PHOTRONICS INC
Form 10-Q
September 08, 2017

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

FORM 10-Q

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended July 30, 2017
OR
TRANSITION REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from ___ to ___

Commission file number 0-15451

PHOTRONICS, INC.
(Exact name of registrant as specified in its charter)

Connecticut	06-0854886
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

15 Secor Road, Brookfield, Connecticut	06804
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code (203) 775-9000

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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. (Check one):

Large Accelerated Filer Accelerated Filer Non-Accelerated Filer Smaller Reporting Company

Emerging growth company

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Class	Outstanding at August 28, 2017
Common Stock, $0.01 par value	68,938,776 Shares

Forward-Looking Statements

The Private Securities Litigation Reform Act of 1995 provides a “safe harbor” for forward-looking statements made by or on behalf of Photronics, Inc. (“Photronics”, the “Company”, “we”, “our”, or “us”). These statements are based on management’s beliefs, as well as assumptions made by, and information currently available to, management. Forward-looking statements may be identified by words like “expect,” “anticipate,” “believe,” “plan,” “project,” “could,” “shou “would,” “estimate,” “intend,” “may,” “will” and similar expressions, or the negative of such terms, or other comparable terminology. All forward-looking statements involve risks and uncertainties that are difficult to predict. In particular, any statement contained in this quarterly report on Form 10-Q or in other documents filed with the Securities and Exchange Commission in press releases or in the Company’s communications and discussions with investors and analysts in the normal course of business through meetings, phone calls, or conference calls regarding, among other things, the consummation and benefits of transactions, joint ventures, business combinations, divestitures and acquisitions, expectations with respect to future sales, financial performance, operating efficiencies, or product expansion, are subject to known and unknown risks, uncertainties, and contingencies, many of which are beyond the control of the Company. Various factors may cause actual results, performance, or achievements to differ materially from anticipated results, performance, or achievements expressed or implied by forward-looking statements. Factors that might affect forward-looking statements include, but are not limited to, overall economic and business conditions economic and political conditions in international markets the demand for the Company’s products competitive factors in the industries and geographic markets in which the Company competes the timing of orders received from customers the gain or loss of significant customers competition from other manufacturers changes in accounting standards federal, state and international tax requirements (including tax rate changes, new tax laws and revised tax law interpretations) changes in the jurisdictional mix of our earnings and changes in tax laws and rates interest rate and other capital market conditions, including changes in the market price of the Company’s securities foreign currency exchange rate fluctuations changes in technology technology or intellectual property infringement, including cyber-security breaches, and other innovation risks unsuccessful or unproductive research and development or capital expenditures the timing, impact, and other uncertainties related to transactions and acquisitions, divestitures, business combinations, and joint ventures as well as decisions the Company may make in the future regarding the Company’s business, capital and organizational structures and other matters the seasonal and cyclical nature of the semiconductor and flat panel display industries management changes changes in laws and government regulation impacting our operations or our products the occurrence of arbitration, regulatory proceedings, claims or litigation damage or destruction to the Company’s facilities, or the facilities of its customers or suppliers, by natural disasters, labor strikes, political unrest, or terrorist activity the ability of the Company to (i) place new equipment in service on a timely basis (ii) obtain additional financing (iii) achieve anticipated synergies and cost savings (iv) fully utilize its tools (v) achieve desired yields, pricing, product mix, and market acceptance of its products or (vi) obtain necessary export licenses. Any forward-looking statements should be considered in light of these factors. Accordingly, there is no assurance that the Company’s expectations will be realized. The Company does not assume responsibility for the accuracy and completeness of the forward-looking statements and does not assume an obligation to provide revisions to any forward-looking statements, except as otherwise required by securities and other applicable laws.

PHOTRONICS, INC.
AND SUBSIDIARIES

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PART I. FINANCIAL INFORMATION

Item 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

PHOTRONICS, INC. AND SUBSIDIARIES
Condensed Consolidated Balance Sheets
(in thousands, except per share amounts)
(unaudited)

	July 30, 2017	October 30, 2016
ASSETS		
Current assets:		
Cash and cash equivalents	$340,572	$ 314,074
Accounts receivable, net of allowance of $3,215 in 2017 and $3,901 in 2016	91,812	92,636
Inventories	25,668	22,081
Other current assets	10,558	12,795
Total current assets	468,610	441,586
Property, plant and equipment, net	501,720	506,434
Intangible assets, net	18,320	19,854
Deferred income taxes	16,128	16,322
Other assets	3,820	3,792
Total assets	$1,008,598	$ 987,988
LIABILITIES AND EQUITY		
Current liabilities:		
Current portion of long-term borrowings	$5,541	$ 5,428
Accounts payable	54,126	51,649
Accrued liabilities	19,643	24,240
Total current liabilities	79,310	81,317
Long-term borrowings	57,776	61,860
Other liabilities	16,384	19,337
Total liabilities	153,470	162,514
Commitments and contingencies		
Equity:		
Preferred stock, $0.01 par value, 2,000 shares authorized, none issued and outstanding	-	-
Common stock, $0.01 par value, 150,000 shares authorized, 68,547 shares issued and outstanding at July 30, 2017 and 68,080 shares issued and outstanding at October 30, 2016	685	681
Additional paid-in capital	545,743	541,093

Retained earnings	184,005	176,260
Accumulated other comprehensive income (loss)	8,849	(7,671)
Total Photronics, Inc. shareholders' equity	739,282	710,363
Noncontrolling interests	115,846	115,111
Total equity	855,128	825,474
Total liabilities and equity	$1,008,598	$ 987,988

See accompanying notes to condensed consolidated financial statements.

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PHOTRONICS, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Income
(in thousands, except per share amounts)
(unaudited)

	Three Months Ended		Nine Months Ended	
	July 30, 2017	July 31, 2016	July 30, 2017	July 31, 2016
Net sales	$111,579	$123,209	$329,707	$376,088
Costs and expenses:				
Cost of sales	(89,862)	(91,759)	(264,835)	(277,915)
Gross profit	21,717	31,450	64,872	98,173
Selling, general and administrative	(11,639)	(11,163)	(33,403)	(34,386)
Research and development	(4,812)	(5,466)	(12,023)	(16,613)
Operating income	5,266	14,821	19,446	47,174
Other income (expense):				
Interest and other income (expense), net	415	1,849	(4,182)	1,878
Interest expense	(549)	(612)	(1,657)	(2,750)
Gain on sale of investment	-	157	-	8,940
Income before income tax provision	5,132	16,215	13,607	55,242
Income tax provision	(333)	(4,762)	(2,814)	(6,136)
Net income	4,799	11,453	10,793	49,106
Net income attributable to noncontrolling interests	(798)	(3,365)	(3,048)	(8,162)
Net income attributable to Photronics, Inc. shareholders	$4,001	$8,088	$7,745	$40,944
Earnings per share:				
Basic	$0.06	$0.12	$0.11	$0.61
Diluted	$0.06	$0.12	$0.11	$0.56
Weighted-average number of common shares outstanding:				
Basic	68,525	67,953	68,376	67,377
Diluted	69,380	74,317	69,311	76,990

See accompanying notes to condensed consolidated financial statements.

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PHOTRONICS, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Comprehensive Income
(in thousands)
(unaudited)

	Three Months Ended		Nine Months Ended	
	July 30, 2017	July 31, 2016	July 30, 2017	July 31, 2016
Net income	$ 4,799	$ 11,453	$ 10,793	$ 49,106
Other comprehensive income, net of tax of $0:				
Foreign currency translation adjustments	4,442	5,051	22,116	7,787
Amortization of cash flow hedge	32	32	96	96
Net other comprehensive income	4,474	5,083	22,212	7,883
Comprehensive income	9,273	16,536	33,005	56,989
Less: comprehensive income attributable to noncontrolling interests	594	4,538	8,740	10,408
Comprehensive income attributable to Photronics, Inc. shareholders	$ 8,679	$ 11,998	$ 24,265	$ 46,581

See accompanying notes to condensed consolidated financial statements.

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PHOTRONICS, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Cash Flows
(in thousands)
(unaudited)

	Nine Months Ended	
	July 30, 2017	July 31, 2016
Cash flows from operating activities:		
Net income	$10,793	$49,106
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	64,081	60,102
Gain on sale of investment	-	(8,940)
Changes in assets and liabilities:		
Accounts receivable	4,031	3,936
Inventories	(2,475)	(204)
Other current assets	2,650	9,177
Accounts payable, accrued liabilities, and other	(5,291)	(21,790)
Net cash provided by operating activities	73,789	91,387
Cash flows from investing activities:		
Purchases of property, plant and equipment	(38,759)	(44,828)
Acquisition of business	(5,400)	-
Proceeds from sale of investment	167	101,853
Other	(458)	584
Net cash (used in) provided by investing activities	(44,450)	57,609
Cash flows from financing activities:		
Dividends paid to noncontrolling interests	(8,298)	(11,890)
Repayments of long-term borrowings	(4,057)	(56,276)
Proceeds from share-based arrangements	2,529	3,172
Other	(33)	(19)
Net cash used in financing activities	(9,859)	(65,013)
Effect of exchange rate changes on cash and cash equivalents	7,018	1,819
Net increase in cash and cash equivalents	26,498	85,802
Cash and cash equivalents at beginning of period	314,074	205,867
Cash and cash equivalents at end of period	$340,572	$291,669
Supplemental disclosure of non-cash information:		
Accrual for property, plant and equipment purchased during the period	$2,572	$7,169

See accompanying notes to condensed consolidated financial statements.

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PHOTRONICS, INC. AND SUBSIDIARIES
Notes to Condensed Consolidated Financial Statements
Three Months and Nine Months Ended July 30, 2017 and July 31, 2016
(unaudited)
(in thousands, except share amounts and per share data)

NOTE 1 - BASIS OF FINANCIAL STATEMENT PRESENTATION

Photronics, Inc. and its subsidiaries ("Photronics", "the Company", "we", "our", or "us") is one of the world's leading manufacturers of photomasks, which are high precision photographic quartz plates containing microscopic images of electronic circuits. Photomasks are a key element in the manufacture of integrated circuits ("ICs") and flat panel displays ("FPDs"), and are used as masters to transfer circuit patterns onto IC wafers and flat panel substrates during the fabrication of ICs and a variety of FPDs and, to a lesser extent, other types of electrical and optical components. We currently operate principally from nine manufacturing facilities, two of which are located in Europe, three in Taiwan, one in Korea, and three in the United States. We have announced our plans to construct two manufacturing facilities in China as we expand our global manufacturing footprint. Please refer to Note 15 for additional information.

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by accounting principles generally accepted in the United States of America for annual financial statements. All intercompany accounts and transactions have been eliminated in consolidation. In the opinion of management, adjustments, all of which are of a normal recurring nature, considered necessary for a fair presentation have been included. We are typically impacted during our first fiscal quarter by the North American and European holiday periods, as some customers reduce their effective workdays and orders during these periods. Additionally, we can be impacted during its first or second quarter by the Asian New Year holiday period, which may also reduce customer orders. Operating results for the interim period are not necessarily indicative of the results that may be expected for the fiscal year ending October 29, 2017. For further information, refer to the consolidated financial statements and notes thereto included in our Annual Report on Form 10-K for the year ended October 30, 2016.

NOTE 2 - CHANGES IN EQUITY

The following tables set forth our consolidated changes in equity for the three and nine month periods ended July 30, 2017 and July 31, 2016:

	Three Months Ended July 30, 2017						
	Photronics, Inc. Shareholders						
	Common Stock						
	Shares	Amount	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income	Non-controlling Interests	Total Equity
Balance at May 1, 2017	68,496	$ 685	$ 545,019	$ 180,004	$ 4,171	$ 114,875	$ 844,754
Net income	-	-	-	4,001	-	798	4,799
Other comprehensive income	-	-	-	-	4,678	(204)	4,474
Sale of common stock through employee stock option and purchase plans	32	-	118	-	-	-	118

Restricted stock awards vesting and expense	19	-	409	-	-	-	409
Share-based compensation expense	-	-	574	-	-	-	574
Other	-	-	(377)	-	-	377	-
Balance at July 30, 2017	68,547	$ 685	$ 545,743	$ 184,005	$ 8,849	$ 115,846	$ 855,128

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	Three Months Ended July 31, 2016 Photronics, Inc. Shareholders Common Stock Shares	Amount	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Non-controlling Interests	Total Equity
Balance at May 2, 2016	67,943	$ 679	$538,535	$162,916	$ (8,846)	$109,488	$802,772
Net income	-	-	-	8,088	-	3,365	11,453
Other comprehensive income	-	-	-	-	3,910	1,173	5,083
Sale of common stock through employee stock option and purchase plans	7	-	53	-	-	-	53
Restricted stock awards vesting and expense	18	1	313	-	-	-	314
Share-based compensation expense	-	-	661	-	-	-	661
Return of capital to noncontrolling interests	-	-	-	-	-	(955)	(955)
Balance at July 31, 2016	67,968	$ 680	$539,562	$171,004	$ (4,936)	$113,071	$819,381

	Nine Months Ended July 30, 2017 Photronics, Inc. Shareholders Common Stock Shares	Amount	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Non-controlling Interests	Total Equity
Balance at October 31, 2016	68,080	$ 681	$541,093	$176,260	$ (7,671)	$115,111	$825,474
Net income	-	-	-	7,745	-	3,048	10,793
Other comprehensive income	-	-	-	-	16,520	5,692	22,212
Sale of common stock through employee stock option and purchase plans	355	3	2,187	-	-	-	2,190
Restricted stock awards vesting and expense	112	1	1,137	-	-	-	1,138
Share-based compensation expense	-	-	1,703	-	-	-	1,703
Subsidiary dividend	-	-	-	-	-	(8,382)	(8,382)
Other	-	-	(377)	-	-	377	-
Balance at July 30, 2017	68,547	$ 685	$545,743	$184,005	$ 8,849	$115,846	$855,128

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	Nine Months Ended July 31, 2016						
	Photronics, Inc. Shareholders						
	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Non-controlling Interests	Total Equity
	Shares	Amount					
Balance at November 2, 2015	66,602	$ 666	$ 526,402	$ 130,060	$ (10,573)	$ 115,511	$ 762,066
Net income	-	-	-	40,944	-	8,162	49,106
Other comprehensive income	-	-	-	-	5,637	2,246	7,883
Sale of common stock through employee stock option and purchase plans	521	5	2,890	-	-	-	2,895
Restricted stock awards vesting and expense	128	2	876	-	-	-	878
Share-based compensation expense	-	-	1,971	-	-	-	1,971
Conversion of debt to common stock	717	7	7,431	-	-	-	7,438
Repurchase of common stock of subsidiary	-	-	(8)	-	-	8	-
Subsidiary dividend payable	-	-	-	-	-	(11,901)	(11,901)
Return of capital to noncontrolling interests	-	-	-	-	-	(955)	(955)
Balance at July 31, 2016	67,968	$ 680	$ 539,562	$ 171,004	$ (4,936)	$ 113,071	$ 819,381

NOTE 3 - INVENTORIES

Inventories are stated at the lower of cost, determined under the first-in, first-out (“FIFO”) method, or market. Presented below are the components of inventory at the balance sheet dates:

	July 30, 2017	October 30, 2016
Finished goods	$ 358	$ 142
Work in process	4,256	2,987
Raw materials	21,054	18,952
	$ 25,668	$ 22,081

NOTE 4 - PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consist of the following:

	July 30, 2017	October 30, 2016
Land	$ 9,905	$ 8,036
Buildings and improvements	123,613	121,873

Machinery and equipment	1,551,224	1,475,755
Leasehold improvements	20,077	19,224
Furniture, fixtures and office equipment	13,030	12,700
Construction in progress	23,222	23,961
	1,741,071	1,661,549
Less accumulated depreciation and amortization	1,239,351	1,155,115
	$501,720	$506,434

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Equipment under capital leases are included in above property, plant and equipment as follows:

	July 30, 2017	October 30, 2016
Machinery and equipment	$34,917	$ 34,917
Less accumulated amortization	12,971	10,352
	$21,946	$ 24,565

Depreciation and amortization expense for property, plant and equipment was $20.6 million and $60.5 million for the three and nine month periods ended July 30, 2017, respectively, and $18.4 million and $56.4 million for the three and nine month periods ended July 31, 2016, respectively.

During the three month period ended January 29, 2017, the Company acquired a business comprised of manufacturing assets and certain intellectual property, that enables the Company to expand its manufacturing capability, primarily in large area masks for IC, for approximately $5.7 million, including a $0.3 million holdback payable one year from the acquisition date. The transaction was accounted for in accordance with ASC 805, “Business Combinations”, with substantially all of the purchase price being allocated to long-lived assets that are being depreciated over five years.

During the three month period ended January 29, 2017, the Company entered into a noncash transaction with a customer which resulted in the acquisition of equipment with a fair value of approximately $0.1 million and $5.1 million in the three and nine month periods ended July 30, 2017, respectively.

NOTE 5 - JOINT VENTURE, TECHNOLOGY LICENSE AND OTHER AGREEMENTS WITH MICRON TECHNOLOGY, INC.

In May 2006 Photronics and Micron Technology, Inc. (“Micron”) entered into the MP Mask joint venture (“MP Mask”), which developed and produced photomasks for leading-edge and advanced next generation semiconductors. At the time of the formation of the joint venture, the Company also entered into an agreement to license photomask technology developed by Micron, as well as, certain supply agreements. In May 2016 the Company sold its investment in MP Mask to Micron for $93.1 million and recorded a gain on the sale of $0.1 million. On that same date a supply agreement commenced between the Company and Micron, which provided that we would be the majority outsourced supplier of Micron’s photomasks and related services. The supply agreement had a one year term and expired in May 2017. The Company forevermore has the right to use the technology it acquired under the prior technology license agreement.

This joint venture was a variable interest entity (“VIE”) (as that term is defined in ASC 810) because all costs of the joint venture were passed on to the Company and Micron through purchase agreements they had entered into with the joint venture, and it was dependent upon the Company and Micron for any additional cash requirements. On a quarterly basis the Company reassessed whether its interest in MP Mask gave it a controlling financial interest in this VIE. The purpose of this quarterly reassessment was to identify the primary beneficiary (which is defined in ASC 810 as the entity that consolidates a VIE) of the VIE. As a result of the reassessments in fiscal year 2016, the Company determined that Micron remained the primary beneficiary of the VIE, by virtue of its tie-breaking voting rights within MP Mask’s Board of Managers, thereby having given it the power to direct the activities of MP Mask that most significantly impacted its economic performance, including its decision making authority in the ordinary course of business and its purchasing the majority of products produced by the VIE.

The Company utilized MP Mask for both high-end IC photomask production and research and development purposes. MP Mask charged its variable interest holders based on their actual usage of its facility. MP Mask separately charged for any research and development activities it engaged in at the requests of its owners. The Company recorded cost of sales of $0.8 million and $5.7 million during the three and nine month periods ended July 31, 2016, respectively, and research and development expenses of $0.5 million during the nine month period ended July 31, 2016.

The Company recorded a loss of $0.1 million related to its investment in MP Mask during the nine month period ended July 31, 2016. Income or loss from the VIE is included in “Interest and other income (expense), net” in the condensed consolidated statements of income.

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NOTE 6 - LONG-TERM BORROWINGS

Long-term borrowings consist of the following:

	July 30, 2017	October 30, 2016
3.25% convertible senior notes due in April 2019	$57,308	$ 57,221
2.77% capital lease obligation payable through July 2018	6,009	10,067
	63,317	67,288
Less current portion	5,541	5,428
	$57,776	$ 61,860

The Company’s credit facility, which expires in December 2018, has a $50 million limit with an expansion capacity to $75 million, and is secured by substantially all of the Company’s assets located in the United States and common stock the Company owns in certain of its foreign subsidiaries. The credit facility stipulates that we may not pay cash dividends on Photronics, Inc. stock, and is subject to a minimum interest coverage ratio, total leverage ratio and minimum unrestricted cash balance financial covenants, all of which the Company was in compliance with at July 30, 2017. The Company had no outstanding borrowings against the credit facility at July 30, 2017, and $50 million was available for borrowing. The interest rate on the credit facility (2.49% at July 30, 2017) is based on the Company’s total leverage ratio at LIBOR plus a spread, as defined in the credit facility. In May 2017 the credit facility was amended primarily for our new joint venture and FPD manufacturing facility in China. See Note 15 for additional discussion of our new joint venture in China and our expansion of FPD manufacturing into China.

The Company adopted Accounting Standard Update (“ASU” or “Update”) 2015-03 “Simplifying the Presentation of Debt Issuance Costs” in the first quarter of its 2017 fiscal year. This ASU requires debt issuance costs related to a recognized debt liability to be presented in the balance sheet as a direct reduction from that debt liability, consistent with the presentation of a debt discount. We adopted this ASU on a retrospective basis, as a result of which our October 30, 2016, condensed consolidated balance sheet and its related long-term borrowings note have been adjusted, as necessary, to reflect this Update’s adoption. The effect on our October 30, 2016, condensed consolidated balance sheet is presented below.

Line Item	Previously Reported	Change Due to Adoption	Retrospectively Adjusted
Other Assets	$ 4,071	$ (279)	$ 3,792
Long-term Borrowings	$ 62,139	$ (279)	$ 61,860

In January 2015 the Company privately exchanged $57.5 million in aggregate principal amount of its 3.25% convertible senior notes with a maturity date of April 1, 2016, for new 3.25% convertible senior notes with an aggregate principal amount of $57.5 million with a maturity date of April 1, 2019. The conversion rate of the new notes is the same as that of the exchanged notes, which were issued in March 2011 with a conversion rate of approximately 96 shares of common stock per $1,000 note principal, equivalent to a conversion price of $10.37 per share of common stock, and is subject to adjustment upon the occurrence of certain events, which are described in the indenture dated January 22, 2015. Note holders may convert each $1,000 principal amount of notes at any time prior to the close of business on the second scheduled trading day immediately preceding April 1, 2019, and the Company is not required to redeem the notes prior to their maturity date. Interest on the notes accrues in arrears, and is paid semiannually through the notes' maturity date.

In August 2013 a $26.4 million principal amount, five year capital lease commenced to fund the purchase of a high-end lithography tool. Payments under the capital lease, which bears interest at 2.77%, are $0.5 million per month through July 2018. Under the terms of the lease agreement, the Company must maintain the equipment in good working order, and is subject to a cross default with cross acceleration provision related to certain nonfinancial covenants incorporated in its credit facility. As of July 30, 2017, the total amount payable through the end of the lease term was $6.1 million, of which $6.0 million represented principal and $0.1 million represented interest.

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NOTE 7 - SHARE-BASED COMPENSATION

In March 2016, shareholders approved a new equity incentive compensation plan (the “Plan”), under which incentive stock options, non-qualified stock options, stock grants, stock-based awards, restricted stock, restricted stock units, stock appreciation rights, performance units, performance stock, and other stock or cash awards may be granted. Shares to be issued under the Plan may be authorized and unissued shares, issued shares that have been reacquired by the Company (in the open-market or in private transactions), shares that are being held in the treasury, or a combination thereof. The maximum number of shares of common stock approved that may be issued under the Plan is four million shares. Awards may be granted to officers, employees, directors, consultants, advisors, and independent contractors of the Company or its subsidiaries. In the event of a change in control (as defined in the Plan), the vesting of awards may be accelerated. Total share-based compensation costs for each of the three month periods ended July 30, 2017 and July 31, 2016, was $1.0 million, and was $2.8 million for each of the nine month periods ended July 30, 2017 and July 31, 2016, respectively. The Company received cash from option exercises of $0.1 million and $2.2 million in the three and nine month periods ended July 30, 2017, respectively, and $0.1 million and $2.9 million in the three and nine month periods ended July 31, 2016, respectively. No share-based compensation cost was capitalized as part of an asset and no related income tax benefits were recorded during the periods presented.

Stock Options

Option awards generally vest in one to four years, and have a ten-year contractual term. All incentive and non-qualified stock option grants have an exercise price no less than the market value of the underlying common stock on the date of grant. The grant date fair values of options are based on closing prices of the Company’s common stock on the dates of grant using the Black-Scholes option pricing model. Expected volatility is based on the historical volatility of the Company’s stock. The Company uses historical option exercise behavior and employee termination data to estimate expected term, which represents the period of time that the options granted are expected to remain outstanding. The risk-free rate of return for the estimated term of the option is based on the U.S. Treasury yield curve in effect at the date of grant.

The weighted-average inputs and risk-free rate of return ranges used to calculate the grant date fair value of options issued during the three and nine month periods ended July 30, 2017 and July 31, 2016, are presented in the following table.

	Three Months Ended		Nine Months Ended	
	July 30, 2017	July 31, 2016	July 30, 2017	July 31, 2016
Volatility	-	38.9 %	32.2 %	48.8 %
Risk free rate of return	-	1.2 %	1.9-2.0 %	1.2-1.7 %
Dividend yield	-	0.0 %	0.0 %	0.0 %
Expected term	-	5.1 years	5.0 years	5.1 years

Information on outstanding and exercisable option awards as of July 30, 2017, is presented below.

Options	Shares	Weighted Average	Weighted Average	Aggregate Intrinsic

		Exercise Price	Remaining Contractual Life	Value
Outstanding at July 30, 2017	3,405,060	$ 7.99	6.0 years	$ 8,422
Exercisable at July 30, 2017	2,179,444	$ 6.57	4.8 years	$ 7,766

There were no share options granted during the three month period ended July 30, 2017 and there were 45,000 share options granted during the three month period ended July 31, 2016, with a weighted-average grant date fair value of $3.44 per share. There were 348,750 share options granted during the nine month period ended July 30, 2017, with a weighted-average grant date fair value of $3.59 per share and 647,250 share options granted during the nine month period ended July 31, 2016, with a weighted-average grant date fair value of $4.55 per share. As of July 30, 2017, the total unrecognized compensation cost related to unvested option awards was approximately $3.6 million. That cost is expected to be recognized over a weighted-average amortization period of 2.1 years.

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Restricted Stock

The fair value of restricted stock awards is based on the Company's closing stock price on the date of grant. The restrictions on these awards typically lapse over a service period of less-than-one to four years. There were 5,000 restricted stock awards granted during the three month period ended July 30, 2017, with a grant date fair value of $10.15, and 290,000 restricted stock awards granted during the nine month period ended July 30, 2017, with a weighted-average grant date fair value of $11.28 per share. No restricted stock awards were granted during the three month period ended July 31, 2016 and 115,225 restricted stock awards were granted during the nine month period ended July 31, 2016, with a weighted-average grant date fair value of $12.13 per share. As of July 30, 2017, the total compensation cost not yet recognized related to unvested restricted stock awards was approximately $2.9 million. That cost is expected to be recognized over a weighted-average amortization period of 2.7 years. As of July 30, 2017, there were 324,181 shares of restricted stock outstanding.

NOTE 8 - INCOME TAXES

The effective tax rate differs from the U.S. statutory rate of 35% in the three and nine month periods ended July 30, 2017 and July 31, 2016, primarily due to earnings being taxed at lower statutory rates in foreign jurisdictions, combined with the benefit of various investment credits in a foreign jurisdiction. Valuation allowances in jurisdictions with historic losses eliminate the tax benefit of these jurisdictions.

As of July 31, 2016, we determined that deferred tax assets of $2.5 million, whose realization was previously not considered to be more likely than not, are realizable and, therefore, reduced their related valuation allowance. During the nine month period ended July 31, 2016, we realized a $2.4 million benefit, which resulted from the reversal of a previously recorded undistributed earnings tax liability in a foreign jurisdiction. As a result of a shareholder action to approve a dividend in this jurisdiction, we determined that we are no longer liable for this tax. In addition, during the nine month period ended July 31, 2016, $0.7 million of withholding tax was incurred upon the completion of a foreign subsidiary's share redemption.

Unrecognized tax benefits related to uncertain tax positions were $3.2 million at July 30, 2017 and $4.6 million at October 30, 2016, all of which, if recognized, would favorably impact our effective tax rate. Accrued interest and penalties related to unrecognized tax benefits was $0.1 million at July 30, 2017 and October 30, 2016. In the three and nine month periods ended July 30, 2017, the net reduction of unrecognized tax benefits was $0.8 and $1.2 respectively. The net reductions reflect the resolution of tax issues with foreign tax authorities and the expiration of assessment periods. Although the timing of the expirations of statutes of limitations may be uncertain, as they can be dependent upon the settlement of tax audits, we believe that it is reasonably possible that up to $1.1 million of our uncertain tax positions (including accrued interest and penalties, and net of tax benefits) may be resolved over the next twelve months. The resolution of these uncertain tax positions may result from either or both the lapses of statutes of limitations and tax settlements.

PKLT Co. Ltd., our FPD manufacturing facility in Taiwan, has been accorded a tax holiday, which started in 2012 and expires in 2017. This tax holiday had no dollar or per share effect in the three or nine month periods ended July 30, 2017 and July 31, 2016. Photronics DNP Mask Corporation ("PDMC"), our IC manufacturing facility in Taiwan, was accorded a tax holiday that commenced in 2015 and expires in 2019. We realized $0.1 million in tax benefits from this tax holiday in each of the three month periods ended July 30, 2017 and July 31, 2016, and $0.2 million in the nine month periods ended July 30, 2017 and July 31, 2016. This tax holiday had no per share effect in the three and nine month periods ended July 30, 2017 and July 31, 2016.

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NOTE 9 - EARNINGS PER SHARE

The calculation of basic and diluted earnings per share is presented below.

	Three Months Ended		Nine Months Ended	
	July 30, 2017	July 31, 2016	July 30, 2017	July 31, 2016
Net income attributable to Photronics, Inc. shareholders	$ 4,001	$ 8,088	$ 7,745	$ 40,944
Effect of dilutive securities:				
Interest expense on convertible notes, net of tax	-	496	-	2,442
Earnings for diluted earnings per share	$ 4,001	$ 8,584	$ 7,745	$ 43,386
Weighted-average common shares computations:				
Weighted-average common shares used for basic earnings per share	68,525	67,953	68,376	67,377
Effect of dilutive securities:				
Share-based payment awards	855	822	935	1,006
Convertible notes	-	5,542	-	8,607
Potentially dilutive common shares	855	6,364	935	9,613
Weighted-average common shares used for diluted earnings per share	69,380	74,317	69,311	76,990
Basic earnings per share	$ 0.06	$ 0.12	$ 0.11	$ 0.61
Diluted earnings per share	$ 0.06	$ 0.12	$ 0.11	$ 0.56

The table below shows the outstanding weighted-average share-based payment awards that were excluded from the calculation of diluted earnings per share because their exercise price exceeded the average market value of the common shares for the period or, under application of the treasury stock method, they were otherwise determined to be anti-dilutive. The table also shows convertible notes that, if converted, would have been anti-dilutive.

	Three Months Ended		Nine Months Ended	
	July 30, 2017	July 31, 2016	July 30, 2017	July 31, 2016
Convertible notes	5,542	-	5,542	-
Share-based payment awards	1,087	2,016	1,054	1,615
Total potentially dilutive shares excluded	6,629	2,016	6,596	1,615

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NOTE 10 - CHANGES IN ACCUMULATED OTHER COMPREHENSIVE INCOME BY COMPONENT

The following tables set forth the changes in our accumulated other comprehensive income by component (net of tax of $0) for the three and nine month periods ended July 30, 2017 and July 31, 2016.

	Three Months Ended July 30, 2017			
	Foreign Currency Translation Adjustments	Amortization of Cash Flow Hedge	Other	Total
Balance at May 1, 2017	$ 5,258	$ (113)	$ (974)	$ 4,171
Other comprehensive income before reclassifications	4,438	-	4	4,442
Amounts reclassified from accumulated other comprehensive income	-	32	-	32
Net current period other comprehensive income	4,438	32	4	4,474
Less: other comprehensive (income) loss attributable to noncontrolling interests	206	-	(2)	204
Balance at July 30, 2017	$ 9,902	$ (81)	$ (972)	$ 8,849

	Three Months Ended July 31, 2016			
	Foreign Currency Translation Adjustments	Amortization of Cash Flow Hedge	Other	Total
Balance at May 2, 2016	$ (7,966)	$ (242)	$ (638)	$ (8,846)
Other comprehensive income (loss) before reclassifications	5,064	-	(13)	5,051
Amounts reclassified from accumulated other comprehensive income	-	32	-	32
Net current period other comprehensive income (loss)	5,064	32	(13)	5,083
Less: other comprehensive (income) loss attributable to noncontrolling interests	(1,180)	-	7	(1,173)
Balance at July 31, 2016	$ (4,082)	$ (210)	$ (644)	$ (4,936)

	Nine Months Ended July 30, 2017			
	Foreign Currency Translation Adjustments	Amortization of Cash Flow Hedge	Other	Total
Balance at October 31, 2016	$ (6,567)	$ (177)	$ (927)	$ (7,671)
Other comprehensive income (loss) before reclassifications	22,205	-	(89)	22,116
Amounts reclassified from accumulated other comprehensive income	-	96	-	96
Net current period other comprehensive income (loss)	22,205	96	(89)	22,212
Less: other comprehensive (income)loss attributable to noncontrolling interests	(5,736)	-	44	(5,692)

Balance at July 30, 2017	$9,902	$ (81)	$(972)	$8,849

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	Nine Months Ended July 31, 2016			
	Foreign Currency Translation Adjustments	Amortization of Cash Flow Hedge	Other	Total
Balance at November 2, 2015	$(9,634)	$ (306)	$(633)	$(10,573)
Other comprehensive income (loss) before reclassifications	7,810	-	(23)	7,787
Amounts reclassified from accumulated other comprehensive income	-	96	-	96
Net current period other comprehensive income (loss)	7,810	96	(23)	7,883
Less: other comprehensive (income) loss attributable to noncontrolling interests	(2,258)	-	12	(2,246)
Balance at July 31, 2016	$(4,082)	$ (210)	$(644)	$(4,936)

The amortization of the cash flow hedge is included in cost of sales in the condensed consolidated statements of income for all periods presented.

NOTE 11 - FAIR VALUE MEASUREMENTS

The accounting framework for determining fair value includes a hierarchy for ranking the quality and reliability of the information used to measure fair value, which enables the reader of the financial statements to assess the inputs used to develop those measurements. The fair value hierarchy consists of three tiers as follows: Level 1, defined as quoted market prices (unadjusted) in active markets for identical securities; Level 2, defined as inputs other than Level 1 that are observable, either directly or indirectly; and Level 3, defined as unobservable inputs that are not corroborated by market data.

We did not have any assets or liabilities measured at fair value, on a recurring or a nonrecurring basis, at July 30, 2017 or October 30, 2016. In connection with the acquisition discussed in Note 4, we recorded and measured the assets acquired at fair value.

Fair Value of Other Financial Instruments

The fair values of our cash and cash equivalents (Level 1 measurements), accounts receivable, accounts payable, and certain other current assets and current liabilities (Level 2 measurements) approximate their carrying value due to their short-term maturities. The fair value of our convertible senior notes is a Level 2 measurement, as they were determined using inputs that were either observable market data, or could be derived from or corroborated with observable market data. These inputs included our stock price and interest rates offered on debt issued by entities with credit ratings similar to ours.

The table below presents the fair and carrying values of our convertible senior notes at July 30, 2017 and October 30, 2016.

	July 30, 2017		October 30, 2016	
	Fair Value	Carrying Value	Fair Value	Carrying Value
3.25% convertible senior notes due 2019	$68,644	$ 57,308	$68,230	$ 57,221

NOTE 12 - COMMITMENTS AND CONTINGENCIES

As of July 30, 2017, we had commitments outstanding for capital equipment expenditures of approximately $60 million.

We are subject to various claims that arise in the ordinary course of business. We believe such claims, individually or in the aggregate, will not have a material effect on our condensed consolidated financial statements.

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NOTE 13 - SUBSIDIARY DIVIDEND

In April 2017 PDMC, our majority owned IC subsidiary in Taiwan, declared a dividend of $16.6 million which 49.99%, or $8.3 million, was paid to the third party that owns a noncontrolling interest in PDMC in the third quarter fiscal year 2017.

NOTE 14 - GAIN ON SALE OF INVESTMENT

We had a minority interest in a foreign entity. In the first quarter of fiscal year 2016, we sold this investment and realized a gain of $8.8 million.

NOTE 15 – EXPANSION INTO CHINA

Expansion of IC Manufacturing into China

In May 2017 we announced that we have entered into an agreement with Dai Nippon Printing Co., Ltd. (DNP) to form a joint venture to serve semiconductor manufacturers in China. Under the agreement, our wholly owned Singapore subsidiary will own 50.01% of the joint venture, which will be named Photronics DNP Mask Corporation Xiamen (PDMCX), and a subsidiary of DNP will own the remaining 49.99%. The financial results of the joint venture will be included in Photronics' consolidated financial statements.

This IC investment in China of $160 million, which we initially announced in August 2016, will be based in Xiamen, China. Construction of the facility is currently underway, and production is anticipated to commence in early 2019. Photronics and DNP will contribute cash, in proportion to their ownership percentages, over five years to fund the equity portion of the investment, which will also receive certain incentives and support from the local industrial development zone. The joint venture, itself, may also fund a portion of the investment with local borrowings. The formation of the joint venture, which is subject to regulatory approvals and customary closing conditions, is expected to be completed by the end of our 2017 fiscal year.

Expansion of FPD Manufacturing into China

In August 2017 we announced that Photronics, UK, Ltd., a wholly owned subsidiary of ours, signed an investment agreement with Hefei State Hi-tech Industry Development Zone to establish a manufacturing facility in Hefei, China. Under the terms of the agreement, through our subsidiary, we will invest a minimum of $160 million, a portion of which may be funded with local borrowings, to build and operate a research and development and manufacturing facility for high-end and mainstream FPD photomasks. Hefei State Hi-tech Industry Development Zone will provide certain investment incentives and support for this facility, which will have initial capability to produce up to G10.5 large area masks and AMOLED products. Construction is planned to begin in late 2017 and production is anticipated to commence in early 2019.

NOTE 16 - RECENT ACCOUNTING PRONOUNCEMENTS

In January 2017 the Financial Accounting Standards Board ("FASB") issued ASU 2017-04 "Simplifying the Test for Goodwill Impairment", which eliminates Step 2 of the goodwill impairment test and requires entities to perform their annual or interim goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount, and to recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value. In addition, this ASU eliminates the requirements for any reporting unit with a zero or negative carrying amount to perform a qualitative assessment and, in the event the reporting unit fails the qualitative test, to perform Step 2 of the goodwill impairment test. ASU 2017-04 is effective for the Company in its first quarter of its fiscal year 2021, and should be applied on a prospective basis. The impact of this ASU will depend upon the nature of future acquisitions that the Company may make.

In January 2017 the FASB issued ASU 2017-01 “Clarifying the Definition of a Business”, with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. ASU 2017-01 is effective for the Company in its first quarter of fiscal year 2019, and should be applied on a prospective basis. The impact of this ASU will depend upon the nature of future acquisitions or dispositions that the Company may make.

In November 2016 the FASB issued ASU 2016-18 “Restricted Cash”, which requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. ASU 2016-18 is effective for the Company in its first quarter of fiscal year 2019 and should be applied on a retrospective transition basis. Early adoption is permitted, including adoption in an interim period. The Company is currently evaluating the effect this ASU will have on its consolidated financial statements.

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In October 2016 the FASB issued ASU 2016-16 “Intra-Entity Transfers of Assets Other Than Inventory”, which eliminates the exception of recognizing, at the time of transfer, current and deferred income taxes for intra-entity asset transfers other than inventory. ASU 2016-16 is effective for the Company in its first quarter of fiscal year 2019 and should be applied on a modified retrospective transition basis. Early adoption is permitted as of the beginning of an annual reporting period for which interim or annual financial statements have not been issued or made available for issuance. The Company is currently evaluating the effect this ASU will have on its consolidated financial statements.

In August 2016 the FASB issued ASU 2016-15 “Classification of Certain Cash Receipts and Cash Payments”, which addresses eight specific cash flow issues with the objective of reducing diversity in practice. ASU 2016-15 is effective for the Company in its first quarter of fiscal year 2019 and should be applied using a retrospective transition approach. The Company is currently evaluating the effect this ASU will have on its consolidated financial statements.

In June 2016 the FASB issued ASU 2016-13 “Measurement of Credit Losses”, the main objective of which is to provide more useful information about expected credit losses on financial instruments and other commitments of an entity to extend credit. In support of this objective, the ASU replaces the incurred loss impairment methodology found in current GAAP with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. This ASU requires a cumulative-effect adjustment as of the beginning of the first reporting period in which the guidance is adopted. ASU 2016-13 is effective for the Company in its first quarter of fiscal year 2021, with early adoption permitted beginning in the first quarter of fiscal year 2019. The Company is currently evaluating the effect this ASU will have on its consolidated financial statements.

In March 2016 the FASB issued ASU 2016-09 “Improvements to Employee Share-Based Payment Accounting”, which simplifies the accounting for share-based payment transactions including their income tax consequences, classification as either equity or liability awards, classification on the statement of cash flows, and other areas. The method of adoption varies with the different aspects of the Update. ASU 2016-09 is effective for the Company in its first quarter of fiscal year 2018, with early application permitted. The Company is currently evaluating the effect this ASU will have on its consolidated financial statements.

In February 2016 the FASB issued ASU 2016-02 “Leases (Topic 842)”, which requires lessees to recognize right-of-use assets and corresponding liabilities for all leases with an initial term in excess of twelve months. ASU 2016-02 is to be adopted using a modified retrospective approach, which includes a number of practical expedients, that requires leases to be measured and recognized under the new guidance at the beginning of the earliest period presented. The ASU is effective for the Company in its first quarter of fiscal year 2020, with early application permitted, and the Company is currently evaluating the effect this ASU will have on its consolidated financial statements.

In January 2016 the FASB issued ASU 2016-01 “Recognition and Measurement of Financial Assets and Financial Liabilities”, which provides targeted improvements to the recognition, measurement, presentation and disclosure of financial assets and financial liabilities. Specific accounting areas addressed include, equity investments, financial liabilities reported under the fair value option and valuation allowance assessment resulting from unrealized losses on available-for-sale securities. The ASU also changes certain presentation and disclosure requirements for financial instruments. ASU 2016-01 is to be applied by means of a cumulative effect adjustment to the balance sheet as of the beginning of the fiscal year of adoption. This ASU is effective for the Company in its first quarter of fiscal year 2019. Early adoption, with certain exceptions, is not permitted. The Company is currently evaluating the effect this ASU will have on its consolidated financial statements.

In April 2015 the FASB issued ASU 2015-03 “Simplifying the Presentation of Debt Issuance Costs”, which requires debt issuance costs related to a recognized debt liability to be presented in the balance sheet as a direct deduction from that debt liability, consistent with the presentation of a debt discount. The Company adopted this ASU, and applied it on a retrospective basis, in the first quarter of its 2017 fiscal year. See Note 6 for the effects of its adoption on the

Company's October 30, 2016, condensed consolidated balance sheet.

In May 2014 the FASB issued ASU 2014-09 "Revenue from Contracts with Customers", which will supersede nearly all existing revenue recognition guidance under accounting principles generally accepted in the United States. The core principle of this ASU is that revenue should be recognized for the amount of consideration expected to be received for promised goods or services transferred to customers. This ASU also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments, and assets recognized for costs incurred to obtain or fulfill a contract. In August 2015 the FASB issued ASU 2015-14 which defers the effective date of ASU 2014-09 by one year and allows entities to early adopt, but no earlier than the original effective date. ASU 2014-09 will now be effective for the Company in its first quarter of fiscal 2019. ASU 2014-09 allows for either full retrospective or modified retrospective adoption. The Company is evaluating the transition method that will be elected and the potential effects of the adoption of ASU 2014-09 on its consolidated financial statements.

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

Overview

This management's discussion and analysis ("MD&A") of our financial condition and results of operations should be read in conjunction with our condensed consolidated financial statements and related notes. Various segments of this MD&A contain forward-looking statements, all of which are presented based on current expectations, may be adversely affected by uncertainties and risk factors (presented throughout this filing and in our Annual Report on Form 10-K for the fiscal 2016 year) that may cause actual results to materially differ from these expectations.

We sell substantially all of our photomasks to semiconductor designers and manufacturers, and manufacturers of FPDs. Photomask technology is also being applied to the fabrication of other higher performance electronic products such as photonics, micro-electronic mechanical systems and certain nanotechnology applications. Thus, our selling cycle is tightly interwoven with the development and release of new semiconductor designs and flat panel applications, particularly as it relates to the semiconductor industry's migration to more advanced design methodologies and fabrication processes. We believe that the demand for photomasks primarily depends on design activity, rather than sales volumes from products manufactured using photomask technologies. Consequently, an increase in semiconductor or FPD sales does not necessarily result in a corresponding increase in photomask sales. However, the reduced use of customized ICs, reductions in design complexity, other changes in the technology or methods of manufacturing or designing semiconductors, or a slowdown in the introduction of new semiconductor or FPD designs could reduce demand for photomasks – even if demand for semiconductors and FPDs increases. Advances in semiconductor, FPD and photomask design and semiconductor and FPD production methods could also reduce the demand for photomasks. Historically, the semiconductor industry has been volatile, with sharp periodic downturns and slowdowns. These downturns have been characterized by, among other things, diminished product demand, excess production capacity and accelerated erosion of selling prices.

Significant customer concentration is inherent in both our high-end IC and FPD businesses, as our largest FPD customer sometimes represents close to one-half of our FPD sales, and our largest IC customer can account for one-fourth of our IC sales. While this is beneficial to us when order levels from these large customers are high, it can present challenges when these customers' short-term photomask demands slip, which can happen for a number of reasons. As is the case with other suppliers to the high-end semiconductor and display sectors, the concentration of our customers has increased through industry consolidation and attrition. The result of this customer concentration trend is that our sales are often subject to short-term volatility – particularly for high-end products. We believe our investments in China, which are discussed in Note 15 of our condensed consolidated financial statements, will serve to somewhat alleviate this volatility.

For merchant photomask companies, such as Photronics, there is an additional challenge, as more of our customers are employing captive photomask producing operations. This necessitates that we focus on areas that complement these captives in order for us to preserve our market share. Specifically, we endeavor to provide advanced technology photomasks and superior customer service, and thereby offer our customers a compelling alternative to expanding their captive photomask operations.

The global semiconductor industry, including mobile displays, is driven by end markets which have been closely tied to consumer driven applications of high performance semiconductor devices including, but not limited to, mobile communications and computing solutions. We are typically required to fulfill customer orders within a short period of time, sometimes within 24 hours. This results in us having a minimal level of backlog orders of, typically, one to two weeks. We cannot predict the timing of the industry's transition to volume production of next-generation technology nodes or the timing of up and down cycles with precise accuracy, but believe that such transitions and cycles will continue into the future, beneficially and adversely affecting our business, financial condition and operating results as they occur. We believe our ability to remain successful in these environments is dependent upon achieving our goals of being a service and technology leader and efficient solutions supplier, which we believe should enable us to continually reinvest in our global infrastructure.

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Material Changes in Results of Operations
Three and Nine Months ended July 30, 2017 and July 31, 2016

All of the following tabular comparisons, unless otherwise indicated, are for the three months ended July 30, 2017 (Q3-17) and July 31, 2016 (Q3-16), and for the nine months ended July 30, 2017 (YTD-17) and July 31, 2016 (YTD-16), in millions of dollars.

The following table represents selected operating information expressed as a percentage of net sales.

	Three Months Ended		Nine Months Ended	
	Q3-17	Q3-16	YTD-17	YTD-16
Net sales	100.0 %	100.0 %	100.0 %	100.0 %
Cost of sales	(80.5)	(74.5)	(80.3)	(73.9)
Gross margin	19.5	25.5	19.7	26.1
Selling, general and administrative expenses	(10.4)	(9.1)	(10.1)	(9.1)
Research and development expenses	(4.4)	(4.4)	(3.7)	(4.5)
Operating income	4.7	12.0	5.9	12.5
Other income (expense), net	(0.1)	1.0	(1.8)	(0.2)
Gain on sale of investment	-	0.2	-	2.4
Income before income tax provision	4.6	13.2	4.1	14.7
Income tax provision	(0.3)	(3.9)	(0.8)	(1.6)
Net income	4.3	9.3	3.3	13.1
Net (income) loss attributable to noncontrolling interests	(0.7)	(2.7)	(1.0)	(2.2)
Net income attributable to Photronics, Inc. shareholders	3.6 %	6.6 %	2.3 %	10.9 %

Net Sales

	Three Months Ended			Nine Months Ended		
	Q3-17	Q3-16	Percent Change	YTD-17	YTD-16	Percent Change
IC	$ 85.1	$ 91.7	(7.1)%	$ 254.1	$ 282.3	(10.0)%
FPD	26.5	31.5	(16.2)%	75.6	93.8	(19.5)%
Total net sales	$ 111.6	$ 123.2	(9.4)%	$ 329.7	$ 376.1	(12.3)%

Net sales for Q3-17 decreased 9.4% to $111.6 million as compared with $123.2 million for Q3-16. The decrease was primarily the result of lower high-end sales of both IC ($7.7 million) and FPD ($5.1 million) products. Revenues from mainstream IC products increased by $1.2 million, or 2.0%, while revenues were unchanged for mainstream FPD products. High-end photomask applications include mask sets for 45 nanometer and below for IC products, and G8 and above and active matrix organic light-emitting diode (AMOLED) display screen technologies for FPD products. Net sales for YTD-17 decreased by 12.3% to $329.7 million as a result of decreased high-end IC and FPD sales of $34.7 million and $20.0 million, respectively. The overall decline in sales of high-end products of 30.9% was partially offset by an increase in sales of mainstream products of $8.3 million, or 4.1%, of which approximately $6.6 million was attributable to IC photomasks.

Sales of high-end memory IC photomasks have increased sequentially, in each of the last three quarters, and we expect current sales levels to sustain, while high-end logic sales have been soft, as a large IC customer has experienced market share loss for some advanced nodes, and are not forecasted to recover until 2018. For the balance of 2017 and into 2018, we expect our markets to improve with the exception of high-end logic, where recovery is still a few quarters away. Our high-end memory business continues to grow and we anticipate continued volume growth in FPD, as we install more capacity. However, it may be another quarter or two before product mix turns more favorably towards high-end sales. We remain optimistic regarding our long-term growth expectation of all of our high-end markets, but see a slower recovery in high-end logic and high-end FPD, as their recoveries will be significantly dictated by the demands of our largest customers.

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The following table presents changes in net sales from Q3-16 to Q3-17 and YTD-16 to YTD-17 by geographic area:

	Q3-16 to Q3-17			YTD-16 to YTD-17		
	Net Sales in Q3-17	Increase (Decrease)	Percent Change	Net Sales in YTD-17	Increase (Decrease)	Percent Change
Taiwan	$44.0	$ (7.9)	(15.3)%	$132.7	$ (14.7)	(10.0)%
Korea	32.0	(5.6)	(15.0)%	93.2	(16.0)	(14.7)%
United States	26.0	1.3	5.3 %	75.6	(17.5)	(18.8)%
Europe	8.9	0.5	6.2 %	26.4	1.4	5.8 %
Other	0.7	0.1	24.5 %	1.8	0.4	27.6 %
	$111.6	$ (11.6)	(9.4)%	$329.7	$ (46.4)	(12.3)%

Gross Margin

	Three Months Ended			Nine Months Ended		
	Q3-17	Q3-16	Percent Change	YTD-17	YTD-16	Percent Change
Gross profit	$21.7	$31.5	(30.9)%	$64.9	$ 98.2	(33.9)%
Percentage of net sales	19.5%	25.5 %		19.7%	26.1 %	

Gross margin percentage decreased to 19.5% in Q3-17 from 25.5% in Q3-16, and to 19.7% in YTD-17 from 26.1% YTD-16. These decreases were primarily driven by lower high-end product sales and increased depreciation. We operate in a high fixed cost environment and, to the extent that our revenues and utilization increase or decrease, gross margin will generally be positively or negatively impacted.

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Selling, General and Administrative Expenses

	Three Months Ended			Nine Months Ended		
	Q3-17	Q3-16	Percent Change	YTD-17	YTD-16	Percent Change
Selling, general and administrative expenses	$11.6	$11.2	4.3 %	$33.4	$ 34.4	(2.9)%
Percentage of net sales	10.4%	9.1 %		10.1%	9.1 %	

Selling, general and administrative expenses increased 4.3% in Q3-17 from Q3-16, primarily as a result of increased professional service fees. Year to date, selling, general and administrative expenses decreased 2.9% compared to the prior period, primarily due to the release of doubtful accounts reserves.

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Research and Development

	Three Months Ended			Nine Months Ended		
	Q3-17	Q3-16	Percent Change	YTD-17	YTD-16	Percent Change
Research and development	$4.8	$ 5.5	(12.0)%	$12.0	$ 16.6	(27.6)%
Percentage of net sales	4.4%	4.4 %		3.7 %	4.5 %	

Research and development expenses decreased by $0.7 million to $4.8 million in Q3-17, as compared with $5.5 million in Q3-16 and by $4.6 million to $12.0 million in YTD-17 from $16.6 million in YTD-16. These decreases are primarily reflective of reductions in activity levels of our global efforts associated with developing high-end process technologies for advanced sub-wavelength reticles.

Other Income (Expense), net

	Three Months Ended		Nine Months Ended	
	Q3-17	Q3-16	YTD-17	YTD-16
Interest and other income (expense), net	$ 0.4	$ 1.8	$ (4.2)	$ 1.9
Interest expense	(0.5)	(0.6)	(1.6)	(2.7)
Gain on sale of investment	-	0.2	-	8.9
Other income (expense), net	$ (0.1)	$ 1.4	$ (5.8)	$ 8.1

Interest and other income (expense), net decreased in Q3-17 from $1.8 million in Q3-16 to $0.4 million, primarily as a result of the recognition of a $1.2 million favorable settlement of a liability in Q3-16 that was related to a prior year's acquisition. Interest and other income (expense), net decreased in YTD-17 to $(4.2) million, as compared with $1.9 million in YTD-16, as a result of less unfavorable foreign currency exchange losses and the aforementioned settlement of a liability related to a prior year's acquisition.

In Q3-17, interest expense decreased by $0.1 million from Q3-16 as a result of a reduced level of outstanding debt. Interest expense decreased in YTD-17 to $(1.6) million, as compared with $(2.7) million in YTD-16, primarily as a result of the impact of the maturing of our 3.25% convertible debt on April 1, 2016.

In January 2016 the Company sold a minority interest investment in a foreign entity and realized a gain of $8.8 million. In May 2016 the Company sold its 49.99% interest in the MP Mask Joint Venture and realized a gain of $0.2 million.

Income Tax Provision

	Three Months Ended		Nine Months Ended	
	Q3-17	Q3-16	YTD-17	YTD-16
Income tax provision	$ 0.3	$ 4.8	$ 2.8	$ 6.1
Effective income tax rate	6.5 %	29.4 %	20.7 %	11.1 %

Our effective income tax rate is sensitive to the jurisdictional mix of earnings, due in part to the non-recognition of tax benefits on losses in jurisdictions with valuation allowances. As of each reporting date, we consider new evidence, both positive and negative, that could impact our view with regards to the future realizations of deferred tax assets and the appropriateness of their related valuation allowances.

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The effective income tax rate decrease in Q3-17, as compared with Q3-16, was primarily attributable to a lower percentage of income before income taxes being earned in jurisdictions where we do not maintain valuation allowances and, therefore, recognize tax expense. In addition, the recognition of previously unrecognized tax benefits, as the result of audit settlements and assessment period statute expirations, contributed to the decrease in the effective income tax rate.

The effective income tax rate increase in YTD-17, as compared with YTD-16, was primarily as a result of the following YTD-16 factors: the recognition of $2.5 million of previously unrecognized deferred tax assets which resulted from the improved performance of our FPD operations; the reversal of previously recognized tax expense of $2.4 million that was eliminated by a distribution of the earnings of a foreign subsidiary to its foreign parent; a higher percentage of income before income taxes, including an $8.8 million gain on the sale of an investment in the first quarter of fiscal year 2016, generated in jurisdictions where we previously incurred losses that, due to valuation allowances, did not result in us recognizing expense. The YTD-16 benefits were partially matched by the YTD-17 benefit realized from the recognition of previously unrecognized tax benefits, which were the result of audit settlements and assessment period statute expirations.

Net Income Attributable to Noncontrolling Interests

Net income attributable to noncontrolling interests was $0.8 million in Q3-17, as compared with income of $3.4 million in Q3-16, and was $3.0 million in YTD-17, as compared with $8.2 million in YTD-16. These changes reflect changes in the financial performance of our majority-owned IC manufacturing subsidiary in Taiwan.

Liquidity and Capital Resources

Our working capital increased to $389.3 million at July 30, 2017, as compared with $360.3 million at October 30, 2016, primarily as a result of cash generated from operating activities. Cash and cash equivalents increased to $340.6 million at July 30, 2017, as compared with $314.1 million at October 30, 2016, also primarily as a result of cash arising from operating activities. Net cash provided by operating activities was $73.8 million for the nine month period ended July 30, 2017, as compared with $91.4 million for the nine month period ended July 31, 2016, with the decrease being primarily due to the reduced net income in the current period. Net cash used in investing activities for the nine month period ended July 30, 2017, was $44.5 million, which was comprised primarily of capital expenditure payments and, to a lesser extent, a payment to acquire a business. Net cash used in financing activities of $9.9 million for the nine month period ended July 30, 2017, was comprised of repayments of long-term borrowings of $4.1 million and the payment of a dividend to the noncontrolling interest of a subsidiary of $8.3 million, which were partially offset by proceeds of $2.5 million received from exercises of employee stock options. We may use our available cash for operations, capital expenditures, debt repayments, strategic opportunities, stock repurchases or other corporate uses, any of which may be material.

As of July 30, 2017 and October 30, 2016, our total cash and cash equivalents included $179.2 million and $141.4 million, respectively, held at foreign subsidiaries. The majority of earnings of our foreign subsidiaries are considered to be indefinitely reinvested. The repatriation of these funds to the U.S. may subject these funds to U.S. federal income taxes and local country withholding tax in certain jurisdictions. Our foreign subsidiaries continue to grow through the reinvestment of earnings in additional manufacturing capacity and capability, particularly in the high-end IC and FPD areas.

In April 2017 PDMC, our majority owned IC manufacturing subsidiary in Taiwan, declared a dividend of approximately $16.6 million, approximately $8.3 million of which was paid to the third party that owns a noncontrolling interest in PDMC in the third quarter of fiscal year 2017.

In May 2016 we received cash of $93.1 million in connection with the sale of our investment in MP Mask to Micron.

In April 2016 PDMC, our majority owned IC manufacturing subsidiary in Taiwan, declared a dividend of approximately $23.8 million, approximately $11.9 million of which was paid to the third party that owns a noncontrolling interest in PDMC in the third quarter of fiscal year 2016.

In April 2016 $57.5 million of our senior convertible notes matured. We repaid $50.1 million to noteholders and issued approximately 0.7 million shares to noteholders that elected to convert their notes to common stock. The notes were exchanged at the rate of approximately 96 shares per $1,000 note principle, equivalent to a conversion rate of $10.37 per share.

Our credit facility, which expires in December 2018, has a $50 million limit with an expansion capacity to $75 million, and is secured by substantially all of our assets located in the United States and common stock we own in certain of our foreign subsidiaries. The credit facility is subject to a minimum interest coverage ratio, total leverage ratio and minimum unrestricted cash balance financial covenants, all of which we were in compliance with at July 30, 2017. We had no outstanding borrowings against the credit facility at July 30, 2017, and $50 million was available for borrowing. The interest rate on the credit facility (2.49% at July 30, 2017) is based on our total leverage ratio at LIBOR plus a spread, as defined in the credit facility. In May 2017 the credit facility was amended primarily for our new joint venture and FPD manufacturing facility in China. See Note 15 of the condensed consolidated financial statements for further discussion of our new joint venture in China and our expansion of FPD manufacturing into China.

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As of July 30, 2017, we had capital equipment commitments outstanding of approximately $60 million. We believe that our currently available resources, together with our capacity for growth, and access to equity and other financing sources, will be sufficient to satisfy our currently planned capital expenditures, as well as our anticipated working capital requirements for the next twelve months. However, we cannot assure that additional sources of financing would be available to us on commercially favorable terms should our capital requirements exceed cash available from operations, existing cash, and cash available under our credit facility.

Our liquidity is highly dependent on our sales volume, cash conversion cycle, and the timing of our capital expenditures (which can vary significantly from period to period), as we operate in a high fixed cost environment. Depending on conditions in the semiconductor and FPD markets, our cash flows from operations and current holdings of cash may not be adequate to meet our current and long-term needs for capital expenditures, operations and debt repayments. However, we believe that our cash on hand, cash generated from our operations and cash committed under our credit facility will allow us to fund our operations through at least the next twelve months. Historically, in certain years, we have used external financing to fund these needs. Due to conditions in the credit markets, some financing instruments used by us in the past may not be currently available to us. We continue to evaluate further cost reduction initiatives. However, we cannot assure that additional sources of financing would be available to us on commercially favorable terms, should our cash requirements exceed cash available from operations, existing cash, and cash available under our credit facility.

Off-Balance Sheet Arrangements

In April 2014 we acquired a 50.01% controlling interest of PDMC, our IC manufacturing facility located in Taiwan. Under the PDMC joint venture operating agreement the shareholders of PDMC may be requested to make additional contributions to PDMC. In the event that PDMC requests additional capital from its shareholders, the Company may, in order to maintain a 50.01% ownership interest, be required to make such contributions to PDMC. The PDMC operating agreement limits the amount of contributions that may be requested during both PDMC's first four years and during any individual year within those first four years. As of July 30, 2017, we had not been requested to make any additional capital contributions to PDMC.

We lease certain office facilities and equipment under operating leases that may require us to pay taxes, insurance and maintenance expenses related to the properties. Certain of these leases contain renewal or purchase options exercisable at the end of the lease terms.

Business Outlook

A majority of our revenue growth is expected to continue to come from the Asian region, predominantly in China. In response to this expectation, we agreed to enter into a joint venture that will complete the construction of an IC research and development and manufacturing facility in Xiamen, China, in late 2018. Production is anticipated to begin at this facility in early 2019. In addition, in August 2017, we announced our plan to construct an FPD manufacturing facility in Hefei, China, in which production is anticipated to begin in early 2019. Please refer to Note 15 of our condensed consolidated financial statements for additional information on these undertakings.

We continue to assess our global manufacturing strategy and monitor our sales volume and related cash flows from operations. This ongoing assessment could result in future facility closures, asset redeployments, impairments of intangible or long-lived assets, workforce reductions, or increasing our manufacturing capacity, all of which would be based on market conditions and customer requirements.

Our future results of operations and the other forward-looking statements contained in this filing involve a number of risks and uncertainties. While various risks and uncertainties were discussed in Part1, Item 1A in our Annual Report on Form 10-K for the year ended October 30, 2016, a number of other unforeseen factors could cause actual results to differ materially from our expectations.

Effect of Recent Accounting Pronouncements

See “Item 1. Condensed Consolidated Financial Statements– Notes to Condensed Consolidated Financial Statements – Note 16 – Recent Accounting Pronouncements” for recent accounting pronouncements that may affect our financial reporting.

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Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Foreign Currency Exchange Rate Risk

We conduct business in several major international currencies through our worldwide operations and our financial performance may be affected by fluctuations in the exchange rates of these currencies. Changes in exchange rates can positively or negatively affect our sales, operating margins, assets, liabilities, and equity. The functional currencies of our Asian subsidiaries are the South Korean won, the New Taiwan dollar, and the Singapore dollar. The functional currencies of our European subsidiaries are the British pound and the euro. In addition, we have transactions and balances in Japanese yen and, as a result of our announced investments in China, we will have transactions in the Chinese renminbi.

We attempt to minimize our risk of foreign currency transaction losses by producing our products in the same country in which the products are sold (thereby generating revenues and incurring expenses in the same currency), and by managing our working capital. However, in some instances, we sell products in a currency other than the functional currency of the country where it was produced, or purchase products in a currency that differs from the functional currency of the manufacturing facility. There can be no assurance that this approach will continue to be successful, especially in the event of a significant adverse movement in the value of any foreign currency against the U.S. dollar, the New Taiwan dollar or the South Korean won.

Our primary net foreign currency exposures as of July 30, 2017, included the South Korean won, the Japanese yen, the New Taiwan dollar, the Singapore dollar, the British pound and the euro. As of July 30, 2017, a 10% adverse movement in the value of these currencies against the functional currencies of our foreign subsidiaries would have resulted in a net unrealized pre-tax loss of $10.9 million. We do not believe that a 10% change in the exchange rates of other non-US dollar currencies would have a material effect on our consolidated financial position, results of operations, or cash flows in the three or nine month periods ended July 30, 2017.

Interest Rate Risk

At July 30, 2017, we did not have any variable rate borrowings. A 10% change in interest rates would not have had a material effect on our consolidated financial position, results of operations, or cash flows in the three or nine month periods ended July 30, 2017.

Item 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We have established and currently maintain disclosure controls and procedures, as such term is defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), designed to provide reasonable assurance that information required to be disclosed in our reports filed under the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission’s rules and forms, and that such information is accumulated and communicated to management, including our chief executive officer (who is the Company’s principal executive officer and principal financial officer), to allow for timely decisions regarding required disclosure. In designing and evaluating disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Our management, under the supervision and with the participation of our chief executive officer, evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this report. Based upon that evaluation our chief executive officer concluded that our disclosure controls and procedures were effective at a reasonable assurance level as of the end of the period covered by this report.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting during our third quarter of fiscal year 2017 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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PART II. OTHER INFORMATION

Item 1A. RISK FACTORS

There have been no material changes to risks relating to our business as disclosed in Part 1, Item 1A of our Form 10-K for the year ended October 30, 2016.

Item 6. EXHIBITS

(a) Exhibits

Exhibit Number	Description
31.1	Certification of Chief Executive Officer, Principle Executive Officer, and Principle Financial Officer pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer, Principle Executive Officer, and Principle Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

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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.

Photronics, Inc.
(Registrant)

By: /s/ PETER S. KIRLIN
Peter S. Kirlin
Chief Executive Officer
(Duly Authorized Officer and
Principal Financial Officer)

Date: September 7, 2017