, 2018. The increases in the percentage of assembly and test operations that were performed internally in the three and six months ended September 30, 2019 compared to the three and six months ended September 30, 2018 are primarily due to our investments in assembly and test equipment, which increased our internal capacity capabilities, and also due to adverse demand fluctuations in the markets we serve, which reduced our demand for external assembly and test operations. Third-party contractors located primarily in Asia perform the balance of our assembly and test operations. The percentage of our assembly and test operations that are performed internally fluctuates over time based on supply and demand conditions in the semiconductor industry, our internal capacity capabilities and our acquisition activities. We believe that the assembly and test operations performed at our internal facilities provide us with significant cost savings compared to contractor assembly and test costs, as well as increased control over these portions of the manufacturing process. We plan to continue to transition certain outsourced assembly and test capacity to our internal facilities.

We rely on outside wafer foundries for a significant portion of our wafer fabrication requirements. Approximately 61% of our net sales came from products that were produced at outside wafer foundries in each of the three and six months ended September 30, 2019 compared to approximately 58% and 54% during the three and six months ended September 30, 2018, respectively. The increases were primarily due to our acquisition of Microsemi, which outsources the majority of its wafer fabrication requirements. The timing of the acquisition, which occurred on May 29, 2018, also contributed to the increase as the September 30, 2019 results included a full six months of Microsemi activity compared to four months in the six months ended September 30, 2018.

Our use of third parties involves some reduction in our level of control over the portions of our business that we subcontract. While we review the quality, delivery and cost performance of our third-party contractors, our future operating results could suffer if any third-party contractor is unable to maintain manufacturing yields, assembly and test yields and costs at approximately their current levels.

Research and Development (R&D)

R&D expenses for the three months ended September 30, 2019 were \$219.8 million, or 16.4% of net sales, compared to \$221.9 million, or 15.5% of net sales, for the three months ended September 30, 2018. R&D expenses for the six months ended September 30, 2019 were \$438.9 million, or 16.5% of net sales, compared to \$393.8 million, or 14.9% of net sales, for the six months ended September 30, 2018. We are committed to investing in new and enhanced products, including development systems software, and in our design and manufacturing process technologies. We believe these investments are significant factors in maintaining our competitive position. R&D costs are expensed as incurred. Assets purchased to support our ongoing research and development activities are capitalized when related to products which have achieved technological feasibility or that have alternative future uses and are amortized over their expected useful lives. R&D expenses include labor, depreciation, masks, prototype wafers, and expenses for the development of process technologies, new packages, and software to support new products and design environments.

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R&D expenses decreased \$2.1 million, or 0.9%, for the three months ended September 30, 2019 over the same period last year. R&D expenses increased \$45.1 million, or 11.5%, for the six months ended September 30, 2019 over the same period last year. The primary reason for the increase in R&D costs in the six months ended September 30, 2019 compared to the same period last year was additional costs from our acquisition of Microsemi.

R&D expenses fluctuate over time, primarily due to revenue and operating expense investment levels.

Selling, General and Administrative

Selling, general and administrative expenses for the three months ended September 30, 2019 were \$172.3 million, or 12.9% of net sales, compared to \$176.6 million, or 12.3% of net sales, for the three months ended September 30, 2018. Selling, general and administrative expenses for the six months ended September 30, 2019 were \$340.2 million, or 12.8% of net sales, compared to \$340.7 million, or 12.9% of net sales, for the six months ended September 30, 2018. Our goal is to continue to be more efficient with our operating expenses as our revenue increases. Selling, general and administrative expenses include salary expenses related to field sales, marketing and administrative personnel, advertising and promotional expenditures and legal expenses. Selling, general and administrative expenses also include costs related to our direct sales force, CEMs and ESEs who work in sales offices worldwide to stimulate demand by assisting customers in the selection and use of our products.

Selling, general and administrative expenses decreased \$4.3 million, or 2.4%, for the three months ended September 30, 2019 over the same period last year. Selling, general and administrative expenses decreased \$0.5 million, or 0.1%, for the six months ended September 30, 2019 over the same period last year. The primary reasons for the decreases in selling, general and administrative expenses were reductions in personnel and associated costs in connection with synergies realized from our Microsemi acquisition, partially offset by remediation costs related to the network compromise discussed in Item 4 of this Form 10-Q.

Selling, general and administrative expenses fluctuate over time, primarily due to revenue and operating expense investment levels.

Amortization of Acquired Intangible Assets

Amortization of acquired intangible assets for the three and six months ended September 30, 2019 was \$248.2 million and \$496.7 million, respectively, compared to \$169.9 million and \$303.6 million for the three and six months ended September 30, 2018, respectively. The primary reason for the increases in acquired intangible asset amortization was increased amortization from our acquisition of Microsemi partially offset by decreased amortization of intangible assets from our prior acquisitions.

Special Charges and Other, Net

During the three and six months ended September 30, 2019, we incurred special charges and other, net of \$3.6 million and \$11.7 million, respectively, compared to \$18.2 million and \$58.3 million, respectively, for the three and six months ended September 30, 2018. Our restructuring expenses were related to our most recent business acquisitions, and resulted from workforce, property and other operating expense rationalizations as well as combining product roadmaps and manufacturing operations.

Other Income (Expense)

Interest income in the three and six months ended September 30, 2019 was \$1.0 million and \$1.7 million, respectively, compared to \$0.9 million and \$6.6 million, respectively, for the three and six months ended September 30, 2018. The primary reason for the decrease in interest income in the six months ended September 30, 2019 compared to the same period last year was lower invested cash balances. During the quarter ended June 30, 2018, we used a substantial portion of our cash to help finance the purchase price of our acquisition of Microsemi.

Interest expense in the three and six months ended September 30, 2019 was \$129.6 million and \$262.2 million, respectively, compared to \$138.6 million and \$229.0 million, respectively, for the three and six months ended September 30, 2018. The primary reason for the decrease in interest expense in the three months ended September 30, 2019 compared to the same period last year relates to the cumulative pay down of \$1.73 billion of our debt. The primary reason for the increase in interest expense in the six months ended September 30, 2019 compared to the same period last year relates to our additional borrowings to help finance our acquisition of Microsemi.

During the three and six months ended September 30, 2019, we recognized a loss of \$0.1 million and \$2.0 million, respectively, in connection with the amendment to our Revolving Credit Facility and the voluntary prepayment of a portion of the outstanding balance on our Term Loan Facility. During the three and six months ended September 30, 2018, we recognized a loss of \$4.1 million in connection with early pay downs of a portion of the outstanding balance on our Term Loan Facility and our Revolving Credit Facility.

Other loss, net in the three months ended September 30, 2019 was \$1.4 million. Other income, net in the six months ended September 30, 2019 was \$1.3 million. Other loss, net in the three and six months ended September 30, 2018 was \$0.2 million and \$10.0 million respectively. The primary reason for these changes relates to foreign currency exchange rate fluctuations.

Provision for Income Taxes

We account for incomes taxes in accordance with ASC 740. Our provision or benefit for income taxes is attributable to U.S. federal, state, and foreign income taxes. Our effective tax rate used for interim periods is based on an estimated annual effective tax rate including the tax effect of items required to be recorded discretely in the interim periods in which those items occur. Our effective tax rates for the six months ended September 30, 2019 and September 30, 2018 were not meaningful due to the amount of pre-tax income, and income tax benefits recorded during the period.

We are subject to taxation in many jurisdictions in which we have operations. The effective tax rates that we pay in these jurisdictions vary widely, but they are generally lower than our combined U.S. federal and state effective tax rate. Our domestic statutory tax rate for the three and six months ended September 30, 2018 was approximately 22% and our domestic statutory tax rate for fiscal 2019 was approximately 22%. Our non-U.S. blended statutory tax rates for the three and six months ended September 30, 2018 and fiscal 2019 were much lower than this amount. The difference in rates applicable in foreign jurisdictions results from a number of factors, including lower statutory rates, tax holidays, financing arrangements and other factors. Our effective tax rate has been, and will continue to be impacted by the geographical dispersion of our earnings and losses.

Our foreign tax rate differential benefit primarily relates to our operations in Thailand, Malta and Ireland. Our Thailand manufacturing operations are currently subject to numerous tax holidays granted to us based on our investment in property, plant and equipment in Thailand. Our tax holiday periods in Thailand expire at various times in the future; however, we actively seek to obtain new tax holidays, otherwise we will be subject to tax at the statutory tax rate of 20%. We do not expect the future expiration of any of our tax holiday periods in Thailand to have a material impact on our effective tax rate. Our Microsemi operations in Malaysia are also subject to a tax holiday that effectively reduces Microsemi's income tax rate in that jurisdiction. Microsemi's tax holiday in Malaysia was granted in 2009 and is effective through December 2019, subject to continued compliance with the tax holiday's requirements. We are actively seeking to obtain a new tax holiday in Malaysia, otherwise we will be subject to tax at the statutory tax rate of 24% following the expiration. The remaining material components of foreign income taxed at a rate lower than the U.S. are earnings accrued in Ireland at a 12.5% statutory tax rate and earnings accrued in Malta at a 0% tax rate.

Various taxing authorities in the U.S. and other countries in which we do business are increasing their scrutiny of the tax structures employed by businesses. Companies of our size and complexity are regularly audited by the taxing authorities in the jurisdictions in which they conduct significant operations. For U.S. federal, and in general for U.S. state tax returns, our fiscal 2007 and later tax returns remain effectively open for examination by the taxing authorities. We are currently being audited by the tax authorities in the United States and in various foreign jurisdictions. At this time, we do not know what the outcome of these audits will be. We record benefits for uncertain tax positions based on an assessment of whether it is more likely than not that the tax positions will be sustained based on their technical merits under currently enacted law. If this threshold is not met, no tax benefit of the uncertain tax position is recognized. If the threshold is met, we recognize the largest amount of the tax benefit that is more than 50% likely to be realized upon ultimate settlement.

Liquidity and Capital Resources

We had \$405.1 million in cash, cash equivalents and short-term investments at September 30, 2019, a decrease of \$25.8 million from the March 31, 2019 balance.

Net cash provided by operating activities was \$776.6 million in the six months ended September 30, 2019 compared to \$789.9 million in the six months ended September 30, 2018.

Net cash used in investing activities was \$54.7 million in the six months ended September 30, 2019 compared to \$6.74 billion in the six months ended September 30, 2018. During the six months ended September 30, 2019, net investing activities primarily related to capital purchases and investments in other assets. In the six months ended September 30, 2018, investing cash flows included net cash and cash equivalents used to finance our acquisition of Microsemi of \$7.85 billion net of \$340.0 million of cash and cash equivalents acquired, offset by net cash inflows of \$1.28 billion due to the sale of available-for-sale debt securities to fund our acquisition of Microsemi, and capital expenditures of \$161.4 million.

Our level of capital expenditures varies from time to time as a result of actual and anticipated business conditions. Capital expenditures in the six months ended September 30, 2019 were \$41.6 million compared to \$161.4 million in the six months ended September 30, 2018. Capital expenditures were primarily for the expansion of production capacity, the addition of research and development equipment and new office buildings. We currently intend to spend between \$110 million and \$130 million during the next twelve months to invest in equipment and facilities. We believe that the capital expenditures anticipated to be incurred over the next twelve months will provide sufficient manufacturing capacity to support the growth of our production capabilities for our new products and technologies and to bring in-house more of the assembly and test operations that are currently outsourced. We expect to finance our capital expenditures through our existing cash balances and cash flows from operations.

Net cash used in financing activities was \$748.7 million in the six months ended September 30, 2019 compared to net cash provided by financing activities of \$5.50 billion in the six months ended September 30, 2018. The cash flows provided by financing activities during the six months ended September 30, 2018, were favorably impacted by net proceeds from amounts borrowed to fund our acquisition of Microsemi. Significant transactions affecting our net financing cash flows include:

- in the first six months of fiscal 2019, proceeds of \$3.0 billion from term loans made under the Term Loan Facility, net proceeds of \$3.63 billion from borrowings under our Revolving Credit Facility, net proceeds of \$1.99 billion from the issuance of our Senior Secured Notes and \$2.06 billion of cash used to repay Microsemi's existing debt,
- in the first six months of fiscal 2019, \$799.5 million of cash was used to pay down principal on the Term Loan Facility and the Credit Facility, net of amounts borrowed under the Credit Facility, respectively, compared to \$573.0 million of cash used to pay down principal on the Term Loan Facility and the Credit Facility, net of amounts borrowed under the Credit Facility, in the first six months of fiscal 2020, and
- cash dividends paid to our stockholders of \$174.4 million and \$171.4 million during the six months ended September 30, 2019 and 2018, respectively.

On May 29, 2018, we completed the acquisition of Microsemi Corporation, a publicly traded company headquartered in Aliso Viejo, California. We paid an aggregate of approximately \$8.19 billion in cash to the stockholders of Microsemi. The total consideration transferred in the acquisition, including approximately \$53.9 million of non-cash consideration for the exchange of certain share-based payment awards of Microsemi for stock awards for our common stock, was approximately \$8.24 billion. In addition to the consideration transferred, we recognized \$3.23 billion in liabilities in our consolidated financial statements of Microsemi consisting of debt, taxes payable and deferred, pension obligations, restructuring, and contingent and other liabilities of which \$2.06 billion of existing debt was paid off. We financed the purchase price using approximately \$8.10 billion of borrowings consisting of \$3.10 billion of loans under our Revolving Credit Facility, \$3.00 billion under the Term Loan Facility, and \$2.00 billion in newly issued senior secured notes. We incurred \$22.0 million in acquisition costs related to the acquisition. During the six months ended September 30, 2019, we voluntarily prepaid \$188.0 million of principal under the Term Loan Facility. During fiscal 2019, we voluntarily prepaid \$1.09 billion of principal under the Term Loan Facility, of which \$500.0 million was from funds borrowed under our Revolving Credit Facility. At September 30, 2019, we had \$1.72 billion of outstanding borrowings under our Term Loan Facility compared to \$1.91 billion at March 31, 2019.

In September 2019, we amended our credit agreement dated May 29, 2018, to, among other things, reduce the margin added to the interest rate on revolving loans under the Credit Agreement. The amendment also allows us the option to

refinance the term loans or revolving loans up to a certain dollar limit and the option to factor receivables and certain related assets. The amendment lowered the Revolving Credit Facility thereunder to \$3.57 billion from \$3.60 billion at June 30, 2019.

The Credit Agreement provides for a revolving loan facility in an aggregate principal amount of approximately \$3.57 billion, with a \$250.0 million foreign currency sublimit, a \$50.0 million letter of credit sublimit and a \$25.0 million swingline loan sublimit. The Credit Agreement also provides for the Term Loan Facility. The Revolving Credit Facility consists of \$3.57 billion of revolving loan commitments (the "2023 Revolving Loans") that terminate on May 18, 2023 (the "2023 Maturity Date"). The 2023 Revolving Loans bear interest, at our option, at the base rate plus a spread of 0.00% to 0.75% or an adjusted LIBOR rate plus a spread of 1.00% to 1.75%, in each case, with such spread being determined based on the consolidated senior leverage ratio for the preceding four fiscal quarter period. At September 30, 2019, we had \$2.88 billion of outstanding borrowings under the Revolving Credit Facility compared to \$3.27 billion at March 31, 2019. See Note 14 of the notes to our condensed consolidated financial statements for more information regarding our Credit Agreement.

The enactment of the Act in 2017 imposed a tax on all previously untaxed earnings of non-U.S. subsidiaries of U.S. corporations. Due to this change, the jurisdiction in which our cash is at any given point in time no longer has a significant impact on our liquidity. Future distributions of a significant portion of our non-U.S. assets to the U.S. will no longer be subject to U.S. federal taxation. We intend to invest substantially all of our foreign subsidiary earnings, as well as our capital in our foreign subsidiaries, indefinitely outside of the U.S. in those jurisdictions in which we would incur significant, additional costs upon repatriation of such amounts.

We enter into derivative transactions from time to time in an attempt to reduce our exposure to currency rate fluctuations. Although none of the countries in which we conduct significant foreign operations has had a highly inflationary economy in the last five years, there is no assurance that inflation rates or fluctuations in foreign currency rates in countries where we conduct operations will not adversely affect our operating results in the future. At September 30, 2019, we had foreign currency forward contracts outstanding with a notional amount of \$250.0 million and \$30.1 million to economically hedge certain balance sheet exposures related to the Malaysian ringgit and Taiwanese dollar, respectively.

There were no repurchases of common stock during the six months ended September 30, 2019. As of September 30, 2019, we held approximately 14.5 million shares as treasury shares.

On October 28, 2002, we announced that our Board of Directors had approved and instituted a quarterly cash dividend on our common stock. A quarterly dividend of \$0.3660 per share was paid on September 4, 2019 in the aggregate amount of \$87.3 million. A quarterly dividend of \$0.3665 per share was declared on November 5, 2019 and will be paid on December 5, 2019 to stockholders of record as of November 21, 2019. We expect the aggregate cash dividend for December 2019 to be approximately \$87.7 million. Our Board is free to change our dividend practices at any time and to increase or decrease the dividend paid, or not to pay a dividend on our common stock on the basis of our results of operations, financial condition, cash requirements and future prospects, and other factors deemed relevant by our Board. Our current intent is to provide for ongoing quarterly cash dividends depending upon market conditions, our results of operations, and potential changes in tax laws.

We believe that our existing sources of liquidity combined with cash generated from operations and borrowings under our Revolving Credit Facility will be sufficient to meet our currently anticipated cash requirements for at least the next 12 months. However, the semiconductor industry is capital intensive. In order to remain competitive, we must constantly evaluate the need to make significant investments in capital equipment for both production and research and development. We may increase our borrowings under our Revolving Credit Facility or seek additional equity or debt financing from time to time to maintain or expand our wafer fabrication and product assembly and test facilities, for cash dividends, for share repurchases or for acquisitions or other purposes. The timing and amount of any such financing requirements will depend on a number of factors, including our level of dividend payments, changes in tax laws and regulations regarding the repatriation of offshore cash (including the impact of the Act), demand for our products, changes in industry conditions, product mix, competitive factors and our ability to identify suitable acquisition candidates. There can be no assurance that such financing will be available on acceptable terms, and any additional equity financing would result in incremental ownership dilution to our existing stockholders.

Off-Balance Sheet Arrangements (Including Guarantees)

As of September 30, 2019, we are not involved in any off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of SEC Regulation S-K with the exception of standby letters of credit or other guarantee instruments to certain parties as required for certain transactions initiated by us or our subsidiaries. We have not recorded any liability in connection with these guarantee arrangements. Based on historical experience and information currently available, we believe we will not be required to make any payments under these guarantee arrangements. Prior to the first quarter of fiscal 2020, we did not record any liability in connection with various operating leases for buildings and equipment entered into in the ordinary course of business. We recorded the associated lease obligations as a liability when we adopted the provisions of the Accounting Standard Update 2016-02-Leases, which was effective April 1, 2019. Refer to Note 2 and Note 11 to our condensed consolidated financial statements for additional information regarding the adoption of this accounting standard.

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As of September 30, 2019, our long-term debt totaled \$11.09 billion. We have no interest rate exposure to rate changes on our fixed rate debt, which totaled \$6.48 billion as of September 30, 2019. We do have interest rate exposure with respect to the \$4.61 billion balance of our variable interest rate debt outstanding as of September 30, 2019. A 50 basis point increase in interest rates would impact our expected annual interest expense for the next 12 months by approximately \$23.0 million.

Item 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this Quarterly Report on Form 10-Q, as required by paragraph (b) of Rule 13a-15 or Rule 15d-15 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), we evaluated under the supervision of our Chief Executive Officer and our Chief Financial Officer, the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) or 15d-15(e) of the Exchange Act. Based on this evaluation, our Chief Executive Officer and our Chief Financial Officer have concluded that because of the material weaknesses in internal control over financial reporting described below, our disclosure controls and procedures were not effective to ensure that information we are required to disclose in reports that we file or submit under the Exchange Act (i) is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms, and (ii) is accumulated and communicated to our management, including our Chief Executive Officer and our Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. Our disclosure controls and procedures are designed to provide reasonable assurance that such information is accumulated and communicated to our management. Our disclosure controls and procedures include components of our internal control over financial reporting. Management's assessment of the effectiveness of our internal control over financial reporting is expressed at the level of reasonable assurance because a control system, no matter how well designed and operated, can provide only reasonable, but not absolute, assurance that the control system's objectives will be met.

Material Weaknesses in Internal Control Over Financial Reporting

A material weakness (as defined in Rule 12b-2 under the Exchange Act) is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis.

In reviewing the accounting for certain transactions completed in fiscal 2019 as part of the realignment of our legal structure and other significant transactions, our management identified deficiencies in the operating effectiveness of controls intended to properly document and review relevant facts used to determine and apply the appropriate tax accounting under accounting standards generally accepted in the United States. Additionally, our controls did not operate to validate the completeness and accuracy of information used in the execution of certain key tax controls. These control deficiencies impacted the deferred tax, long-term income tax payable, and income tax benefit accounts and related disclosures and resulted in adjustments to our annual financial statements as of and for the year ended March 31, 2019. The errors arising from the underlying deficiencies are not material to the financial statements reported in any interim or annual period and therefore, did not result in a revision to previously filed financial statements. However, the control deficiencies could result in a failure to timely prevent or detect misstatements of the aforementioned accounts and disclosures that could be material to the annual or interim consolidated financial statements. Accordingly, our management has concluded that the deficiencies, in the aggregate, constitute a material weakness in our internal control over financial reporting.

In the fourth quarter of fiscal 2019, we also identified deficiencies in the design of our internal control over financial reporting as our management determined that there were not sufficient controls to prevent, detect and respond to unauthorized

access to our IT systems in a timely manner. Network authentication, segmentation and monitoring were in place, but were not sufficiently designed to address changes in the current risk environment. Our management has concluded that these deficiencies, in the aggregate, constitute a material weakness in our internal control over financial reporting.

Remediation Plans and Other Information

As previously described in Part II, Item 9A of our Annual Report on Form 10-K for the fiscal year ended March 31, 2019, we began implementing a remediation plan to address the foregoing material weaknesses. However, these material weaknesses will not be considered remediated until the applicable controls operate for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively. We expect the remediation of these material weaknesses to be completed by the end of fiscal 2020.

Changes in Internal Control over Financial Reporting

During the three months ended September 30, 2019, we transitioned certain of Microsemi's processes to our internal control processes and we expect to transition more of such processes throughout the remainder of fiscal 2020.

In connection with the identified material weaknesses related to accounting for income taxes and to IT system access, we have taken steps to remediate the material weaknesses as described above. However, other than with respect to our transition of Microsemi to our systems and control environment as described above, during the three months ended September 30, 2019, there was no change in our internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Rule 13a-15 or Rule 15d-15 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. LEGAL PROCEEDINGS

Refer to Note 16 to our condensed consolidated financial statements for information regarding legal proceedings.

Item 1A. RISK FACTORS

When evaluating Microchip and its business, you should give careful consideration to the factors listed below, in addition to the information provided elsewhere in this Form 10-Q and in other documents that we file with the Securities and Exchange Commission.

Our operating results are impacted by global economic conditions and may fluctuate in the future due to a number of factors that could reduce our net sales and profitability.

Our operating results are affected by a wide variety of factors that could reduce our net sales and profitability, many of which are beyond our control. Some of the factors that may affect our operating results include:

- general economic, industry or political conditions in the U.S. or internationally, including ongoing uncertainty surrounding Brexit and its implications;
- changes in demand or market acceptance of our products and products of our customers, and market fluctuations in the industries into which such products are sold;
- trade restrictions and changes in tariffs, including those impacting business in China, Japan, and South Korea, as well as those focused on specific companies;
- our ability to continue to realize the expected benefits of our acquisitions including our acquisition of Microsemi;
- our ability to ramp our factory capacity to meet customer demand;
- changes in utilization of our manufacturing capacity and fluctuations in manufacturing yields;
- our ability to secure sufficient wafer foundry, assembly and testing capacity;
- changes or fluctuations in customer order patterns and seasonality;
- changes in tax regulations and policies in the U.S. and other countries in which we do business including the impact of the Tax Cuts and Jobs Act of 2017 (the "Act");
- new accounting pronouncements or changes in existing accounting standards and practices;
- the mix of inventory we hold and our ability to satisfy orders from our inventory;
- levels of inventories held by our customers;
- risk of excess and obsolete inventories;
- competitive developments including pricing pressures;
- unauthorized copying of our products resulting in pricing pressure and loss of sales;
- availability of raw materials and equipment;
- our ability to successfully transition products to more advanced process technologies to reduce manufacturing costs;
- the level of orders that are received and can be shipped in a quarter, including the impact of product lead times;
- the level of sell-through of our products through distribution;
- fluctuations in our mix of product sales;
- announcements of other significant acquisitions by us or our competitors;
- disruptions in our business or our customers' businesses due to cybersecurity incidents, terrorist activity, armed conflict, war, worldwide oil prices and supply, public health concerns, fires, natural disasters or disruptions in the transportation system;
- constrained availability from other electronic suppliers impacting our customers' ability to ship their products, which in turn may adversely impact our sales to those customers;
- costs and outcomes of any current or future tax audits or any litigation, investigation or claims involving intellectual property, our Microsemi acquisition, customers or other issues;
- fluctuations in commodity or energy prices; and
- property damage or other losses, whether or not covered by insurance.

We believe that period-to-period comparisons of our operating results are not necessarily meaningful and that you should not rely upon any such comparisons as indications of our future performance. In future periods, our operating results may fall below our public guidance or the expectations of public market analysts and investors, which would likely have a negative effect on the price of our common stock. Uncertain global economic conditions have caused our operating results to fluctuate significantly and make comparability between periods less meaningful.

We may not fully realize the anticipated benefits of our completed or future acquisitions or divestitures including our acquisition of Microsemi.

We have acquired, and expect in the future to acquire, additional businesses that we believe will complement or augment our existing businesses. On May 29, 2018, we completed our acquisition of Microsemi, which was our largest and most complex acquisition ever. In addition, in April 2016, we completed our acquisition of Atmel; and in August 2015, we completed our acquisition of Micrel. The integration process for our acquisitions is complex and may be costly and time consuming and include unanticipated issues, expenses and liabilities. We may not be able to successfully or profitably integrate, operate, maintain and manage any newly acquired operations or employees. We may not be able to maintain uniform standards, procedures and policies and we may be unable to realize the expected synergies and cost savings from the integration. There may be increased risk due to integrating financial reporting and internal control systems. We may have difficulty in developing, manufacturing and marketing the products of a newly acquired company, or in growing the business at the rate we anticipate. Following an acquisition, we may not achieve the revenue or net income levels that justify the acquisition. We may suffer loss of key employees, customers and strategic partners of acquired companies and it may be difficult to implement our corporate culture at acquired companies. We have been and may in the future be subject to claims from terminated employees, shareholders of Microchip or the acquired companies and other third parties related to the transaction. In particular, in connection with our Microsemi and Atmel acquisitions, we became involved with third-party claims, litigation, governmental investigations and disputes related to such businesses and transactions. See Note 16 to our condensed consolidated financial statements for information regarding such matters. Acquisitions may also result in charges (such as acquisition-related expenses, write-offs, restructuring charges, or future impairment of goodwill), contingent liabilities, adverse tax consequences, additional share-based compensation expense and other charges that adversely affect our operating results. To fund our acquisition of Microsemi, we used a significant portion of our cash balances and incurred approximately \$8.10 billion of additional debt. We may fund future acquisitions of new businesses or strategic alliances by utilizing cash, borrowings under our Revolving Credit Facility, raising debt, issuing shares of our common stock, or other mechanisms.

Further, if we decide to divest assets or a business, we may encounter difficulty in finding or completing divestiture opportunities or alternative exit strategies, which may include site closures, on acceptable terms or in a timely manner. These circumstances could delay the achievement of our strategic objectives or cause us to incur additional expenses with respect to assets or a business that we want to dispose of, or we may dispose of assets or a business at a price or on terms that are less favorable than we had anticipated. Even following a divestiture or other exit strategy, we may be contractually obligated with respect to certain continuing obligations to former employees, customers, vendors, landlords or other third parties. We may also have continuing obligations for pre-existing liabilities related to the former employees, assets or businesses. Such obligations may have a material adverse impact on our results of operations and financial condition.

In addition to acquisitions, we have in the past, and expect in the future, to enter into joint development agreements or other business or strategic relationships with other companies. These transactions are subject to a number of risks similar to those we face with our acquisitions including our ability to realize the expected benefits of any such transaction, to successfully market and sell any products resulting from such transactions or to successfully integrate any technology developed through such transactions.

Our financial condition and results of operations could be adversely affected if we do not effectively manage our current or future debt.

As of September 30, 2019, the principal amount of our outstanding indebtedness was \$11.09 billion. In connection with our acquisition of Microsemi, we incurred debt consisting of \$3.10 billion under our revolving line of credit, \$3.00 billion under our term loan facility, and \$2.00 billion in senior secured notes. At September 30, 2019, we had \$2.88 billion in outstanding borrowings under our revolving line of credit which provides up to \$3.57 billion of revolving loan commitments that terminate in 2023. At September 30, 2019, we had \$1.72 billion of outstanding borrowings under our term loan facility. In February 2017, we issued \$2.65 billion of aggregate principal value of senior and junior convertible debt.

As a result of such transactions, we have a substantially greater amount of debt than we had maintained in the past. Our maintenance of substantial levels of debt could adversely affect our ability to take advantage of corporate opportunities and could adversely affect our financial condition and results of operations. We may need or desire to refinance our convertible debt, senior debt, term loan debt or any other future indebtedness and there can be no assurance that we will be able to refinance any of our indebtedness on commercially reasonable terms, if at all.

Servicing our current debt requires a significant amount of cash, we may not have sufficient cash flow from our business to fund future payments and any adverse changes in our credit ratings could increase our borrowing costs and could adversely affect our ability to access the debt markets.

Our ability to make scheduled payments of principal, to pay interest on or to refinance our indebtedness, including our outstanding convertible debt and debt incurred to finance our acquisition of Microsemi, depends on our future performance, which is subject to economic, financial, competitive and other factors. Our business may not continue to generate cash flow from operations in the future sufficient to service our debt and to fund capital expenditures, dividend payments, share repurchases or acquisitions. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness will depend on the capital markets and our financial condition at such time. Our senior secured notes are rated by certain major credit rating agencies. These credit ratings impact our cost of borrowing and our ability to access the capital markets and are based on our financial performance and certain financial metrics including debt levels. There can be no assurance that we will be able to maintain our current credit ratings. Any downgrade of our credit rating by any of the major credit rating agencies could result in increased borrowing costs and could adversely affect our ability to access the debt markets to refinance our existing debt or finance future debt.

We are dependent on orders that are received and shipped in the same quarter and therefore have limited visibility to future product shipments.

Our net sales in any given quarter depend upon a combination of shipments from backlog and customer orders that are both received and shipped in that same quarter, which we refer to as turns orders. We measure turns orders at the beginning of a quarter based on the orders needed to meet the shipment targets that we set entering the quarter. Historically, we have relied on our ability to respond quickly to customer orders as part of our competitive strategy, resulting in customers placing orders with relatively short delivery schedules. Shorter lead times generally mean that turns orders as a percentage of our business are relatively high in any particular quarter and reduce our backlog visibility on future product shipments. Turns orders correlate to overall semiconductor industry conditions and product lead times. Because turns orders are difficult to predict, varying levels of turns orders make it more difficult to forecast net sales. As a significant portion of our products are manufactured at foundries, foundry lead times may affect our ability to satisfy certain turns orders. If we do not achieve a sufficient level of turns orders in a particular quarter relative to our revenue targets, our revenue and operating results will likely suffer.

We may lose sales if suppliers of raw materials, components or equipment fail to meet our or our customers' needs or increase costs due to increased tariffs or other factors.

Our semiconductor manufacturing operations require raw and processed materials and equipment that must meet exacting standards. We generally have more than one source for these supplies, but there are only a limited number of suppliers capable of delivering various materials and equipment that meet our standards. The materials and equipment necessary for our business could become more difficult to obtain as worldwide use of semiconductors in product applications increases. Additionally, consolidation in our supply chain due to mergers and acquisitions may reduce the number of suppliers or change the relationships that we have with our suppliers. Also, the application of trade restrictions or tariffs by the U.S. or other countries may adversely impact the industry supply chain. For example, the U.S. government has recently increased tariffs on products that have China as their country of origin and which are imported into the U.S. Likewise, the China government has increased tariffs on products that have the U.S. as their country of origin and which are imported into China. We have taken steps to attempt to mitigate the costs of these tariffs on our business. Although these increases in tariffs did not result in significant increases to the operating costs of our business, they did, however, adversely impact demand for our products during fiscal 2019 and the six months ended September 30, 2019. The recent additional tariffs imposed on components or equipment that we or our suppliers source from China will increase our costs and could have a material adverse impact on our operating results in the three months ending December 31, 2019 or future periods. We may also incur increases in manufacturing costs in mitigating the impact of tariffs on our operations. This could also impair sourcing flexibility. We have experienced supply shortages from time to time in the past, and on occasion our suppliers have told us they need more time than expected to fill our orders or that they will no longer support certain equipment with updates or spare and replacement parts. In particular, we have recently experienced longer lead times for equipment which we need for capacity expansion at certain of our manufacturing facilities. An interruption of any materials or equipment sources, or the lack of supplier support for a particular piece of equipment, could harm our business.

Our customers may also be adversely affected by these same issues. The materials, components and equipment necessary for their businesses could become more difficult to obtain for various reasons not limited to business interruptions of suppliers, consolidation in their supply chain due to mergers and acquisitions, or application of trade restrictions or tariffs that impair

sourcing flexibility or increase costs. If our customers are not able to produce their products, then their need for our products will decrease. Such interruptions of our customers' businesses could harm our business.

Intense competition in the markets we serve may lead to pricing pressures, reduced sales of our products or reduced market share.

The semiconductor industry is intensely competitive and has been characterized by price erosion and rapid technological change. We compete with major domestic and international semiconductor companies, many of which have greater market recognition and substantially greater financial, technical, marketing, distribution and other resources than we do. The semiconductor industry has experienced significant merger and acquisition activity and consolidation in recent years which has resulted in several of our competitors becoming much larger in terms of revenue, product offerings and scale. We may be unable to compete successfully in the future, which could harm our business. Our ability to compete successfully depends on a number of factors both within and outside our control, including, but not limited to:

- the quality, performance, reliability, features, ease of use, pricing and diversity of our products;
- our success in designing and manufacturing new products including those implementing new technologies;
- our ability to ramp production and increase capacity, as needed, at our wafer fabrication and assembly and test facilities;
- the rate at which customers incorporate our products into their own applications and the success of such applications;
- the rate at which the markets that we serve redesign and change their own products;
- our ability to obtain adequate foundry and assembly and test capacity and supplies of raw materials and other supplies at acceptable prices;
- changes in demand in the markets that we serve and the overall rate of growth or contraction of such markets, including but not limited to the automotive, personal computing and consumer electronics markets;
- product introductions by our competitors;
- the number, nature and success of our competitors in a given market;
- our ability to protect our products and processes by effective utilization of intellectual property rights;
- our ability to remain price competitive against companies that have copied our proprietary product lines, especially in countries where intellectual property rights protection is difficult to achieve and maintain;
- our ability to address the needs of our customers; and
- general market and economic conditions.

Historically, average selling prices in the semiconductor industry decrease over the life of any particular product. The average selling prices of our microcontroller, FPGA, and proprietary analog, interface, mixed signal and timing products have remained relatively constant, while average selling prices of our memory and non-proprietary analog, interface, mixed signal and timing products have declined over time. The overall average selling price of our products is affected by these trends; however, variations in our product and geographic mix of sales can cause wider fluctuations in our overall average selling price in any given period.

We have experienced, and expect to continue to experience, modest pricing declines in certain of our more mature proprietary product lines, primarily due to competitive conditions. We have been able to moderate average selling price declines in many of our proprietary product lines by continuing to introduce new products with more features and higher prices. However, there can be no assurance that we will be able to do so in the future. We have experienced in the past, and expect to continue to experience in the future, varying degrees of competitive pricing pressures in our memory and non-proprietary analog, interface, mixed signal and timing products. We may be unable to maintain average selling prices for our products as a result of increased pricing pressure in the future, which could adversely impact our operating results.

We are dependent on wafer foundries and other contractors to perform key manufacturing functions for us, and our licensees of our SuperFlash and other technologies also rely on foundries and other contractors.

We rely on outside wafer foundries for a significant portion of our wafer fabrication needs. Specifically, during the first six months of fiscal 2020, approximately 61% of our net sales came from products that were produced at outside wafer foundries compared to 57% of our net sales in fiscal 2019. We also use several contractors located primarily in Asia for a portion of the assembly and testing of our products. Specifically, during the first six months of fiscal 2020, approximately 55% of our assembly requirements and 46% of our test requirements were performed by third party contractors compared to approximately 62% of our assembly requirements and 51% of our test requirements during fiscal 2019. Our reliance on third party contractors and foundries increased as a result of our acquisitions of Microsemi, Atmel, Micrel and other companies. The disruption or termination of any of our contractors could harm our business and operating results.

Our use of third parties somewhat reduces our control over the subcontracted portions of our business. Our future operating results could suffer if any contractor were to experience financial, operational or production difficulties or situations when demand exceeds capacity, or if they were unable to maintain manufacturing yields, assembly and test yields and costs at approximately their current levels, or if the countries in which such contractors are located were to experience political upheaval or infrastructure disruption. If these third parties are unable or unwilling to timely deliver products or services conforming to our quality standards, we may not be able to qualify additional manufacturing sources for our products in a timely manner on terms favorable to us, or at all. Additionally, these subcontractors could abandon fabrication processes that are important to us, or fail to adopt advanced manufacturing technologies that we desire to control costs. In any such event, we could experience an interruption in production, an increase in manufacturing and production costs or a decline in product reliability, and our business and operating results could be adversely affected. Further, our use of subcontractors increases the risks of potential misappropriation of our intellectual property.

Certain of our SuperFlash and other technology licensees also rely on outside wafer foundries for wafer fabrication services. If our licensees were to experience any disruption in supply from outside wafer foundries, this would reduce the revenue we receive in our technology licensing business and would harm our operating results.

Our operating results will suffer if we ineffectively utilize our manufacturing capacity or fail to maintain manufacturing yields.

The manufacture and assembly of integrated circuits, particularly non-volatile, erasable CMOS memory and logic devices such as those that we produce, are complex processes. These processes are sensitive to a wide variety of factors, including the level of contaminants in the manufacturing environment, impurities in the materials used, the performance of our wafer fabrication and assembly and test personnel and equipment, and other quality issues. As is typical in the semiconductor industry, we have from time to time experienced lower than anticipated manufacturing yields. Our operating results will suffer if we are unable to maintain yields at or above approximately the current levels. This could include delays in the recognition of revenue, loss of revenue or future orders, and customer-imposed penalties for our failure to meet contractual shipment deadlines. Our operating results are also adversely affected when we operate at less than optimal capacity. During the three and six months ended September 30, 2019, we operated at below normal capacity levels resulting in unabsorbed capacity charges of \$8.9 million and \$16.2 million, respectively. In certain periods in fiscal 2019, we operated at below normal capacity levels resulting in an unabsorbed capacity charge of \$19.0 million.

Our operating results are impacted by both seasonality and the wide fluctuations of supply and demand in the semiconductor industry.

The semiconductor industry is characterized by seasonality and wide fluctuations of supply and demand. Historically, since a significant portion of our revenue is from consumer markets and international sales, our business tends to generate stronger revenues in the first and second quarters and comparatively weaker revenues in the third and fourth quarters of our fiscal year. Broad fluctuations in our overall business, changes in semiconductor industry and global economic conditions (including trade tensions) and our acquisition activity (including our acquisition of Microsemi) have had and can have a more significant impact on our results than seasonality. As a result, in periods when these broad fluctuations, changes in business conditions or acquisitions occur, it is difficult to assess the impact of seasonal factors on our business. The semiconductor industry has also experienced significant economic downturns, characterized by diminished product demand and production over-capacity. We have sought to reduce our exposure to this industry cyclically by selling proprietary products, that cannot be easily or quickly replaced, to a geographically diverse customer base across a broad range of market segments. However, we have experienced substantial period-to-period fluctuations in operating results and expect, in the future, to experience period-to-period fluctuations in operating results due to general industry or economic conditions.

Our business is dependent on distributors to service our end customers.

Sales to distributors accounted for approximately 50% of our net sales in the first six months of fiscal 2020 and approximately 51% of our net sales in fiscal 2019. We do not have long-term agreements with our distributors, and we and our distributors may each terminate our relationship with little or no advance notice.

Any future adverse conditions in the U.S. or global economies or in the U.S. or global credit markets could materially impact the operations of our distributors. Any deterioration in the financial condition of our distributors or any disruption in the operations of our distributors could adversely impact the flow of our products to our end customers and adversely impact our results of operation. In addition, during an industry or economic downturn, it is possible there will be an oversupply of products and a decrease in demand for our products from our distributors, which could reduce our net sales in a given period

and result in an increase in inventory returns. Violations of the Foreign Corrupt Practices Act, or similar laws, by our distributors or other channel partners could have a material adverse impact on our business.

Our success depends on our ability to introduce new products on a timely basis.

Our future operating results depend on our ability to develop and timely introduce new products that compete effectively on the basis of price and performance and which address customer requirements. The success of our new product introductions depends on various factors, including, but not limited to:

- effective new product selection;
- timely completion and introduction of new product designs;
- procurement of licenses for intellectual property rights from third parties under commercially reasonable terms;
- timely filing and protection of intellectual property rights for new product designs;
- availability of development and support tools and collateral literature that make complex new products easy for engineers to understand and use; and
- market acceptance of our customers' end products.

Because our products are complex, we have experienced delays from time to time in completing new product development. In addition, our new products may not receive or maintain substantial market acceptance. We may be unable to timely design, develop and introduce competitive products, which could adversely impact our future operating results.

Our success also depends upon our ability to develop and implement new design and process technologies. Semiconductor design and process technologies are subject to rapid technological change and require significant R&D expenditures. We and other companies in the industry have, from time to time, experienced difficulties in effecting transitions to advanced process technologies and, consequently, have suffered reduced manufacturing yields or delays in product deliveries. Our future operating results could be adversely affected if any transition to future process technologies is substantially delayed or inefficiently implemented.

We continue to be the target of attacks on our data, attempts to breach our security and attempts to introduce malicious software into our IT systems and any interruptions in our IT systems, unauthorized access to our IT systems or improper handling of data, could adversely affect our business.

We rely on the efficient and uninterrupted operation of complex IT systems and networks to operate our business. Any significant disruption to our systems or networks, including, but not limited to, new system implementations, computer viruses, security breaches, facility issues, natural disasters, terrorism, war, telecommunication failures or energy blackouts could have a material adverse impact on our business, operations, sales and operating results. Such disruption could result in a loss of our intellectual property or the release of sensitive competitive information or supplier, customer or employee personal data. Any loss of such information could harm our business or competitive position, result in a loss of customer confidence, and cause us to incur significant costs to remedy the damages caused by any such disruptions or security breaches. Additionally, any failure to properly manage the collection, handling, transfer or disposal of personal data of employees and customers may result in regulatory penalties, enforcement actions, remediation obligations, litigation, fines and other sanctions.

From time to time, we have experienced verifiable attacks on our data, attempts to breach our security and attempts to introduce malicious software into our IT systems. For example, in fiscal 2019 we learned of an ongoing compromise of our computer networks by what is believed to be sophisticated hackers. We engaged experienced legal counsel and a leading forensic investigatory firm with experience in such matters. We have taken steps to identify malicious activity on our network including a compromise of our network and, in May 2019, we began implementing a containment plan. We are continuing to evaluate the effectiveness of the containment plan and the amount and content of the information that was compromised and to implement additional remedial actions. At this time, we do not believe that this IT system compromise has had a material adverse effect on our business or resulted in any material damage to us. However, we are still evaluating the amount and type of data that was compromised and there can be no assurance as to what the impact of this IT system compromise will be. As a result of the IT system compromise, our management, including our chief executive officer and our chief financial officer, has concluded that our internal controls related to IT system access were not effective resulting in a material weakness in our internal controls. For additional information, refer to Item 4 "Controls and Procedures".

Due to the types of products we sell and the significant amount of sales we make to government agencies or customers whose principal sales are to U.S. government agencies, we expect to continue to be the target of attacks on our data, attempts to breach our security and attempts to introduce malicious software into our IT systems. Were any future attacks to be successful, we may be unaware of the incident, its magnitude, or its effects until significant harm is done. In recent years, we have

implemented improvements to our protective measures which include, but are not limited to, the following: firewalls, endpoint detection and response software, patches, log monitors, event correlation tools, routine backups with offsite retention of storage media, system audits, dual factor identification, data partitioning and routine password modifications. As a result of the material weakness in our internal controls resulting from the IT systems compromise, we have taken remediation actions and implemented additional controls and we plan to continue to take further actions to attempt to address evolving threats. Recent system improvements have not been fully effective in preventing attacks on our data and breaches to our security and there can be no assurance that any future system improvements will be effective in preventing attacks or breaches or limiting the damage from any future cyber attacks or disruptions. Such system improvements have resulted in increased costs to us and any future improvements, attack or disruption could result in additional costs related to rebuilding of our internal systems, defending litigation, responding to regulatory actions, or paying damages. Such attacks or disruptions could have a material adverse impact on our business, operations and financial results.

Third-party service providers, such as wafer foundries, assembly and test contractors, distributors, credit card processors and other vendors have access to certain portions of our and our customers' sensitive data. In the event that these service providers do not properly safeguard the data that they hold, security breaches and loss of data could result. Any such loss of data by our third-party service providers could negatively impact our business, operations and financial results, as well as our relationship with our customers.

If we fail to remediate our material weaknesses and achieve and maintain proper and effective internal control and remediate current or future deficiencies, our ability to produce accurate and timely financial statements could be impaired, which could harm our operating results, our ability to operate our business and investors' views of us.

As discussed in Item 4 "Controls and Procedures" of our Form 10-K filed on May 30, 2019, in the fourth quarter of fiscal 2019, we identified a material weakness in our internal controls related to accounting for income taxes and we also identified a material weakness in our internal controls related to IT system access. Internal controls related to such matters are important to accurately reflect our financial position and results of operations in our financial reports. We are in the process of remediating the material weaknesses, but our efforts may not be successful. If we are unable to remediate the material weaknesses in an appropriate and timely manner, or if we identify additional control deficiencies that individually or together constitute significant deficiencies or material weaknesses, our ability to accurately record, process, and report financial information and consequently, our ability to prepare financial statements within required time periods, could be adversely affected. Failure to maintain effective internal controls could result in violations of applicable securities laws, stock exchange listing requirements, and the covenants under our debt agreements, subject us to litigation and investigations, negatively affect investor confidence in our financial statements, and adversely impact our stock price and ability to access capital markets.

Ensuring that we have adequate internal financial and accounting controls and procedures so that we can produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with United States generally accepted accounting principles. We are required to comply with Section 404 of the Sarbanes-Oxley Act of 2002 which requires an annual management assessment of the effectiveness of our internal control over financial reporting and a report by our independent auditors. In addition to the identified material weaknesses related to accounting for income taxes and to IT system access, we have from time to time identified significant deficiencies related to other matters. If we fail to remediate our material weaknesses or significant deficiencies or to maintain proper and effective internal control over financial reporting in the future, our ability to produce accurate and timely financial statements could be impaired, which could harm our operating results, harm our ability to operate our business and reduce the trading price of our stock.

Our reported financial results may be adversely affected by new accounting pronouncements or changes in existing accounting standards and practices.

We prepare our financial statements in conformity with accounting principles generally accepted in the U.S. These accounting principles are subject to interpretation or changes by the Financial Accounting Standards Board (FASB) and the SEC. New accounting pronouncements and varying interpretations of accounting standards and practices have occurred in the past and are expected to occur in the future. New accounting pronouncements or a change in the interpretation of existing accounting standards or practices may have a significant effect on our reported financial results and may even affect our reporting of transactions completed before the change is announced or effective.

Business interruptions to our operations or the operations of our key vendors, subcontractors, licensees or customers, whether due to natural disasters, cybersecurity incidents, or other events, could harm our business.

Operations at any of our facilities, at the facilities of any of our wafer fabrication or assembly and test subcontractors, or at any of our significant vendors or customers may be disrupted for reasons beyond our control. These reasons may include work stoppages, power loss, cyber attacks, computer network compromises, incidents of terrorism or security risk, political instability, public health issues, telecommunications, transportation or other infrastructure failure, radioactive contamination, fire, earthquake, floods, volcanic eruptions or other natural disasters. We have taken steps to mitigate the impact of some of these events should they occur; however, we cannot be certain that our actions will be effective to avoid a significant impact on our business in the event of a disaster or other business interruption.

In particular, Thailand has experienced periods of severe flooding in recent years. While our facilities in Thailand have continued to operate normally, there can be no assurance that any future flooding in Thailand would not have a material adverse impact on our operations. If operations at any of our facilities, or our subcontractors' facilities are interrupted, we may not be able to shift production to other facilities on a timely basis, and we may need to spend significant amounts to repair or replace our facilities and equipment. If we experienced business interruptions, we would likely experience delays in shipments of products to our customers and alternate sources for production may be unavailable on acceptable terms. This could result in reduced revenues and profits and the cancellation of orders or loss of customers. Although we maintain business interruption insurance, such insurance will likely not be enough to compensate us for any losses that may occur and any losses or damages incurred by us as a result of business interruptions could significantly harm our business.

Additionally, operations at our customers and licensees may be disrupted for a number of reasons. In the event of customer disruptions, sales of our products may decline and our revenue, profitability and financial condition could suffer. Likewise, if our licensees are unable to manufacture and ship products incorporating our technology, or if there is a decrease in product demand due to a business disruption, our royalty revenue may decline.

Our technology licensing business exposes us to various risks.

Our technology licensing business is based on our SuperFlash and other technologies. The success of our licensing business depends on the continued market acceptance of these technologies and on our ability to further develop and enhance such technologies and to introduce new technologies in the future. To be successful, any such technology must be able to be repeatably implemented by licensees, provide satisfactory yield rates, address licensee and customer requirements, and perform competitively. The success of our technology licensing business depends on various other factors, including, but not limited to:

- proper identification of licensee requirements;
- timely development and introduction of new or enhanced technology;
- our ability to protect and enforce our intellectual property rights for our licensed technology;
- our ability to limit our liability and indemnification obligations to licensees;
- availability of sufficient development and support services to assist licensees in their design and manufacture of products integrating our technology;
- availability of foundry licensees with sufficient capacity to support OEM production; and
- market acceptance of our customers' end products.

Because our licensed technologies are complex, there may be delays from time to time in developing and enhancing such technologies. There can be no assurance that our existing or any enhanced or new technology will achieve or maintain substantial market acceptance. Our licensees may experience disruptions in production or lower than expected production levels which would adversely affect the revenue that we receive from them. Our technology license agreements generally include an indemnification clause that indemnifies the licensee against liability and damages (including legal defense costs) arising from intellectual property matters. We could be exposed to substantial liability for claims or damages related to intellectual property matters or indemnification claims. Any claim, with or without merit, could result in significant legal fees and require significant attention from our management. Any of the foregoing issues may adversely impact the success of our licensing business and adversely affect our future operating results.

We are exposed to various risks related to legal proceedings, investigations or claims.

We are currently, and in the future may be, involved in legal proceedings, investigations or claims regarding patent infringement, other intellectual property rights, product failures, our Microsemi acquisition, contracts and other matters. As is typical in the semiconductor industry, we receive notifications from third parties from time to time who believe that we owe them indemnification or other obligations related to claims made against us, our direct or indirect customers or our licensees. These legal proceedings and claims, even if meritless, could result in substantial costs to us and divert our resources. If we are not able to resolve a claim, settle a matter, obtain necessary licenses on commercially reasonable terms, reengineer our products or processes to avoid infringement, provide a cost-effective remedy, or successfully prosecute or defend our position, we could

incur uninsured liability in any of them, be required to take an appropriate charge to operations, be enjoined from selling a material portion of our products or using certain processes, suffer a reduction or elimination in the value of our inventories, and our business, financial condition or results of operations could be harmed.

It is also possible that from time to time we may be subject to claims related to the manufacture, performance or use of our products. These claims may be due to injuries, economic damage or environmental exposures related to manufacturing, a product's nonconformance to our specifications or specifications agreed upon with the customer, changes in our manufacturing processes, or unexpected customer system issues due to the integration of our products or insufficient design or testing by our customers. We could incur significant expenses related to such matters, including, but not limited to:

- costs related to writing off the value of our inventory of nonconforming products;
- recalling nonconforming products;
- providing support services, product replacements, or modifications to products and the defense of such claims;
- diversion of resources from other projects;
- lost revenue or a delay in the recognition of revenue due to cancellation of orders or unpaid receivables;
- customer imposed fines or penalties for failure to meet contractual requirements; and
- a requirement to pay damages or penalties.

Because the systems into which our products are integrated have a higher cost of goods than the products we sell, the expenses and damages we are asked to pay may be significantly higher than the sales and profits we received from the products involved. While we specifically exclude consequential damages in our standard terms and conditions, certain of our contracts may not exclude such liabilities. Further, our ability to avoid such liabilities may be limited by applicable law. We do have liability insurance which covers certain damages arising out of product defects, but we do not expect that insurance will cover all claims or be of a sufficient amount to fully protect against such claims. Costs or payments we may make in connection with these customer claims may adversely affect the results of our operations.

Further, we sell to customers in industries such as automotive, aerospace, defense, safety, security, and medical, where failure of the systems in which our products are integrated could cause damage to property or persons. We may be subject to claims if our products, or the integration of our products, cause system failures. We will face increased exposure to claims if there are substantial increases in either the volume of our sales into these applications or the frequency of system failures integrating our products.

Failure to adequately protect our intellectual property could result in lost revenue or market opportunities.

Our ability to obtain patents, licenses and other intellectual property rights covering our products and manufacturing processes is important for our success. To that end, we have acquired certain patents and patent licenses and intend to continue to seek patents on our technology and manufacturing processes. The process of seeking patent protection can be long and expensive, and patents may not be issued from currently pending or future applications. In addition, our existing and new patents, trademarks and copyrights that issue may not have sufficient scope or strength to provide meaningful protection or commercial advantage to us. We may be subject to, or may ourselves initiate, interference proceedings in the U.S. Patent and Trademark Office, patent offices of a foreign country or U.S. or foreign courts, which can require significant financial and management resources. In addition, the laws of certain foreign countries do not protect our intellectual property rights to the same extent as the laws of the U.S. Infringement of our intellectual property rights by a third party could result in uncompensated lost market and revenue opportunities for us. Although we continue to vigorously and aggressively defend and protect our intellectual property on a worldwide basis, there can be no assurance that we will be successful in our endeavors.

Our operating results may be adversely impacted if economic conditions impact the financial viability of our licensees, customers, distributors, or suppliers.

We regularly review the financial performance of our licensees, customers, distributors and suppliers. However, any downturn in global economic conditions may adversely impact the financial viability of our licensees, customers, distributors or suppliers. The financial failure of a large licensee, customer or distributor, an important supplier, or a group thereof, could have an adverse impact on our operating results and could result in our not being able to collect our accounts receivable balances, higher reserves for doubtful accounts, write-offs for accounts receivable, and higher operating costs as a percentage of net sales.

Regulatory authorities in jurisdictions into or from which we ship our products could levy fines, restrict or delay our ability to export or transfer products, or increase costs associated with the manufacture or transfer of products.

A significant portion of our sales are made through the exporting and importing of products. In addition to local jurisdictions' trade regulations, our U.S.-manufactured products or products based on U.S. technology are subject to U.S. laws and regulations governing international trade, including, but not limited to the Foreign Corrupt Practices Act, Export Administration Regulations, International Traffic in Arms Regulations and trade sanctions against embargoed countries and denied entities administered by the U.S. Department of the Treasury, Office of Foreign Assets Control (OFAC). Licenses or proper license exceptions are required for the shipment of our products to certain countries. A determination by the U.S. or foreign government that we have failed to comply with trade or export regulations or anti-bribery regulations can result in penalties which may include denial of export privileges, fines, civil or criminal penalties, and seizure of products. Such penalties could have a material adverse effect on our business, sales and earnings. Further, a change in these laws and regulations could restrict our ability to transfer product to previously permitted countries, customers, distributors or other third parties. For example, in fiscal 2019, the U.S. Commerce Department banned U.S. companies from selling products or transferring technology to ZTE, a Chinese company, and certain of its subsidiaries. In fiscal 2020, the U.S. Commerce Department banned U.S. companies from selling products or transferring technology to certain Chinese companies, including Huawei and certain of its subsidiaries. Any one or more of these sanctions, future sanctions, a change in laws or regulations, or a prohibition on shipment of our products or transfer of our technology to significant customers could have a material adverse effect on our business, financial condition and results of operations.

For certain of our products associated with our Microsemi acquisition, we rely on U.S. export licenses to ship our products to non-U.S. customers. In 2018, there was a federal government shutdown from January 20, 2018 to January 23, 2018 and a second shutdown from December 22, 2018 through January 25, 2019. Due to the U.S. federal government shutdown, the agency that approves these export licenses was temporarily closed. This resulted in a delay in certain shipments that were scheduled to ship within the quarter. Although this delay did not result in a material adverse impact on our revenue in previous quarters, it could have a material adverse impact on our revenue within the quarter of any future government shutdown, and in the following quarter depending on the ability of the governmental agency to expedite processing of licenses delayed during the shutdown.

The U.S. and other countries have levied tariffs and taxes on certain goods and implemented trade restrictions on materials and products. Trade tensions between the U.S. and China escalated in 2018 and 2019, including the U.S. increasing tariffs on Chinese origin goods, and China increasing tariffs on U.S. goods. Some of our products were affected and are continuing to be affected by the increased tariffs. Higher duties on existing tariffs and further rounds of tariffs have been recently announced or threatened by the U.S. and Chinese administrations. We have taken steps to mitigate the costs of these tariffs on our business. Although these increases in tariffs did not result in significant increases to the operating costs of our business, they did, however, adversely impact demand for our products during fiscal 2019 and the first and second quarters of fiscal 2020. The recent additional tariffs imposed on components or equipment that we or our suppliers source from China will increase our costs and could have a material adverse impact on our operating results in the three months ending December 31, 2019 or future periods. Increased tariffs on our customers' products could impact their sales of their products, and increased tariffs on our products in comparison to those of our competitors could each result in lower demand for our products. Additionally, the Japan-South Korea trade dispute could put pressures on our Japanese and South Korean customers, and the ongoing uncertainty regarding Brexit and its implications could also result in lower demand for our products.

Further changes in trade policy, tariffs, additional taxes, restrictions on exports or other trade barriers, may limit our ability to produce products, increase our selling and/or manufacturing costs, decrease margins, reduce the competitiveness of our products, or inhibit our ability to sell products, which could have a material adverse effect on our business, results of operations or financial conditions.

We are highly dependent on foreign sales and operations, which exposes us to foreign political and economic risks including risks from recent increases in tariffs.

Sales to foreign customers account for a substantial portion of our net sales. During the first six months of fiscal 2020, approximately 79% of our net sales were made to foreign customers, including 21% in China, 15% in Taiwan and 11% in Germany. During fiscal 2019, approximately 80% of our net sales were made to foreign customers, including 22% in China and 13% in Taiwan.

A strong position in the Chinese market is a key component of our global growth strategy. The market for integrated circuit products in China is highly competitive, and both international and domestic competitors are aggressively seeking to increase their market share. Increased competition or economic weakness in the China market has recently made it more difficult for us to achieve our desired sales volumes in China. In particular, the trade relationship between the U.S. and China has worsened, economic conditions in China remain uncertain, and we are unable to predict whether such uncertainty will continue or worsen in future periods. The U.S. government has increased tariffs on products that have China as their country of

origin and which are imported into the U.S. Likewise, the China government has increased tariffs on products that have the U.S. as their country of origin and which are imported into China. We have taken steps to mitigate the costs of these tariffs on our business. Although these increases in tariffs did not result in significant increases to the operating costs of our business, they did, however, adversely impact demand for our products during fiscal 2019 and the first and second quarters of fiscal 2020. The recent additional tariffs imposed on components or equipment that we or our suppliers source from China will increase our costs and could have a material adverse impact on our operating results in the three months ending December 31, 2019 or future periods. Additionally, tariffs on our customers' products could impact their sales of such end products, resulting in lower demand for our products. We may also incur increases in manufacturing costs in mitigating the impact of tariffs on our customers.

Additionally, the Japan-South Korea trade dispute could put pressure on our Japanese and South Korean customers. These pressures may result in various negative effects such as a decrease in the supply of raw materials or components needed to complete products, an increase in costs of raw materials or components, the inability to receive licenses to sell their products in the other country, boycotts, or similar actions. These negative effects on our customers may then result in decreased demand for our products and decreased revenue.

We purchase a substantial portion of our raw materials and equipment from foreign suppliers. In addition, we own product assembly and testing facilities near Bangkok, Thailand, which has experienced periods of political instability in the past. A large portion of our finished goods inventory is maintained in Thailand. From time to time, Thailand has also experienced periods of severe flooding. There can be no assurance that any future flooding or political instability in Thailand would not have a material adverse impact on our operations. As part of our Atmel acquisition, we acquired a test facility in Calamba, Philippines. We use various foundries and other foreign contractors for a significant portion of our assembly and testing and wafer fabrication requirements.

Our reliance on foreign operations, foreign suppliers, maintenance of substantially all of our finished goods inventory at foreign locations and significant foreign sales exposes us to foreign political and economic risks, including, but not limited to:

- political, social and economic instability;
- trade restrictions and changes in tariffs;
- potentially adverse tax consequences;
- economic uncertainty in the worldwide markets served by us;
- import and export license requirements and restrictions;
- changes in rules and laws related to taxes, environmental, health and safety, technical standards and consumer protection in various jurisdictions;
- currency fluctuations and foreign exchange regulations;
- difficulties in staffing and managing international operations;
- employment regulations;
- disruptions due to cybersecurity incidents;
- disruptions in international transport or delivery;
- public health conditions; and
- difficulties in collecting receivables and longer payment cycles.

If any of these risks materialize, or are worse than we anticipate, our sales could decrease and our operating results could suffer, we could face an increase in the cost of components, production delays, general business interruptions, delays from difficulties in obtaining export licenses for certain technology, tariffs and other barriers and restrictions, longer payment cycles, increased taxes, restrictions on the repatriation of funds and the burdens of complying with a variety of foreign laws, any of which could ultimately have a material adverse effect on our business.

Further changes in trade policy, tariffs, additional taxes, or restrictions on supplies, equipment, and raw materials including rare earth minerals, may limit our ability to produce products, increase our selling and/or manufacturing costs, decrease margins, reduce the competitiveness of our products, or inhibit our ability to sell products or purchase necessary equipment and supplies, which could have a material adverse effect on our business, results of operations, or financial conditions.

Our contractual relationships with our customers expose us to risks and liabilities.

We do not typically enter into long-term contracts with our non-distributor customers, and therefore we cannot be certain about future order levels from our customers. When we do enter into customer contracts, the contract is generally cancelable at the convenience of the customer. Even though we had over 120,000 customers and our ten largest direct customers made up approximately 12% of our total revenue for the six months ended September 30, 2019 and six of our top ten direct customers are contract manufacturers that perform manufacturing services for many customers, cancellation of customer contracts could have an adverse impact on our revenue and profits.

We have contracts with certain customers that differ from our standard terms of sale. For several of the significant markets that we sell into, such as the automotive and personal computer markets, our current or potential customers may possess significant leverage over us in negotiating the terms and conditions of supply as a result of their market size and position. For example, under certain contracts we may commit to supply specific quantities of products on scheduled delivery dates, or agree to extend our obligations for certain liabilities such as warranties or indemnification for quality issues or claims of intellectual property infringement. If we are unable to supply the customer as required under the contract, the customer may incur additional production costs, lost revenues due to subsequent delays in their own manufacturing schedule, or quality-related issues. We may be liable for the customer's costs, expenses and damages associated with their claims and we may be obligated to defend the customer against claims of intellectual property infringement and pay the associated legal fees. While we try to minimize the number of contracts which contain such provisions, manage the risks underlying such liabilities, and set caps on our liability exposure, sometimes we are not able to do so. In order to win important designs, avoid losing business to competitors, maintain existing business, or be permitted to bid on new business, we have been, and may in the future be, forced to agree to uncapped liability for such items as intellectual property infringement, product failure, or confidentiality. Such provisions expose us to risk of liability far exceeding the purchase price of the products we sell under such contracts, the lifetime revenues we receive from such products, or various forms of potential consequential damages. Further, where we do not have negotiated contracts with our customers, the terms of our customer's orders may govern the transaction and contain terms that are not favorable to us. These significant additional risks could result in a material adverse impact on our results of operations and financial condition.

Reliance on government contracts and sales to governmental agencies could have a material adverse effect on our results of operations.

A significant portion of the sales of Microsemi (which we acquired in May 2018) are from or are derived from government agencies or customers whose principal sales are to U.S. government agencies. Such sales are subject to uncertainties regarding governmental spending levels, spending priorities and policy changes. Future sales to U.S. government agencies or customers are also subject to uncertain government appropriations and national defense policies and priorities, including the constraints of the budgetary process, changes in the timing and potential spending priorities and the impact of any past or future government shutdowns, contract terminations or renegotiations, or future sequestrations. Such sales are also subject to uncertainties related to monetary, regulatory, tax and trade policies implemented by current or future administrations or by the U.S. Congress.

In the past, Microsemi has experienced delays and reductions in appropriations on programs that included its products. For example, there were federal government shutdowns from January 20, 2018 to January 23, 2018 and from December 22, 2018 through January 25, 2019. Further delays, reductions in or terminations of government contracts or subcontracts, including those caused by any past or future shutdown of the U.S. federal government, could materially and adversely affect our operating results. If the U.S. government fails to complete its annual budget process or to provide for a continuing resolution to fund government operations, another federal government shutdown may occur, during which time we may experience further delays and reductions in appropriations or reductions in or terminations of government contracts or subcontracts, which could materially and adversely affect our operating results. While we generally function as a subcontractor in these type of transactions, further changes in U.S. government procurement regulations and practices, particularly surrounding initiatives to reduce costs, may adversely impact the contracting environment and our operating results.

The U.S. government and its contractors may terminate their contracts with Microsemi or us at any time. For example, in 2014, Microsemi had a \$75 million contract terminated for convenience by the U.S. government. Uncertainty with respect to government spending and termination of contracts associated with government related projects could have a material adverse impact on the revenue and other benefits we achieve from our Microsemi acquisition. Our business related to U.S. governmental agencies or customers not only requires us to comply with the contract terms, but also with applicable governmental regulations, particularly for our facilities, systems and personnel that service such customers. Maintaining compliance with these regulations, including any audit requirements, requires that we devote significant resources to such matters in terms of training, personnel, information technology and facilities. Any failure to maintain compliance with these requirements may result in fines and penalties and loss of current or future business that may materially and adversely affect our operating results.

We must attract and retain qualified personnel to be successful, and competition for qualified personnel can be intense.

Our success depends upon the efforts and abilities of our senior management, engineering, manufacturing and other personnel. The competition for qualified engineering and management personnel can be intense. We may be unsuccessful in retaining our existing key personnel or in attracting and retaining additional key personnel that we require. The loss of the services of one or more of our key personnel or the inability to add key personnel could harm our business. The loss of, or any inability to attract personnel, even if not key personnel, if experienced in sufficient numbers could harm our business. We have no employment agreements with any member of our senior management team.

Fluctuations in foreign currency exchange rates could adversely impact our operating results.

We use forward currency exchange contracts in an attempt to reduce the adverse earnings impact from the effect of exchange rate fluctuations on our non-U.S. dollar net balance sheet exposures. Nevertheless, in periods when the U.S. dollar significantly fluctuates in relation to the non-U.S. currencies in which we transact business, the value of our non-U.S. dollar transactions can have an adverse effect on our results of operations and financial condition. In particular, in periods when a foreign currency significantly declines in value in relation to the U.S. dollar, customers transacting in that foreign currency may find it more difficult to fulfill their previously committed contractual obligations or to undertake new obligations to make payments or purchase products. In periods when the U.S. dollar is significantly declining in relation to the British pound, Euro, Thai baht, Taiwan dollar and Malaysian ringgit, the operational costs in our European and Thailand subsidiaries are adversely affected. Although our business has not been materially adversely impacted by recent changes in the value of the U.S. dollar, there can be no assurance as to the future impact that any weakness or strength in the U.S. dollar will have on our business or results of operations.

The occurrence of events for which we are self-insured, or which exceed our insurance limits, may adversely affect our profitability and liquidity.

We have insurance contracts with independent insurance companies related to many different types of risk; however, we self-insure for some potentially significant risks and obligations. In these circumstances, we believe that it is more cost effective for us to self-insure certain risks than to pay the high premium costs. The risks and exposures that we self-insure include, but are not limited to certain property, product defects, cybersecurity matters, employment risks, environmental matters, political risks, and intellectual property matters. Should there be a loss or adverse judgment or other decision in an area for which we are self-insured, then our financial condition, results of operations and liquidity may be adversely affected.

We are subject to stringent environmental and other regulations, which may force us to incur significant expenses.

We must comply with all applicable federal, state, local and foreign governmental regulations related to the use, storage, discharge and disposal of toxic, volatile or otherwise hazardous substances used in our products and manufacturing processes. Our failure to comply, or the failure of entities that we have acquired over time to have complied, with applicable regulations could result in significant fines, liability for clean up, suspension of production, cessation of operations or future liabilities. Such environmental regulations have required us in the past, and could require us in the future, to buy costly equipment or to incur significant expenses to comply with such regulations. Our failure to control the use of, or adequately restrict the discharge of, hazardous substances could impact the health of our employees and others and could impact our ability to operate. Such failure could also restrict our ability to ship certain products to certain countries, require us to modify our operations' logistics, or require us to incur other significant costs and expenses. There is a continuing expansion in environmental laws with a focus on reducing or eliminating hazardous substances and substances of high concern in electronic products and shipping materials. These and other future environmental regulations could require us to reengineer certain of our existing products and may make it more expensive for us to manufacture, sell and ship our products. In addition, the number and complexity of laws focused on the energy efficiency of electronic products and accessories, the recycling of electronic products,

and the reduction in the quantity and the recycling of packing materials have expanded significantly. It may be difficult for us to timely comply with these laws and we may not have sufficient quantities of compliant products to meet customers' needs, thereby adversely impacting our sales and profitability. We may also have to write off inventory in the event that we hold unsaleable inventory as a result of changes to regulations or customer requirements. We expect these risks and trends to continue. In addition, we anticipate increased customer requirements to meet voluntary criteria related to the reduction or elimination of substances of high concern in our products, energy efficiency measures, and supplier practices associated with sourcing and manufacturing. These requirements may increase our own costs, as well as those passed on to us by our supply chain.

Customer demands for us to implement business practices that are more stringent than existing legal requirements may reduce our revenue opportunities or cause us to incur higher costs.

Some of our customers and potential customers are requiring that we implement operating practices that are more stringent than what is required by applicable laws with respect to workplace and labor requirements, the type of materials we use in our products, environmental matters or other items. To comply with such requirements, we may have to pass these same operating practices on to our suppliers. Our suppliers may refuse to implement these operating practices, or may charge us more for complying with them. The cost to implement such practices may cause us to incur higher costs and reduce our profitability, and if we choose not to implement such practices, such customers may disqualify us as a supplier, resulting in decreased revenue opportunities. Developing, administering, monitoring and auditing these customer-requested practices at our own sites and those in our supply chain will increase our costs and may require that we hire more personnel.

Customer demands and regulations related to conflict-free minerals may force us to incur additional expenses.

As required by the Dodd-Frank Wall Street Reform and Consumer Protection Act, in August 2012, the SEC released investigation, disclosure and reporting requirements regarding the use of "conflict" minerals mined from the Democratic Republic of Congo and adjoining countries and which are necessary to the functionality or production of products. We filed a report on Form SD with the SEC regarding such matters on May 31, 2019. Other countries are considering similar regulations. If we cannot certify that we are using conflict-free minerals, customers may demand that we change the sourcing of minerals and other materials used in the manufacture of our products, even if the costs for compliant minerals and materials significantly increases and availability is limited. If we make changes to materials or suppliers, there will likely be costs associated with qualifying new suppliers and production capacity and quality could be negatively impacted. Our relationships with customers and suppliers may be adversely affected if we are unable to certify that our products are "conflict-free." We have incurred, and expect in the future to incur, additional costs associated with complying with these new disclosure requirements, such as costs related to determining the source of any conflict minerals used in our products. We may also encounter challenges to satisfy those customers who require that all of the components of our products be certified as conflict free in a materially different manner than advocated by the Responsible Minerals Initiative or the Dodd-Frank Wall Street Reform and Consumer Protection Act. If we are not able to meet customer requirements, customers may choose to disqualify us as a supplier and we may have to write off inventory in the event that it cannot be sold.

The outcome of future examinations of our income tax returns could have an adverse effect on our results of operations.

We are subject to examination of our income tax returns by the IRS and other tax authorities for fiscal 2007 and later. We are subject to certain income tax examinations in foreign jurisdictions for fiscal 2007 and later. We regularly assess the likelihood of adverse outcomes resulting from these examinations to determine the adequacy of our provision for income taxes and have reserved for potential adjustments that may result from the current examinations. There can be no assurance that the final determination of any of these or any future examinations will not have an adverse effect on our effective tax rates, financial position and results of operations.

Exposure to greater than anticipated income tax liabilities, changes in tax rules and regulations (including the Act), changes in the interpretation of tax rules and regulations, or unfavorable assessments from tax audits could affect our effective tax rates, financial condition and results of operations.

We are a U.S.-based multinational company subject to tax in multiple U.S. and foreign tax jurisdictions. Our income tax obligations could be affected by many factors, including but not limited to changes to our corporate operating structure, intercompany arrangements and tax planning strategies.

Our income tax expense is computed based on tax rates at the time of the respective financial period. Our future effective tax rates, financial condition and results from operations could be unfavorably affected by changes in the tax rates in

jurisdictions where our income is earned, by changes in the tax rules and regulations or the interpretation of tax rules and regulations in the jurisdictions in which we do business or by changes in the valuation of our deferred tax assets.

Currently, a majority of our revenue is generated from customers located outside the U.S., and a substantial portion of our assets, including employees, are located outside of the U.S. The adoption of the Act significantly changed the taxation of U.S.-based multinational corporations, by, among other things, reducing the U.S. corporate income tax rate, adopting elements of a territorial tax system, assessing a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, and creating new taxes on certain foreign-sourced earnings. The Act is unclear in some respects and will require interpretations and continued implementation of regulations by the Internal Revenue Service, as well as state tax authorities, and the legislation could be subject to potential amendments and technical corrections, any of which could lessen or increase certain adverse impacts of the legislation. A significant portion of our earnings are earned by our subsidiaries outside the U.S. Changes to the taxation of certain foreign earnings resulting from the Act, along with the state tax impact of these changes and potential future cash distributions, will likely have an adverse effect on our effective tax rate. Furthermore, changes to the taxation of undistributed foreign earnings could change our future intentions regarding reinvestment of such earnings. The foregoing items could have a material adverse effect on our business, cash flow, results of operations or financial conditions.

The future trading price of our common stock could be subject to wide fluctuations in response to a variety of factors.

The market price of our common stock has fluctuated significantly in the past and is likely to fluctuate in the future. The future trading price of our common stock could be subject to wide fluctuations in response to a variety of factors, many of which are beyond our control, including, but not limited to:

- quarterly variations in our operating results or the operating results of other technology companies;
- our ability to continue to realize the expected benefits of our acquisition of Microsemi;
- changes in our financial guidance or our failure to meet such guidance;
- changes in analysts' estimates of our financial performance or buy/sell recommendations;
- general conditions in the semiconductor industry;
- global economic and financial conditions;
- any other acquisitions we pursue or complete; and
- actual or anticipated announcements of technical innovations or new products by us or our competitors.

In addition, the stock market has from time to time experienced significant price and volume fluctuations that have affected the market prices for many companies and that often have been unrelated to the operating performance of such companies. These broad market fluctuations and other factors have harmed and may harm the market price of our common stock. Some or all of the foregoing factors could also cause the market price of our convertible debentures to decline or fluctuate substantially.

Anti-takeover defenses in our charter documents and under Delaware law could discourage takeover attempts, which could also reduce the market price of our common stock.

Our certificate of incorporation and bylaws contain provisions that could delay or prevent a change in control of Microchip. These provisions could also make it difficult for stockholders to elect directors that are not nominated by the current members of our board of directors or take other corporate actions, including effecting changes in our management. These provisions include:

- the ability of our board of directors to issue shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquiror;
- the right of our board of directors to elect a director to fill a vacancy created by the expansion of our board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- the requirement that a special meeting of stockholders may be called only by the holders of 50% or more of the combined voting power of all classes of our capital stock, which could delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors;
- the ability of our board of directors, by majority vote, to amend the bylaws, which may allow our board of directors to take additional actions to prevent an unsolicited takeover and inhibit the ability of an acquiror to amend the bylaws to facilitate an unsolicited takeover attempt; and
- advance notice procedures with which stockholders must comply to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential

acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of us.

In addition, as a Delaware corporation, we are subject to Section 203 of the Delaware General Corporation Law. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a certain period of time. The application of Section 203 also could have the effect of delaying or preventing a change in control of us.

Any of these provisions could, under certain circumstances, depress the market price of our common stock.

As a result of our acquisition activity, our goodwill and intangible assets have increased significantly in recent years and we may in the future incur impairments to goodwill or intangible assets.

When we acquire a business, a substantial portion of the purchase price of the acquisition is allocated to goodwill and other identifiable intangible assets. The amount of the purchase price which is allocated to goodwill is determined by the excess of the purchase price over the net identifiable assets acquired. As of September 30, 2019, we had goodwill of \$6.66 billion and net intangible assets of \$6.19 billion. In connection with the completion of our acquisition of Microsemi in May 2018, our balance of goodwill and intangible assets increased significantly. We review our indefinite-lived intangible assets, including goodwill, for impairment annually in the fourth fiscal quarter or whenever events or changes in circumstances indicate that the carrying amount of those assets is more likely than not impaired. Factors that may be considered in assessing whether goodwill or intangible assets may be impaired include a decline in our stock price or market capitalization, reduced estimates of future cash flows and slower growth rates in our industry. Our valuation methodology for assessing impairment requires management to make judgments and assumptions based on historical experience and to rely heavily on projections of future operating performance. Because we operate in highly competitive environments, projections of our future operating results and cash flows may vary significantly from our actual results. No goodwill impairment charges were recorded in fiscal 2020 or fiscal 2019. In the six months ended September 30, 2019, we recognized \$0.5 million of intangible asset impairment charges. In fiscal 2019, we recognized \$3.1 million of intangible asset impairment charges. If in future periods, we determine that our goodwill or intangible assets are impaired, we will be required to write down these assets which would have a negative effect on our condensed consolidated financial statements.

Our foreign pension plans are unfunded, and any requirement to fund these plans in the future could negatively affect our cash position and operating capital.

In connection with our acquisitions of Microsemi and Atmel, we assumed defined benefit pension plans that cover certain of our French and German employees. Plan benefits are managed in accordance with local statutory requirements. Benefits are based on years of service and employee compensation levels. The projected benefit obligation totaled \$71.5 million at September 30, 2019. Most of these plans are unfunded in compliance with local statutory regulations, and we have no immediate intention of funding these plans. Benefits are paid when amounts become due, commencing when participants retire. We expect to pay approximately \$1.3 million in fiscal 2020 for benefits earned. Should legislative regulations require complete or partial funding of these plans in the future, it could negatively affect our cash position and operating capital.

From time to time we receive grants from governments, agencies and research organizations. If we are unable to comply with the terms of those grants, we may not be able to receive or recognize grant benefits or we may be required to repay grant benefits previously paid to us and recognize related charges, which would adversely affect our operating results and financial position.

From time to time, we receive economic incentive grants and allowances from European governments, agencies and research organizations targeted at increasing employment at specific locations. The subsidy grant agreements typically contain economic incentive, headcount, capital and research and development expenditure and other covenants that must be met to receive and retain grant benefits, and these programs can be subjected to periodic review by the relevant governments. Noncompliance by us with the conditions of the grants could result in our forfeiture of all or a portion of any future amounts to be received, as well as the repayment of all or a portion of amounts received to date.

Conversion of our debentures will dilute the ownership interest of our existing stockholders.

The conversion of some or all of our outstanding debentures will dilute the ownership interest of existing stockholders to the extent we deliver common stock upon conversion of the debentures. Upon conversion, we may satisfy our conversion obligation by delivering cash, shares of common stock or any combination, at our option. If upon conversion we elect to deliver cash for the lesser of the conversion value and principal amount of the debentures, we would pay the holder the cash value of the applicable number of shares of our common stock. Upon conversion, we intend to satisfy the lesser of the principal amount or the conversion value of the debentures in cash. If the conversion value of a debenture exceeds the principal amount of the debenture, we may also elect to deliver cash in lieu of common stock for the conversion value in excess of the one thousand dollars principal amount (i.e., the conversion spread). There would be no adjustment to the numerator in the net income per common share computation for the cash settled portion of the debentures as that portion of the debt instrument will always be settled in cash. The conversion spread will be included in the denominator for the computation of diluted net income per common share. Any sales in the public market of any common stock issuable upon conversion of our debentures could adversely affect prevailing market prices of our common stock. In addition, the existence of the debentures may encourage short selling by market participants because the conversion of the debentures could be used to satisfy short positions, or anticipated conversion of the debentures into shares of our common stock could depress the price of our common stock.

Climate change regulations and sustained adverse climate change pose regulatory and physical risks that could harm our results of operations or affect the way we conduct business.

Climate change regulations at the federal, state or local level or in international jurisdictions could require us to limit emissions, change our manufacturing processes, obtain substitute materials which may cost more or be less available, increase our investment in control technology for greenhouse gas emissions, fund offset projects or undertake other costly activities. These regulations could significantly increase our costs and restrict our manufacturing operations by virtue of requirements for new equipment. New permits may be required for our current operations, or expansions thereof. Failure to timely receive permits could result in fines, suspension of production, or cessation of operations at one or more facilities. In addition, restrictions on carbon dioxide or other greenhouse gas emissions could result in significant costs such as higher energy costs, and utility companies passing down carbon taxes, emission cap and trade programs and renewable portfolio standards. The cost of complying, or of failing to comply, with these and other climate change and emissions regulations could have an adverse effect on our operating results.

Further, any sustained adverse change in climate could have a direct adverse economic impact on us, such as water and power shortages, and higher costs of water or energy to control the temperature of our facilities. Certain of our operations are located in arid or tropical regions, such as Arizona, Thailand, and the Philippines. Some environmental experts predict that these regions may become vulnerable to storms, severe floods and droughts due to climate change. While we maintain business recovery plans that are intended to allow us to recover from natural disasters or other events that can interrupt our business, we cannot be certain that our plans will protect us from all such disasters or events.

Item 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

We did not repurchase any shares of our common stock in the three months ended September 30, 2019.

Table of Contents

Item 6. EXHIBITS

Exhibit Number	Exhibit Description	Incorporated by Reference				Included Herewith
		Form	File Number	Exhibit	Filing Date	
10.1	<u>Amendment No.1 to Amended and Restated Credit Agreement, dated as of September 26, 2019, among Microchip Technology Incorporated, the Subsidiary Guarantors party thereto, the lenders party thereto and JPMorgan Chase Bank, N.A., as Administrative Agent.</u>	8-K	000-21184	10.1	10/01/2019	
31.1*	<u>Certification of Chief Executive Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended (the Exchange Act)</u>					X
31.2*	<u>Certification of Chief Financial Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended (the Exchange Act)</u>					X
32*	<u>Certifications Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 *</u>					X
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive File because its XBRL tags are embedded within the Inline XBRL document					
101.SCH	Inline XBRL Taxonomy Extension Schema Document					
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document					
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document					
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document					
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document					
104	Cover Page Interactive Data File - the cover page XBRL tags are embedded within the Inline XBRL document.					

* Furnished herewith.

SIGNATURES

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

MICROCHIP TECHNOLOGY INCORPORATED

Date: November 6, 2019

By: /s/ J. Eric Bjornholt

J. Eric Bjornholt

Senior Vice President and Chief Financial Officer

(Duly Authorized Officer, and Principal Financial
and Accounting Officer)

CERTIFICATION

I, Steve Sanghi, certify that:

1. I have reviewed this Form 10-Q of Microchip Technology Incorporated;
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.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's Board of Directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 6, 2019

/s/ Steve Sanghi

Steve Sanghi

Chief Executive Officer and Chairman of the Board

CERTIFICATION

I, J. Eric Bjornholt, certify that:

1. I have reviewed this Form 10-Q of Microchip Technology Incorporated;
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.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's Board of Directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 6, 2019

/s/ J. Eric Bjornholt

J. Eric Bjornholt

Senior Vice President and Chief Financial Officer

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Steve Sanghi, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Microchip Technology Incorporated on Form 10-Q for the period ended September 30, 2019 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Microchip Technology Incorporated.

By: /s/ Steve Sanghi
Name: Steve Sanghi
Title: Chief Executive Officer and Chairman of the Board
Date: November 6, 2019

I, J. Eric Bjornholt, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Microchip Technology Incorporated on Form 10-Q for the period ended September 30, 2019 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Microchip Technology Incorporated.

By: /s/ J. Eric Bjornholt
Name: J. Eric Bjornholt
Title: Senior Vice President and Chief Financial Officer
Date: November 6, 2019