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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, DC 20549

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**FORM 10-Q**

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(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, 2014

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 0-23621

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**MKS INSTRUMENTS, INC.**

(Exact name of registrant as specified in its charter)

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Massachusetts  
(State or other jurisdiction of  
incorporation or organization)

04-2277512  
(I.R.S. Employer  
Identification No.)

2 Tech Drive, Suite 201, Andover, Massachusetts  
(Address of principal executive offices)

01810  
(Zip Code)

Registrant's telephone number, including area code (978) 645-5500

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

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

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

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

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

As of October 29, 2014, the registrant had 53,069,061 shares of common stock outstanding.

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## PART I. FINANCIAL INFORMATION

## ITEM 1. FINANCIAL STATEMENTS.

MKS INSTRUMENTS, INC.  
CONSOLIDATED BALANCE SHEETS  
(in thousands, except share and per share data)  
(Unaudited)

	September 30, 2014	December 31, 2013
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 295,456	\$ 288,902
Short-term investments	140,042	300,715
Trade accounts receivable, net	106,290	116,744
Inventories	153,930	142,727
Deferred income taxes	12,422	13,428
Other current assets	28,735	16,715
Total current assets	736,875	879,231
Property, plant and equipment, net	73,642	77,536
Long-term investments	134,749	60,405
Goodwill	193,125	150,909
Intangible assets, net	48,812	13,090
Other assets	30,165	31,847
Total assets	<u>\$ 1,217,368</u>	<u>\$ 1,213,018</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 30,809	\$ 40,074
Accrued compensation	27,277	43,662
Income taxes payable	3,821	10,444
Other current liabilities	42,961	34,242
Total current liabilities	104,868	128,422
Other liabilities	53,940	63,073
Commitments and contingencies (Note 18)		
Stockholders' equity:		
Preferred Stock, \$0.01 par value per share, 2,000,000 shares authorized; none issued and outstanding	—	—
Common Stock, no par value, 200,000,000 shares authorized; 53,065,338 and 53,363,450 shares issued and outstanding at September 30, 2014 and December 31, 2013, respectively	113	113
Additional paid-in capital	730,110	730,571
Retained earnings	323,639	278,966
Accumulated other comprehensive income	4,698	11,873
Total stockholders' equity	1,058,560	1,021,523
Total liabilities and stockholders' equity	<u>\$ 1,217,368</u>	<u>\$ 1,213,018</u>

The accompanying notes are an integral part of the consolidated financial statements.

MKS INSTRUMENTS, INC.  
CONSOLIDATED STATEMENTS OF OPERATIONS  
AND COMPREHENSIVE INCOME  
(in thousands, except per share data)  
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2014	2013	2014	2013
<b>Net revenues:</b>				
Products	\$ 158,520	\$ 139,846	\$ 497,172	\$ 388,998
Services	28,278	26,607	80,676	76,028
Total net revenues	186,798	166,453	577,848	465,026
<b>Cost of revenues:</b>				
Cost of products	89,181	87,809	276,905	237,590
Cost of services	18,292	16,410	52,611	48,542
Total cost of revenues (exclusive of amortization shown separately below)	107,473	104,219	329,516	286,132
Gross profit	79,325	62,234	248,332	178,894
Research and development	15,827	15,257	46,866	47,318
Selling, general and administrative	32,365	33,158	99,195	102,140
Insurance reimbursement	—	—	—	(1,071)
Acquisition costs	—	—	499	171
Restructuring	1,223	1,126	1,970	1,364
Amortization of intangible assets	1,760	361	3,214	1,537
Income from operations	28,150	12,332	96,588	27,435
Interest income	399	221	895	760
Interest expense	5	13	35	50
Income before income taxes	28,544	12,540	97,448	28,145
(Benefit) provision for income taxes	(573)	10,082	15,862	12,606
Net income	<u>\$ 29,117</u>	<u>\$ 2,458</u>	<u>\$ 81,586</u>	<u>\$ 15,539</u>
<b>Other comprehensive income:</b>				
Changes in value of financial instruments designated as cash flow hedges, net of tax expense (benefit)(1)	\$ 1,302	\$ (891)	\$ 458	\$ 185
Foreign currency translation adjustments, net of tax of \$0 for the three months and nine months ended September 30, 2014 and 2013	(9,598)	5,593	(7,604)	(3,582)
Unrealized (loss) gain on investments, net of tax expense (benefit)(2)	(71)	48	(29)	(13)
Total comprehensive income	<u>\$ 20,750</u>	<u>\$ 7,208</u>	<u>\$ 74,411</u>	<u>\$ 12,129</u>
<b>Net income per share:</b>				
Basic	<u>\$ 0.55</u>	<u>\$ 0.05</u>	<u>\$ 1.53</u>	<u>\$ 0.29</u>
Diluted	<u>\$ 0.55</u>	<u>\$ 0.05</u>	<u>\$ 1.52</u>	<u>\$ 0.29</u>
Cash dividends per common share	<u>\$ 0.165</u>	<u>\$ 0.16</u>	<u>\$ 0.49</u>	<u>\$ 0.48</u>
<b>Weighted average common shares outstanding:</b>				
Basic	<u>53,054</u>	<u>53,165</u>	<u>53,276</u>	<u>52,998</u>
Diluted	<u>53,310</u>	<u>53,513</u>	<u>53,541</u>	<u>53,410</u>

(1) Tax expense (benefit) was \$671 and \$(491) for the three months ended September 30, 2014 and 2013, respectively. Tax expense was \$134 and \$161 for the nine months ended September 30, 2014 and 2013, respectively.

(2) Tax (benefit) expense was \$(37) and \$26 for the three months ended September 30, 2014 and 2013, respectively. Tax (benefit) was \$(8) and \$(11) for the nine months ended September 30, 2014 and 2013, respectively.

The accompanying notes are an integral part of the consolidated financial statements.

MKS INSTRUMENTS, INC.  
CONSOLIDATED STATEMENTS OF CASH FLOWS  
(in thousands)  
(Unaudited)

	Nine Months Ended September 30,	
	2014	2013
Cash flows from operating activities:		
Net income	\$ 81,586	\$ 15,539
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	14,757	12,715
Stock-based compensation	8,751	11,509
Provision for excess and obsolete inventory	8,707	16,554
Provision for bad debt	450	1,061
Deferred income taxes	474	3,623
Excess tax benefits from stock-based compensation	(416)	(825)
Other	24	173
Changes in operating assets and liabilities:		
Trade accounts receivable	9,252	(17,702)
Inventories	(14,476)	(17,949)
Income taxes	(26,765)	3,887
Other current assets	(3,064)	(2,974)
Accrued compensation	(14,079)	6,649
Other current and non-current liabilities	9,904	(737)
Accounts payable	(9,168)	10,468
Other assets	1,763	(209)
Net cash provided by operating activities	<u>67,700</u>	<u>41,782</u>
Cash flows from investing activities:		
Acquisition of businesses, net of cash acquired	(86,950)	(2,326)
Purchases of investments	(307,355)	(374,998)
Maturities of investments	211,385	253,231
Sales of investments	182,011	90,580
Proceeds from sale of property, plant and equipment	1,508	—
Purchases of property, plant and equipment	(9,362)	(9,154)
Other	53	(59)
Net cash used in investing activities	<u>(8,710)</u>	<u>(42,726)</u>
Cash flows from financing activities:		
Proceeds from short-term borrowings	—	6
Payments on short-term borrowings	—	(776)
Repurchase of common stock	(20,809)	(2,875)
Net receipts (payments) related to employee stock awards	457	(2,464)
Dividend payments to common stockholders	(26,081)	(25,458)
Excess tax benefits from stock-based compensation	416	825
Net cash used in financing activities	<u>(46,017)</u>	<u>(30,742)</u>
Effect of exchange rate changes on cash and cash equivalents	<u>(6,419)</u>	<u>(1,124)</u>
Increase (decrease) in cash and cash equivalents	6,554	(32,810)
Cash and cash equivalents at beginning of period	288,902	287,588
Cash and cash equivalents at end of period	<u>\$ 295,456</u>	<u>\$ 254,778</u>

The accompanying notes are an integral part of the consolidated financial statements.

MKS INSTRUMENTS, INC.  
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS  
(in thousands, except share and per share data)

1) Basis of Presentation

The terms “MKS” and the “Company” refer to MKS Instruments, Inc. and its subsidiaries. The interim financial data as of September 30, 2014 and for the three and nine months ended September 30, 2014 and 2013 are unaudited; however, in the opinion of MKS, the interim data includes all adjustments, consisting only of normal recurring adjustments, necessary for a fair statement of the results for the interim periods. The consolidated balance sheet presented as of December 31, 2013 has been derived from the audited consolidated financial statements as of that date. The unaudited consolidated financial statements presented herein have been prepared in accordance with the instructions to Form 10-Q and do not include all of the information and note disclosures required by United States generally accepted accounting principles (“U.S. GAAP”). The consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in the MKS Annual Report on Form 10-K for the year ended December 31, 2013 filed with the Securities and Exchange Commission on February 26, 2014.

The preparation of these consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. On an on-going basis, management evaluates its estimates and judgments, including those related to revenue recognition, stock-based compensation, inventory, intangible assets, goodwill and other long-lived assets, acquisition expenses, income taxes and investments. Management bases its estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

2) Recently Issued Accounting Pronouncements

In May 2014 the Financial Accounting Standards Board issued Accounting Standards Update (“ASU”) No. 2014-09, “Revenue from Contracts with Customers (Topic 606),” which supersedes all existing revenue recognition requirements, including most industry-specific guidance. The new standard requires a company to recognize revenue when it transfers goods and services to customers in an amount that reflects the consideration that the company expects to be entitled to in exchange for those goods or services. The 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 from costs incurred to obtain or fulfill a contract. This pronouncement is effective for annual reporting periods beginning after December 15, 2016, including interim periods within that reporting period. The two permitted transition methods under the new standard are the full retrospective method, in which case the standard would be applied to each prior reporting period presented, or the modified retrospective method, in which case the cumulative effect of applying the standard would be recognized at the date of initial application. The Company has not yet selected a transition method. The Company is currently evaluating the requirements of ASU No. 2014-09 and has not yet determined its impact on the Company’s consolidated financial statements.

In August 2014, the Financial Accounting Standards Board issued ASU No. 2014-15, Presentation of Financial Statements—Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern. Under the new guidance, management will be required to assess an entity’s ability to continue as a going concern, and to provide related footnote disclosures in certain circumstances. The provisions of this ASU are effective for annual periods beginning after December 15, 2016, and for annual and interim periods thereafter. This ASU is not expected to have an impact on the Company’s financial statements or disclosures.

MKS INSTRUMENTS, INC.  
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS  
(in thousands, except share and per share data)

3) Investments

The fair value of short-term investments with maturities or estimated lives of less than one year consists of the following:

	<u>September 30, 2014</u>	<u>December 31, 2013</u>
<b>Available-for-sale investments:</b>		
Bankers' acceptance drafts	\$ 765	\$ 491
Time deposits and certificates of deposit	40,672	64,989
Commercial paper	9,691	53,434
Corporate obligations	14,890	18,351
Municipal bonds	2,099	—
U.S. agency obligations	71,925	162,450
	<u>\$ 140,042</u>	<u>\$ 299,715</u>
<b>Trading investments:</b>		
Mutual funds	—	1,000
	<u>\$ 140,042</u>	<u>\$ 300,715</u>

The fair value of long-term investments with maturities of more than one year consists of the following:

	<u>September 30, 2014</u>	<u>December 31, 2013</u>
<b>Available-for-sale investments:</b>		
Time deposits and certificates of deposit	\$ 50	\$ 54
Asset-backed securities	63,986	—
Corporate obligations	61,446	—
Municipal bonds	1,257	—
U.S. agency obligations	8,010	60,351
	<u>\$ 134,749</u>	<u>\$ 60,405</u>

MKS INSTRUMENTS, INC.  
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS  
(in thousands, except share and per share data)

The following tables show the gross unrealized gains and (losses) aggregated by investment category for short-term and long-term available-for-sale investments:

As of September 30, 2014:	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
<b>Short-term investments:</b>				
Bankers' acceptance drafts	\$ 765	\$ —	\$ —	\$ 765
Time deposits and certificates of deposit	40,672	1	(1)	40,672
Commercial paper	9,692	2	(3)	9,691
Corporate obligations	14,889	1	—	14,890
Municipal bonds	2,100	—	(1)	2,099
U.S. agency obligations	71,879	46	—	71,925
	<u>\$139,997</u>	<u>\$ 50</u>	<u>\$ (5)</u>	<u>\$140,042</u>
<b>Long-term investments:</b>				
Time deposits	\$ 50	\$ —	\$ —	\$ 50
Asset-backed securities	64,039	12	(65)	63,986
Corporate obligations	61,496	13	(63)	61,446
Municipal bonds	1,260	—	(3)	1,257
U.S. agency obligations	8,011	—	(1)	8,010
	<u>\$134,856</u>	<u>\$ 25</u>	<u>\$ (132)</u>	<u>\$134,749</u>

As of December 31, 2013:	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
<b>Short-term investments:</b>				
Bankers' acceptance drafts	\$ 491	\$ —	\$ —	\$ 491
Time deposits and certificates of deposit	64,983	10	(4)	64,989
Commercial paper	53,429	5	—	53,434
Corporate obligations	18,360	—	(9)	18,351
U.S. agency obligations	162,430	22	(2)	162,450
	<u>\$299,693</u>	<u>\$ 37</u>	<u>\$ (15)</u>	<u>\$299,715</u>
<b>Long-term investments:</b>				
Time Deposits	\$ 54	\$ —	\$ —	\$ 54
U.S. agency obligations	60,374	9	(32)	60,351
	<u>\$ 60,428</u>	<u>\$ 9</u>	<u>\$ (32)</u>	<u>\$ 60,405</u>

Interest income is accrued as earned. Dividend income is recognized as income on the date the stock trades "ex-dividend." The cost of marketable securities sold is determined by the specific identification method. Realized gains or (losses) are reflected in income and were immaterial for the three and nine months ended September 30, 2014 and 2013, respectively.

The gains and losses for trading investments were immaterial for the three and nine months ended September 30, 2014 and 2013, respectively.

In accordance with the Company's investment policy, no security shall have a maturity or average life longer than three years. The average duration of the portfolio shall be no more than one year. Corporate securities must have ratings of A3/A- or better. Asset-backed securities must be rated AAA. Short-term ratings of A-2/P2/F2 or higher are also permitted. With respect to compliance with these investment guidelines the rating agencies include Moody's Investor Service, Standard & Poor's and Fitch Investor Service. The middle of Moody's, Standard & Poor's and Fitch rating shall be used to determine compliance with credit quality guidelines. If a security is rated by two rating agencies, the lower rating will apply. If only one rating exists, that rating shall be used.



MKS INSTRUMENTS, INC.  
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS  
(in thousands, except share and per share data)

4) Fair Value Measurements

In accordance with the provisions of fair value accounting, a fair value measurement assumes that the transaction to sell an asset or transfer a liability occurs in the principal market for the asset or liability or, in the absence of a principal market, the most advantageous market for the asset or liability and defines fair value based upon an exit price model.

The fair value measurement guidance establishes a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The guidance describes three levels of inputs that may be used to measure fair value:

- Level 1 Quoted prices in active markets for identical assets or liabilities assessed as of the reporting date. Active markets are those in which transactions for the asset or liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis.
- Level 2 Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. Level 2 assets and liabilities include debt securities with quoted prices that are traded less frequently than exchange-traded instruments or securities or derivative contracts that are valued using a pricing model with inputs that are observable in the market or can be derived principally from or corroborated by observable market data.
- Level 3 Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. Level 3 assets and liabilities include financial instruments whose value is determined using pricing models, discounted cash flow methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant management judgment or estimation.

In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, the Company categorizes such assets and liabilities based on the lowest level input that is significant to the fair value measurement in its entirety. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the asset or liability.

MKS INSTRUMENTS, INC.  
 NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS  
 (in thousands, except share and per share data)

Assets and liabilities of the Company are measured at fair value on a recurring basis as of September 30, 2014 and are summarized as follows:

Description	Total September 30, 2014	Fair Value Measurements at Reporting Date Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Assets:</b>				
Cash equivalents:				
Money market funds	\$ 78,268	\$ 78,268	\$ —	\$ —
Time deposits and certificates of deposit	8,239	—	8,239	—
Bankers' acceptance drafts	83	—	83	—
Available-for-sale securities:				
Bankers' acceptance drafts	765	—	765	—
Time deposits and certificates of deposit	40,722	—	40,722	—
Commercial paper	9,691	—	9,691	—
Asset-backed securities	63,986	—	63,986	—
Corporate obligations	76,336	—	76,336	—
Municipal bonds	3,356	—	3,356	—
U.S. agency obligations	79,935	—	79,935	—
Derivatives – currency forward contracts	1,042	—	1,042	—
Total assets	<u>\$ 362,423</u>	<u>\$ 78,268</u>	<u>\$ 284,155</u>	<u>\$ —</u>
<b>Liabilities:</b>				
Derivatives – currency forward contracts	<u>\$ 88</u>	<u>\$ —</u>	<u>\$ 88</u>	<u>\$ —</u>
Reported as follows:				
<b>Assets:</b>				
Cash and cash equivalents(1)	\$ 86,590	\$ 78,268	\$ 8,322	\$ —
Short-term investments	140,042	—	140,042	—
Other current assets	1,042	—	1,042	—
Total current assets	<u>\$ 227,674</u>	<u>\$ 78,268</u>	<u>\$ 149,406</u>	<u>\$ —</u>
Long-term investments	<u>\$ 134,749</u>	<u>\$ —</u>	<u>\$ 134,749</u>	<u>\$ —</u>
<b>Liabilities:</b>				
Other current liabilities	<u>\$ 88</u>	<u>\$ —</u>	<u>\$ 88</u>	<u>\$ —</u>

(1) The cash and cash equivalent amounts presented in the table above do not include cash of \$201,135 and non-negotiable time deposits of \$7,731, as of September 30, 2014.

MKS INSTRUMENTS, INC.  
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS  
(in thousands, except share and per share data)

Assets and liabilities of the Company are measured at fair value on a recurring basis as of December 31, 2013 and are summarized as follows:

Description	Total December 31, 2013	Fair Value Measurements at Reporting Date Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Assets:</b>				
Cash equivalents:				
Money market funds	\$ 38,166	\$ 38,166	\$ —	\$ —
Time deposits and certificates of deposit	7,050	—	7,050	—
Bankers' acceptance drafts	32	—	32	—
Commercial paper	3,350	—	3,350	—
Trading securities:				
Mutual funds	1,000	1,000	—	—
Available-for-sale securities:				
Bankers' acceptance drafts	491	—	491	—
Time deposits and certificates of deposit	65,043	—	65,043	—
Commercial paper	53,434	—	53,434	—
Corporate obligations	18,351	—	18,351	—
U.S. agency obligations	222,801	—	222,801	—
Derivatives – currency forward contracts	920	—	920	—
Total assets	<u>\$ 410,638</u>	<u>\$ 39,166</u>	<u>\$ 371,472</u>	<u>\$ —</u>
<b>Liabilities:</b>				
Derivatives – currency forward contracts	<u>\$ 656</u>	<u>\$ —</u>	<u>\$ 656</u>	<u>\$ —</u>
<b>Reported as follows:</b>				
<b>Assets:</b>				
Cash and cash equivalents (1)	\$ 48,598	\$ 38,166	\$ 10,432	\$ —
Short-term investments	300,715	1,000	299,715	—
Other current assets	920	—	920	—
Total current assets	<u>\$ 350,233</u>	<u>\$ 39,166</u>	<u>\$ 311,067</u>	<u>\$ —</u>
Long-term investments	<u>\$ 60,405</u>	<u>\$ —</u>	<u>\$ 60,405</u>	<u>\$ —</u>
<b>Liabilities:</b>				
Other current liabilities	<u>\$ 656</u>	<u>\$ —</u>	<u>\$ 656</u>	<u>\$ —</u>

(1) The cash and cash equivalent amounts presented in the table above do not include cash of \$234,675 and non-negotiable time deposits of \$5,629, as of December 31, 2013.

Money Market Funds

Money market funds are cash and cash equivalents and are classified within Level 1 of the fair value hierarchy.

Trading Securities

As of December 31, 2013, trading securities consisted of certain U.S. and international equity mutual funds and government agency fixed income mutual funds.

MKS INSTRUMENTS, INC.  
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS  
(in thousands, except share and per share data)

Bankers' Acceptance Drafts

Bankers' acceptance drafts are short-term credit investments created by a non-financial firm and guaranteed by a bank. These drafts are often traded at a discount from face value and may be traded on a secondary market.

Available-For-Sale Investments

Available-for-sale investments consisted of time deposits and drafts denominated in the Euro currency, commercial paper, certificates of deposit, asset-backed securities which include auto loans, credit card receivables, equipment trust receivables, corporate obligations, municipal bonds and U.S. agency obligations. The Company measures its debt and equity investments at fair value.

Derivatives

As a result of the Company's global operating activities, the Company is exposed to market risks from changes in foreign currency exchange rates, which may adversely affect its operating results and financial position. When deemed appropriate, the Company minimizes its risks from foreign currency exchange rate fluctuations through the use of derivative financial instruments. The principal market in which the Company executes its foreign currency contracts is the institutional market in an over-the-counter environment with a relatively high level of price transparency. The market participants usually are large commercial banks. The forward foreign currency exchange contracts are valued using broker quotations, or market transactions and are classified within Level 2 of the fair value hierarchy.

5) Derivatives

The Company enters into derivative instruments for risk management purposes only, including derivatives designated as hedging instruments and those utilized as economic hedges. The Company operates internationally and, in the normal course of business, is exposed to fluctuations in interest rates and foreign exchange rates. These fluctuations can increase the costs of financing, investing and operating the business. The Company has used derivative instruments, such as forward contracts, to manage certain foreign currency exposure.

By nature, all financial instruments involve market and credit risks. The Company enters into derivative instruments with major investment grade financial institutions and no collateral is required. The Company has policies to monitor the credit risk of these counterparties. While there can be no assurance, the Company does not anticipate any material non-performance by any of these counterparties.

The Company hedges a portion of its forecasted foreign currency denominated intercompany sales of inventory, over a maximum period of eighteen months, using forward foreign exchange contracts accounted for as cash-flow hedges related to Japanese, South Korean, British, Euro and Taiwan currencies. To the extent these derivatives are effective in off-setting the variability of the hedged cash flows, and otherwise meet the hedge accounting criteria, changes in the derivatives' fair value are not included in current earnings but are included in other comprehensive income ("OCI") in stockholders' equity. These changes in fair value will subsequently be reclassified into earnings, as applicable, when the forecasted transaction occurs. To the extent that a previously designated hedging transaction is no longer an effective hedge, any ineffectiveness measured in the hedging relationship is recorded currently in earnings in the period it occurs. The cash flows resulting from forward exchange contracts are classified in the consolidated statements of cash flows as part of cash flows from operating activities. The Company does not enter into derivative instruments for trading or speculative purposes.

To the extent the hedge accounting criteria is not met, the related foreign currency forward contracts are considered as economic hedges and changes in the fair value of these contracts are recorded immediately in earnings in the period in which they occur. These include hedges that are used to reduce exchange rate risks arising from the change in fair value of certain foreign currency denominated assets and liabilities (i.e., payables, receivables) and other economic hedges where the hedge accounting criteria were not met.

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As of September 30, 2014 and December 31, 2013, the Company had outstanding forward foreign exchange contracts with gross notional values of \$27,643 and \$21,018, respectively. The following tables provide a summary of the primary net hedging positions and corresponding fair values held as of September 30, 2014 and December 31, 2013:

Currency Hedged (Buy/Sell)	September 30, 2014	
	Gross Notional Value	Fair Value(1) Asset/(Liability)
U.S. Dollar/Japanese Yen	\$ 9,014	\$ 610
U.S. Dollar/South Korean Won	10,122	48
U.S. Dollar/Euro	2,500	205
U.S. Dollar/U.K. Pound Sterling	1,261	40
U.S. Dollar/Taiwan Dollar	4,746	51
Total	<u>\$ 27,643</u>	<u>\$ 954</u>

(1) Represents the fair value of the net asset / (liability) amount included in the consolidated balance sheets.

Currency Hedged (Buy/Sell)	December 31, 2013	
	Gross Notional Value	Fair Value(1) Asset/(Liability)
U.S. Dollar/Japanese Yen	\$ 7,191	\$ 920
U.S. Dollar/South Korean Won	9,254	(521)
U.S. Dollar/Euro	2,806	(85)
U.S. Dollar/U.K. Pound Sterling	1,767	(50)
Total	<u>\$ 21,018</u>	<u>\$ 264</u>

(1) Represents the fair value of the net asset / (liability) amount included in the consolidated balance sheets.

The following table provides a summary of the fair value amounts of the Company's derivative instruments:

	September 30, 2014	December 31, 2013
<b>Derivative assets:</b>		
Forward exchange contracts	\$ 1,042	\$ 920
<b>Derivative liabilities:</b>		
Forward exchange contracts	(88)	(656)
<b>Total net derivative asset (liability) designated as hedging instruments(1)</b>	<u>\$ 954</u>	<u>\$ 264</u>

(1) The derivative asset of \$1,042 and derivative liability of \$(88) are classified in other current assets and other current liabilities in the consolidated balance sheet as of September 30, 2014. The derivative asset of \$920 and derivative liability of \$(656) are classified in other current assets and other current liabilities, respectively, in the consolidated balance sheet as of December 31, 2013. These foreign exchange contracts are subject to a master netting agreement with one financial institution. However, the Company has elected to record these contracts on a gross basis in the balance sheet.

The net amount of existing gains or losses as of September 30, 2014 that is expected to be reclassified from accumulated OCI into earnings within the next twelve months is immaterial.

The following table provides a summary of the gains (losses) on derivatives designated as hedging instruments:

Derivatives Designated as Cash Flow Hedging Relationships	Three Months Ended September 30,		Nine Months Ended September 30,	
	2014	2013	2014	2013
<b>Forward exchange contracts:</b>				
Net gain (loss) recognized in OCI(1)	\$ 2,071	\$ (1,837)	\$ 689	\$ (315)
Net (loss) gain reclassified from OCI into income(2)	\$ (352)	\$ 297	\$ (145)	\$ 1,102

(1) Net change in the fair value of the effective portion classified in OCI.

(2) Effective portion classified in cost of products for the three and nine months ended September 30, 2014 and 2013.

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The following table provides a summary of (losses) gains on derivatives not designated as hedging instruments:

Derivatives Not Designated as Hedging Instruments	Three Months Ended September 30,		Nine Months Ended September 30,	
	2014	2013	2014	2013
<b>Forward exchange contracts:</b>				
Net gain (loss) recognized in income <sup>(1)</sup>	\$ (70)	\$ (514)	\$ (168)	\$ 141

(1) The Company enters into foreign exchange contracts to hedge against changes in the balance sheet for certain subsidiaries. These derivatives are not designated as hedging instruments and are recorded immediately in selling, general and administrative expenses.

6) Inventories

Inventories consist of the following:

	September 30, 2014	December 31, 2013
Raw materials	\$ 77,737	\$ 75,687
Work-in-process	26,428	24,304
Finished goods	49,765	42,736
	<u>\$ 153,930</u>	<u>\$ 142,727</u>

7) Acquisitions

Granville-Phillips

On May 30, 2014, the Company acquired Granville-Phillips (“GP”), a division of Brooks Automation, Inc. (“Brooks”), for \$87,000, which includes \$86,950 in cash and \$50 in contingent consideration. MKS will pay contingent consideration if it does not cease use of certain of Brooks’ administrative services by a pre-defined date in accordance with a transition services agreement. Granville-Phillips is a leading global provider of vacuum measurement and control instruments to the semiconductor, thin film and general industrial markets with sales of approximately \$30,000 in 2013. The Company believes that the amount of goodwill relative to identifiable intangible assets relates to several factors, including: a well-regarded leader in indirect vacuum gauges, a premium brand, an excellent reputation for quality, reliability and performance and an assembled workforce. The acquisition aligns with the Company’s current strategy to grow its semiconductor business, while diversifying into other high growth advanced markets.

The following table summarizes the estimated fair value of the assets acquired and liabilities assumed at the date of acquisition:

Inventory	\$ 6,223
Property and equipment	299
Other assets	191
Intangible assets	38,850
Goodwill	41,612
Warranty liability	(175)
Total purchase price	<u>\$87,000</u>

The entire purchase price is expected to be deductible for tax purposes. The following table reflects the allocation of the acquired intangible assets and related estimates of useful lives. These acquired intangibles will be amortized on a straight-line basis.

Customer relationships	\$21,250	7 years
Trademark and trade names	1,900	12 years
Current developed technology	15,700	9-12 years
	<u>\$38,850</u>	

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The results of this acquisition were included in the Company's consolidated operations beginning on May 30, 2014. The pro forma consolidated statements reflecting the operating results of GP, had it been acquired January 1, 2013, would not differ materially from the operating results of the Company as reported for the nine months ended September 30, 2014. GP is included in the Company's Instruments, Control and Vacuum Products group and the Advanced Manufacturing Capital Equipment reportable segment.

8) Goodwill and Intangible Assets

Goodwill

The Company's methodology for allocating the purchase price relating to purchase acquisitions is determined through established and generally accepted valuation techniques. Goodwill is measured as the excess of the cost of the acquisition over the sum of the amounts assigned to tangible and identifiable intangible assets acquired less liabilities assumed. The Company assigns assets acquired (including goodwill) and liabilities assumed to one or more reporting units as of the date of acquisition. Typically acquisitions relate to a single reporting unit and thus do not require the allocation of goodwill to multiple reporting units. If the products obtained in an acquisition are assigned to multiple reporting units, the goodwill is distributed to the respective reporting units as part of the purchase price allocation process.

Goodwill and purchased intangible assets with indefinite useful lives are not amortized, but are reviewed for impairment annually during the fourth quarter of each fiscal year and whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. The process of evaluating the potential impairment of goodwill and intangible assets requires significant judgment. The Company regularly monitors current business conditions and other factors including, but not limited to, adverse industry or economic trends, restructuring actions and lower projections of profitability that may impact future operating results.

As of October 31, 2013, the Company performed its annual impairment assessment of goodwill and determined that there was no impairment.

The changes in the carrying amount of goodwill and accumulated impairment (loss) during the nine months ended September 30, 2014 and twelve months ended December 31, 2013 were as follows:

	2014			2013		
	Gross Carrying Amount	Accumulated Impairment (Loss)	Net	Gross Carrying Amount	Accumulated Impairment (Loss)	Net
Beginning balance at January 1	\$290,323	\$ (139,414)	\$150,909	\$290,147	\$ (139,414)	\$150,733
Acquired goodwill(1)	41,993	—	41,993	—	—	—
Foreign currency translation	223	—	223	176	—	176
Ending balance at September 30, 2014 and December 31, 2013	\$332,539	\$ (139,414)	\$193,125	\$290,323	\$ (139,414)	\$150,909

- (1) During the second quarter of 2014, the Company recorded \$41,612 of goodwill related to the May 30, 2014 GP acquisition. During the first quarter of 2014, the Company recorded a purchase accounting adjustment for \$381 related to the March 12, 2013 purchase of Alter S.r.l.

Goodwill associated with each of our reportable segments is as follows:

Reportable segment:	September 30, 2014	December 31, 2013
Advanced Manufacturing Capital Equipment	\$ 184,234	\$ 142,065
Analytical Solutions Group	8,668	8,668
Europe Region Sales & Service	—	—
Asia Region Sales & Service	—	—
Foreign currency translation	223	176
Total goodwill	\$ 193,125	\$ 150,909

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Intangible Assets

Components of the Company's intangible assets are comprised of the following:

As of September 30, 2014:	Gross	Accumulated Amortization	Foreign Currency Translation	Net
Completed technology <sup>(1)</sup>	\$100,380	\$ (79,263)	\$ 490	\$21,607
Customer relationships <sup>(1)</sup>	35,821	(11,612)	588	24,797
Patents, trademarks, trade names and other <sup>(1)</sup>	27,536	(25,193)	65	2,408
	<u>\$163,737</u>	<u>\$ (116,068)</u>	<u>\$ 1,143</u>	<u>\$48,812</u>

- (1) During the nine months ended September 30, 2014, the Company recorded \$38,850 of separately identified intangible assets of which \$15,700 was completed technology, \$21,250 was customer relationships and \$1,900 was trademarks and trade names, relating to the May 30, 2014 GP acquisition.

As of December 31, 2013:	Gross	Accumulated Amortization	Foreign Currency Translation	Net
Completed technology	\$ 84,680	\$ (78,072)	\$ 519	\$ 7,127
Customer relationships	14,571	(9,831)	454	5,194
Patents, trademarks, trade names and other	25,636	(24,951)	84	769
	<u>\$124,887</u>	<u>\$ (112,854)</u>	<u>\$ 1,057</u>	<u>\$13,090</u>

Aggregate amortization expense related to acquired intangibles for the three and nine months ended September 30, 2014 were \$1,760 and \$3,214, respectively. Aggregate amortization expense related to acquired intangibles for the three and nine months ended September 30, 2013 were \$361 and \$1,537, respectively. Estimated amortization expense for each of the remaining fiscal years is as follows:

Year	Amount
2014 (remaining)	\$ 1,777
2015	6,555
2016	6,306
2017	6,268
2018	6,260
2019	6,214
Thereafter	15,432

9) Other Assets

	September 30, 2014	December 31, 2013
Other Assets:		
Deferred tax assets, net	\$ 9,538	\$ 9,208
Long-term income tax receivable	18,616	20,516
Other	2,011	2,123
Total other assets	<u>\$ 30,165</u>	<u>\$ 31,847</u>



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10) Other Liabilities

	September 30, 2014	December 31, 2013
<b>Other Current Liabilities:</b>		
Product warranties	\$ 6,689	\$ 6,956
Deferred revenue	6,463	5,556
Other	29,809	21,730
<b>Total other current liabilities</b>	<b>\$ 42,961</b>	<b>\$ 34,242</b>
<b>Other Liabilities:</b>		
Long-term income tax payable	\$ 35,417	\$ 46,745
Accrued compensation	11,570	9,646
Other	6,953	6,682
<b>Total other liabilities</b>	<b>\$ 53,940</b>	<b>\$ 63,073</b>

11) Debt

The Company's Japanese subsidiary has lines of credit and short-term borrowing arrangements with two financial institutions which generally expire and are renewed at three month intervals. The lines of credit provide for aggregate borrowings as of September 30, 2014 of up to an equivalent of \$21,049 U.S. dollars. One of the borrowing arrangements has an interest rate based on the Tokyo Interbank Offer Rate at the time of borrowing and the other has an interest rate based on the Japanese Short-term Prime Lending Rate. There were no borrowings outstanding under these arrangements at September 30, 2014 and December 31, 2013.

12) Product Warranties

The Company provides for the estimated costs to fulfill customer warranty obligations upon the recognition of the related revenue. While the Company engages in extensive product quality programs and processes, including actively monitoring and evaluating the quality of its component suppliers, the Company's warranty obligation is affected by shipment volume, product failure rates, utilization levels, material usage, and supplier warranties on parts delivered to the Company. Should actual product failure rates, utilization levels, material usage, or supplier warranties on parts differ from the Company's estimates, revisions to the estimated warranty liability would be required. The product warranty liability is included in other current liabilities in the consolidated balance sheets.

Product warranty activities were as follows:

	Nine Months Ended September 30,	
	2014	2013
Beginning of period	\$ 6,956	\$ 8,266
Provision for product warranties	1,880	1,705
Direct charges to warranty liability	(2,119)	(3,142)
Foreign currency translation	(28)	(97)
End of period	<b>\$ 6,689</b>	<b>\$ 6,732</b>

13) Income Taxes

The Company's effective tax rate for the three and nine months ended September 30, 2014 was (2.0)% and 16.3%, respectively. The effective tax rate for the three and nine months ended September 30, 2014 was lower than the U.S. statutory tax rate primarily due to the discrete release of income tax reserves related to the effective settlement of foreign tax examinations in the first and third quarters of 2014. The effective tax rate for the three and nine months ended September 30, 2014 also benefited from a third quarter discrete release of income tax reserves related to the expiration of the statute of limitations for a previously open tax year and a third quarter discrete benefit resulting from foreign tax credits recognized on the payment of a dividend from a foreign subsidiary. The geographic mix of income and profits earned by the Company's international subsidiaries being taxed at rates lower than the U.S. statutory tax rate and the deduction for domestic production activities also had an impact in reducing the effective tax rate in the three and nine month periods.

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The Company's effective tax rate for the three and nine months ended September 30, 2013 was 80.4% and 44.8%, respectively. The effective tax rate for the three and nine months ended September 30, 2013, and related income tax expense was higher than the U.S. statutory tax rate primarily due to a decision made during the quarter ended September 30, 2013 to pay currently, at a substantially reduced rate, taxes on certain accumulated earnings of its Israeli subsidiary relating to calendar year periods 2002 through 2011 covered under its tax holiday that expired on December 31, 2011. This additional charge was partially offset by additional U.S. tax incentives realized by the Company and recognized as discrete events during the quarter ended September 30, 2013, and the geographic mix of income and profits earned by the Company's international subsidiaries being taxed at rates lower than the U.S. statutory rate. Additionally, certain tax incentives realized by the Company were recognized as discrete events during the quarter ended March 31, 2013. These incentives were reinstated under The American Taxpayer Relief Act of 2012 that was signed into law on January 2, 2013.

At September 30, 2014 the total amount of gross unrecognized tax benefits, which excludes interest and penalties, was approximately \$32,318. At December 31, 2013 the total amount of gross unrecognized tax benefits, which excludes interest and penalties, was approximately \$47,684. The net decrease from December 31, 2013 was primarily attributable to a release in reserves for uncertain tax positions due to the effective settlement of foreign tax examinations and the expiration of the statute of limitations related to a previously open tax year. As of September 30, 2014, if these benefits were recognized in a future period, the timing of which is not estimable, the net unrecognized tax benefit of \$15,286, excluding interest and penalties, would impact the Company's effective tax rate. The Company accrues interest expense, and if applicable penalties, for any uncertain tax positions. Interest and penalties are classified as a component of income tax expense. At September 30, 2014, and December 31, 2013, the Company had accrued interest on unrecognized tax benefits of approximately \$1,340 and \$2,159, respectively.

The Company and its subsidiaries are subject to examination by federal, state and foreign tax authorities. The Internal Revenue Service commenced an examination of the Company's U.S. federal tax filings for tax years 2007 through 2009 during the quarter ended June 30, 2012. As a result, the U.S. statute of limitations remains open between tax years 2007 through 2009 and from 2011 through the present. However, carryforward amounts from prior years may still be adjusted upon examination by tax authorities if they are used in a future period. The statute of limitations for the Company's tax filings in other jurisdictions varies between fiscal years 2005 through the present.

14) Net Income Per Share

The following table sets forth the computation of basic and diluted net income per share:

	<u>Three Months Ended September 30,</u>		<u>Nine Months Ended September 30,</u>	
	<u>2014</u>	<u>2013</u>	<u>2014</u>	<u>2013</u>
<b>Numerator:</b>				
Net income	\$ 29,117	\$ 2,458	\$ 81,586	\$ 15,539
<b>Denominator:</b>				
Shares used in net income per common share – basic	53,054,000	53,165,000	53,276,000	52,998,000
<b>Effect of dilutive securities:</b>				
Stock options, restricted stock and employee stock purchase plan	256,000	348,000	265,000	412,000
Shares used in net income per common share – diluted	<u>53,310,000</u>	<u>53,513,000</u>	<u>53,541,000</u>	<u>53,410,000</u>
<b>Net income per common share:</b>				
Basic	\$ 0.55	\$ 0.05	\$ 1.53	\$ 0.29
Diluted	\$ 0.55	\$ 0.05	\$ 1.52	\$ 0.29

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Basic earnings per share (“EPS”) is computed by dividing income available to common stockholders by the weighted-average number of common shares outstanding during the period. The computation of diluted EPS is similar to the computation of basic EPS except that the denominator is increased to include the number of additional common shares that would have been outstanding (using the treasury stock method) if securities containing potentially dilutive common shares (stock options and restricted stock units) had been converted to such common shares, and if such assumed conversion is dilutive.

As of September 30, 2014, stock options and restricted stock units relating to an aggregate of approximately 769,000 shares were outstanding. For the three and nine months ended September 30, 2014, the potential dilutive effect of approximately 64 and 534 weighted-average shares, respectively, of restricted stock units and stock options were excluded from the computation of diluted weighted-average shares outstanding as the shares would have an anti-dilutive effect on EPS.

As of September 30, 2013, stock options and restricted stock units relating to an aggregate of approximately 1,059,000 shares were outstanding. For the three and nine months ended September 30, 2013, the potential dilutive effect of approximately 104,000 and 101,000 weighted-average shares, respectively, of restricted stock units and stock options were excluded from the computation of diluted weighted-average shares outstanding as the shares would have an anti-dilutive effect on EPS.

15) Stockholder’s Equity

Stock Repurchase Program

On July 25, 2011, the Company’s Board of Directors approved a share repurchase program for the repurchase of up to an aggregate of \$200,000 of its outstanding common stock from time to time in open market purchases, privately negotiated transactions or through other appropriate means. The timing and quantity of any shares repurchased depends upon a variety of factors, including business conditions, stock market conditions and business development activities, including, but not limited to, merger and acquisition opportunities. These repurchases may be commenced, suspended or discontinued at any time without prior notice.

During the nine months ended September 30, 2014, the Company repurchased approximately 728,000 shares of its common stock for \$20,809, or an average price of \$28.59 per share.

Cash Dividends

Holders of the Company’s common stock are entitled to receive dividends when they are declared by the Company’s Board of Directors. During the nine months ended September 30, 2014, the Board of Directors authorized a cash dividend of \$0.16 per share during the first quarter of 2014 and a cash dividend of \$0.165 during the second and third quarters of 2014, which totaled \$26,081.

On October 27, 2014, our Board of Directors declared a quarterly cash dividend of \$0.165 per share to be paid on December 12, 2014 to shareholders of record as of December 1, 2014. Future dividend declarations, if any, as well as the record and payment dates for such dividends, are subject to the final determination of the Company’s Board of Directors.

16) Business Segment, Geographic Area, Product and Significant Customer Information

The Company develops, manufactures, sells and services products that measure, control, power and monitor critical parameters of advanced manufacturing processes. The Company’s Chief Operating Decision Maker (“CODM”) utilizes consolidated financial information to make decisions about allocating resources and assessing performance for the entire Company. In addition, certain disaggregated financial information is also provided to the CODM. Based upon the information provided to the CODM, the Company has determined it has eight operating segments and four reportable segments.

The eight operating segments are PFMC Products, Controls Products, ASTeX Products, ENI Products, HPS Products (Vacuum Products), Analytical Solutions Group, Europe Region Sales & Service and Asia Region Sales & Service.

PFMC Products, Controls Products, ASTeX Products, ENI Products and HPS Products comprise a single reportable segment due to the similarities of the operating segments. This reportable segment, Advanced Manufacturing Capital Equipment, includes the development, manufacturing, sales and servicing of instruments and control products, power and reactive gas products, and vacuum products, all of which are utilized in semiconductor processing and other similar advanced manufacturing processes. Sales in this segment include both external sales and intercompany sales (which are stated at agreed upon transfer prices). External sales of these products made in Europe or Asia are reported as sales in the Europe Region Sales & Service or Asia Region Sales & Service segments.

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Analytical Solutions Group, Asia Region Sales & Service and Europe Region Sales & Service are each separate reportable segments. The Company has reported corporate expenses and certain intercompany pricing transactions in a Corporate, Eliminations and Other reconciling column. The Analytical Solutions Group includes gas composition analysis and information technology products. The Europe and Asia region sales and service segments mainly resell and service the Advanced Manufacturing Capital Equipment and Analytical Solutions Group products sold in their respective regions.

MKS derives the segment results directly from the manner in which results are reported in its management reporting system. The accounting policies MKS uses to derive reportable segment results are substantially the same as those used for external reporting purposes except that a substantial portion of the sales of the Advanced Manufacturing Capital Equipment and Analytical Solutions Group segments are intercompany sales to the regions at tax-based transfer prices and certain significant costs, including stock-based compensation and management incentive compensation, are not allocated to the segments and are included in Corporate, Eliminations and Other. The CODM reviews several metrics of each operating segment, including net revenues and gross profit (loss).

The following is net revenues by reportable segment:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2014	2013	2014	2013
Advanced Manufacturing Capital Equipment	\$ 152,901	\$ 132,856	\$ 472,837	\$ 362,153
Analytical Solutions Group	15,079	13,313	44,549	41,217
Europe Region Sales & Service Operations(1)	14,295	12,436	41,337	35,287
Asia Region Sales & Service Operations(1)	55,416	52,558	177,914	149,267
Corporate, Eliminations and Other	(50,893)	(44,710)	(158,789)	(122,898)
	<u>\$ 186,798</u>	<u>\$ 166,453</u>	<u>\$ 577,848</u>	<u>\$ 465,026</u>

- (1) The Europe and Asia foreign sales and service operations do not represent total geographical Europe and Asia financial information. These sales and service operations mainly represent the sales from the resale and service of Advanced Manufacturing Capital Equipment and Analytical Solutions Group products in their respective regions. The Advanced Manufacturing Capital Equipment and Analytical Solutions Group segments both have sales in each region. Accordingly, total geographical sales include sales from multiple reportable segments.

The following is gross profit by reportable segment:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2014	2013	2014	2013
Advanced Manufacturing Capital Equipment	\$ 61,887	\$ 43,151	\$ 191,049	\$ 121,647
Analytical Solutions Group	7,667	6,758	22,066	21,239
Europe Region Sales & Service Operations(1)	4,221	3,427	12,082	10,005
Asia Region Sales & Service Operations(1)	7,974	11,580	30,639	31,366
Corporate, Eliminations and Other	(2,424)	(2,682)	(7,504)	(5,363)
	<u>\$ 79,325</u>	<u>\$ 62,234</u>	<u>\$ 248,332</u>	<u>\$ 178,894</u>

- (1) The Europe and Asia foreign sales and service operations do not represent total geographical Europe and Asia financial information. These sales and service operations mainly represent the sales from the resale and service of Advanced Manufacturing Capital Equipment and Analytical Solutions Group products in their respective regions. The Advanced Manufacturing Capital Equipment and Analytical Solutions Group segments both have sales in each region. Accordingly, total geographical sales include sales from multiple reportable segments.

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The following is capital expenditures by reportable segment for the three and nine months ended September 30, 2014 and 2013:

	Product Groups		Foreign Sales & Service Operations		Corporate, Eliminations and Other	Total
	Advanced Manufacturing Capital Equipment	Analytical Solutions Group	Europe	Asia		
<b>Three Months Ended September 30, 2014:</b>						
Capital expenditures	<u>\$ 1,341</u>	<u>\$ 21</u>	<u>\$ 60</u>	<u>\$ 307</u>	<u>\$ 378</u>	<u>\$2,107</u>
<b>Nine Months Ended September 30, 2014:</b>						
Capital expenditures	<u>\$ 5,282</u>	<u>\$ 1,823</u>	<u>\$ 87</u>	<u>\$ 560</u>	<u>\$ 1,610</u>	<u>\$9,362</u>
	Product Groups		Foreign Sales & Service Operations		Corporate, Eliminations and Other	Total
	Advanced Manufacturing Capital Equipment	Analytical Solutions Group	Europe	Asia		
<b>Three Months Ended September 30, 2013:</b>						
Capital expenditures	<u>\$ 1,893</u>	<u>\$ 125</u>	<u>\$ 24</u>	<u>\$ 239</u>	<u>\$ 513</u>	<u>\$2,794</u>
<b>Nine Months Ended September 30, 2013:</b>						
Capital expenditures	<u>\$ 6,599</u>	<u>\$ 265</u>	<u>\$ 137</u>	<u>\$ 435</u>	<u>\$ 1,718</u>	<u>\$9,154</u>

The following is depreciation and amortization by reportable segment for the three and nine months ended September 30, 2014 and 2013:

	Product Groups		Foreign Sales & Service Operations		Corporate, Eliminations and Other	Total
	Advanced Manufacturing Capital Equipment	Analytical Solutions Group	Europe	Asia		
<b>Three Months Ended September 30, 2014:</b>						
Depreciation and amortization	<u>\$ 4,393</u>	<u>\$ 319</u>	<u>\$ 85</u>	<u>\$ 295</u>	<u>\$ 700</u>	<u>\$ 5,792</u>
<b>Nine Months Ended September 30, 2014:</b>						
Depreciation and amortization	<u>\$ 10,816</u>	<u>\$ 795</u>	<u>\$ 260</u>	<u>\$ 874</u>	<u>\$ 2,012</u>	<u>\$14,757</u>
	Product Groups		Foreign Sales & Service Operations		Corporate, Eliminations and Other	Total
	Advanced Manufacturing Capital Equipment	Analytical Solutions Group	Europe	Asia		
<b>Three Months Ended September 30, 2013:</b>						
Depreciation and amortization	<u>\$ 2,861</u>	<u>\$ 319</u>	<u>\$ 86</u>	<u>\$ 294</u>	<u>\$ 685</u>	<u>\$ 4,245</u>
<b>Nine Months Ended September 30, 2013:</b>						
Depreciation and amortization	<u>\$ 8,819</u>	<u>\$ 923</u>	<u>\$ 260</u>	<u>\$ 876</u>	<u>\$ 1,837</u>	<u>\$12,715</u>

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The following is segment assets by reportable segment:

	Product Groups		Foreign Sales & Service Operations		Corporate, Eliminations and Other	Total
	Advanced Manufacturing Capital Equipment	Analytical Solutions Group	Europe	Asia		
<b>September 30, 2014:</b>						
Segment assets:						
Accounts receivable(1)	\$ 15,853	\$ 4,843	\$ 7,711	\$ 36,800	\$ 41,083	\$ 106,290
Inventory	125,309	4,638	3,697	27,612	(7,326)	153,930
<b>Total segment assets</b>	<b>\$ 141,162</b>	<b>\$ 9,481</b>	<b>\$ 11,408</b>	<b>\$ 64,412</b>	<b>\$ 33,757</b>	<b>\$ 260,220</b>

	Product Groups		Foreign Sales & Service Operations		Corporate, Eliminations and Other	Total
	Advanced Manufacturing Capital Equipment	Analytical Solutions Group	Europe	Asia		
<b>December 31, 2013:</b>						
Segment assets:						
Accounts receivable(1)	\$ 20,767	\$ 5,603	\$ 6,538	\$ 44,207	\$ 39,629	\$ 116,744
Inventory	117,822	4,391	4,254	25,094	(8,834)	142,727
<b>Total segment assets</b>	<b>\$ 138,589</b>	<b>\$ 9,994</b>	<b>\$ 10,792</b>	<b>\$ 69,301</b>	<b>\$ 30,795</b>	<b>\$ 259,471</b>

(1) A significant portion of segment receivables are processed at the Company's shared services center at the Corporate location.

A reconciliation of segment assets to consolidated total assets is as follows:

	September 30, 2014	December 31, 2013
Total segment assets	\$ 260,220	\$ 259,471
Cash and cash equivalents and investments	570,247	650,022
Other current assets	41,157	30,143
Property, plant and equipment, net	73,642	77,536
Goodwill and intangible assets, net	241,937	163,999
Other assets	30,165	31,847
<b>Consolidated total assets</b>	<b>\$ 1,217,368</b>	<b>\$ 1,213,018</b>

Worldwide Product Information

Because the reportable segment information above does not reflect worldwide sales of the Company's products, the Company groups its products into three groups of similar products based upon the similarity of product function. Worldwide net revenue for each group of products is as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2014	2013	2014	2013
Instruments, Control and Vacuum Products	\$ 93,027	\$ 78,713	\$ 284,934	\$ 238,317
Power and Reactive Gas Products	79,228	72,471	249,190	182,294
Analytical Solutions Group Products	14,543	15,269	43,724	44,415
	<b>\$ 186,798</b>	<b>\$ 166,453</b>	<b>\$ 577,848</b>	<b>\$ 465,026</b>

Sales of Instruments, Control and Vacuum Products and Power and Reactive Gas Products are included in the Company's Advanced Manufacturing Capital Equipment Products segment as well as in the foreign sales and service operations because the products are sold through the foreign sales and service operations in their respective regions. Sales of the Analytical Solutions Group products are included in the Analytical Solutions Group segment as well as in the foreign sales and service operations because the products are sold through the foreign sales and service operations in their respective regions.

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Geographic

Information about the Company's operations in different geographic regions is presented in the tables below. Net revenues to unaffiliated customers are based on the location in which the sale originated. Transfers between geographic areas are at negotiated transfer prices and have been eliminated from consolidated net revenues.

	<u>Three Months Ended September 30,</u>		<u>Nine Months Ended September 30,</u>	
	2014	2013	2014	2013
<b>Net revenues:</b>				
United States	\$ 107,583	\$ 91,286	\$ 332,892	\$ 252,704
Korea	20,540	19,012	70,806	52,224
Japan	14,798	13,825	46,141	40,243
Asia (excluding Korea and Japan)	22,539	21,897	68,304	61,897
Europe	21,338	20,433	59,705	57,958
	<u>\$ 186,798</u>	<u>\$ 166,453</u>	<u>\$ 577,848</u>	<u>\$ 465,026</u>

	<u>September 30, 2014</u>	<u>December 31, 2013</u>
<b>Long-lived assets:(1)</b>		
United States	\$ 57,560	\$ 60,700
Europe	6,075	5,484
Asia	12,019	13,475
	<u>\$ 75,654</u>	<u>\$ 79,659</u>

(1) Long-lived assets include property, plant and equipment, net and certain other long-term assets, excluding long-term income tax receivable.

Major Customers

The Company had two customers with net revenues greater than 10% of total net revenues in the periods shown as follows:

	<u>Three Months Ended September 30,</u>		<u>Nine Months Ended September 30,</u>	
	2014	2013	2014	2013
Customer A	19.5%	16.4%	19.6%	16.7%
Customer B	11.2%	13.5%	12.7%	11.8%

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17) Restructuring

The Company recorded restructuring charges of \$1,223 and \$1,970 during the three and nine months ended September 30, 2014. The restructuring charges were primarily for severance associated with the reduction in workforce of approximately 111 people throughout the Company.

The activity related to the Company's restructuring accrual is shown below:

	Nine Months Ended September 30, 2014
Balance at December 31	\$ —
Charged to expense	1,970
Payments	<u>(1,580)</u>
Balance at September 30	<u>\$ 390</u>

During the first quarter of 2014, the Company re-classified certain assets from property, plant and equipment to current assets classified as held for sale, as these assets met the criteria for classification as held for sale. These assets relate to the Company closing one of its facilities in Colorado, as part of restructuring activities announced during the third quarter of 2013. The Company sold this building during the third quarter of 2014 for \$1,316, net of commissions, and recorded an immaterial loss.

18) Commitments and Contingencies

The Company is subject to various legal proceedings and claims, which have arisen in the ordinary course of business. In the opinion of management, the ultimate disposition of these matters will not have a material adverse effect on the Company's results of operations, financial condition or cash flows.



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

This Quarterly Report on Form 10-Q contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). When used herein, the words "believes," "anticipates," "plans," "expects," "estimates," "would," "will," "intends" and similar expressions are intended to identify forward-looking statements. These forward-looking statements reflect management's current opinions and are subject to certain risks and uncertainties that could cause results to differ materially from those stated or implied. While we may elect to update forward looking statements in the future, we specifically disclaim any obligation to do so even if our estimates or expectations change. Risks and uncertainties include, but are not limited to those discussed in our Annual Report on Form 10-K for the year ended December 31, 2013 in the section entitled "Risk Factors" as referenced in Part II, Item 1A "Risk Factors" of this Quarterly Report on Form 10-Q.

**Overview**

We are a global provider of instruments, subsystems and process control solutions that measure, control, power, monitor and analyze critical parameters of advanced manufacturing processes to improve process performance and productivity. We also provide services relating to the maintenance and repair of our products, software maintenance, installation services and training.

Our products are derived from our core competencies in pressure measurement and control, materials delivery, gas composition analysis, control and information technology, power and reactive gas generation and vacuum technology. Our products are used in diverse markets, applications and processes. Our primary served markets are manufacturers of capital equipment for semiconductor devices, and for other thin film applications including flat panel displays, solar cells and light emitting diodes ("LEDs"), data storage media and other advanced coatings. We also leverage our technology into other markets with advanced manufacturing applications including medical equipment, pharmaceutical manufacturing, energy generation and environmental monitoring.

We have a diverse base of customers that includes manufacturers of semiconductor capital equipment and semiconductor devices, thin film capital equipment used in the manufacture of flat panel displays, LEDs, solar cells, data storage media and other coating applications; and other industrial, medical, pharmaceutical manufacturing, energy generation, environmental monitoring and other advanced manufacturing companies, as well as university, government and industrial research laboratories. For the nine months ended September 30, 2014 and 2013, approximately 70% and 66% of our net revenues, respectively, were from sales to semiconductor capital equipment manufacturers and semiconductor device manufacturers. We expect that sales to semiconductor capital equipment manufacturers and semiconductor device manufacturers will continue to account for a substantial portion of our sales.

We have four reportable segments: Advanced Manufacturing Capital Equipment, Analytical Solutions Group, Europe Region Sales & Service and Asia Region Sales & Service. The Advanced Manufacturing Capital Equipment segment includes the development, manufacture, sales and servicing of instruments and control products, power and reactive gas products, materials delivery products and vacuum products, all of which are utilized in semiconductor processing and other similar advanced manufacturing processes. Sales in this segment include both external sales and intercompany sales (which are recorded at agreed upon transfer prices). External sales of these products made in Europe or Asia are reported as sales in the Europe Region Sales & Service or Asia Region Sales & Service segments. The Analytical Solutions Group includes gas composition analysis, information technology products and custom fabrication services. The Europe and Asia region sales and service segments mainly resell and service the Advanced Manufacturing Capital Equipment and Analytical Solutions Group products sold into their respective regions.

Net revenues from semiconductor capital equipment manufacture and semiconductor device manufacture customers increased by approximately 31% for the nine months ended September 30, 2014, compared to the same period in the prior year. Net revenues to semiconductor capital equipment manufacture and semiconductor device manufacture customers increased sequentially each quarter since March 31, 2013, from \$90 million in the first quarter of 2013 to \$150 million in the first quarter of 2014. In the second and third quarters of 2014, there has been a pause in spending in the semiconductor market, and we saw a decrease in our semiconductor revenues to \$127 million in the second quarter of 2014 and \$126 million in the third quarter of 2014. The semiconductor capital equipment industry is subject to rapid demand shifts, which are difficult to predict, and we are uncertain as to the timing or extent of future demand or any future weakness in the semiconductor capital equipment industry.

Our net revenues sold to customers in other advanced markets, which exclude semiconductor capital equipment and semiconductor device product applications, increased by approximately 12% for the nine months ended September 30, 2014, compared to the same period for the prior year. We have seen four consecutive quarters of growth in our other advanced markets starting in the quarter ended December 31, 2013. Revenues from customers in other advanced markets are made up of many different markets including general industrial, solar, film, medical, analysis metrology and other markets. The increase is primarily attributed to the general industrial market.

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A significant portion of our net revenues is from sales to customers in international markets. For the nine months ended September 30, 2014 and 2013, international net revenues accounted for approximately 42% and 46% of our net revenues, respectively. A significant portion of our international net revenues were in Korea and Japan. We expect that international net revenues will continue to represent a significant percentage of our total net revenues.

On May 30, 2014 we completed our acquisition of Granville-Phillips (“GP”), a division of Brooks Automation, Inc., for \$87 million. GP is a leading global provider of vacuum measurement and control instruments to the semiconductor, thin film and general industrial markets with sales of approximately \$30 million in 2013. The pro forma consolidated statements reflecting the operating results of GP, had it been acquired January 1, 2013, would not differ materially from the operating results of the Company as reported for the nine months ended September 30, 2014. The acquisition aligns with our current strategy to grow our semiconductor business, while diversifying into other high growth advanced markets.

### Critical Accounting Policies and Estimates

The preparation of our consolidated financial statements and related disclosures in conformity with accounting principles generally accepted in the United States of America requires management to make judgments, assumptions and estimates that affect the amounts reported. There have been no material changes in our critical accounting policies since December 31, 2013. For further information, please see the discussion of critical accounting policies in our Annual Report on Form 10-K for the year ended December 31, 2013 in the section captioned “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies and Estimates.”

### Results of Operations

The following table sets forth, for the periods indicated, the percentage of total net revenues of certain line items included in MKS’ consolidated statements of operations and comprehensive income data.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2014	2013	2014	2013
<b>Net revenues:</b>				
Product	84.9%	84.0%	86.0%	83.7%
Services	15.1	16.0	14.0	16.3
Total net revenues	100.0	100.0	100.0	100.0
<b>Cost of revenues:</b>				
Cost of product revenues	47.7	52.7	47.9	51.1
Cost of service revenues	9.8	9.9	9.1	10.4
Total cost of revenues (exclusive of amortization shown separately below)	57.5	62.6	57.0	61.5
Gross profit	42.5	37.4	43.0	38.5
Research and development	8.5	9.2	8.1	10.2
Selling, general and administrative	17.3	19.9	17.2	22.0
Acquisition costs	—	—	0.1	—
Insurance reimbursement	—	—	—	(0.2)
Restructuring	0.7	0.7	0.3	0.3
Amortization of intangible assets	0.9	0.2	0.6	0.3
Income from operations	15.1	7.4	16.7	5.9
Interest income, net	0.2	0.1	0.1	0.1
Income from operations before income taxes	15.3	7.5	16.8	6.0
(Benefit) provision for income taxes	(0.3)	6.0	2.7	2.7
Net income	15.6%	1.5%	14.1%	3.3%

### Net Revenues

(dollars in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2014	2013	% Change	2014	2013	% Change
Product	\$ 158.5	\$ 139.8	13.4%	\$ 497.2	\$ 389.0	27.8%
Service	28.3	26.6	6.3	80.6	76.0	6.1
Total net revenues	\$ 186.8	\$ 166.4	12.2%	\$ 577.8	\$ 465.0	24.3%

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Product revenues increased \$18.7 million and \$108.2 million during the three and nine months ended September 30, 2014, respectively, compared to the same periods for the prior year. Product revenues related to our semiconductor capital equipment manufacturer and semiconductor device manufacturer customers increased by \$11.7 million and \$91.2 million for the three and nine months ended September 30, 2014, respectively, compared to the same periods for the prior year. The increase in the semiconductor markets we serve was mainly the result of volume increases throughout 2013 and into the three months ended March 31, 2014.

Our product revenues for other advanced markets, which exclude semiconductor capital equipment and semiconductor device product applications, increased by \$7.0 million and \$17.0 million during the three and nine months ended September 30, 2014, respectively, compared to the same periods for the prior year. The increase in our non-semiconductor markets was primarily due to volume increases of \$3.5 million and \$13.0 million for the three and nine months ended September 30, 2014, respectively, in our general industrial markets.

Service revenues consisted mainly of fees for services relating to the maintenance and repair of our products and software services, installation and training. Service revenues increased \$1.7 million and \$4.6 million during the three and nine months ended September 30, 2014, respectively, compared to the same periods in the prior year. The increase in service revenues for the three months ended September 30, 2014, compared to the same period in the prior year, is primarily attributed to increases in the non-semiconductor markets, primarily in the medical market. The increase in service revenues for the nine months ended September 30, 2014, compared to the same period in the prior year is primarily attributed to increases in the semiconductor markets.

Total international net revenues, including product and services, were \$79.2 million and \$245.0 million for the three and nine months ended September 30, 2014, respectively, compared to \$75.2 million and \$212.3 million for the three and nine months ended September 30, 2013, respectively. The increase for the three and nine months ended September 30, 2014, compared to the same periods in the prior year related mainly to an increase in net revenues in Korea and Japan, where we sell primarily into the semiconductor markets.

The following is our net revenues by reportable segment (dollars in millions):

	Three Months Ended September 30,			Nine Month Ended September 30,		
	2014	2013	% Change	2014	2013	% Change
Net revenues:						
Advanced Manufacturing Capital Equipment	\$ 152.9	\$ 132.8	15.1%	\$ 472.8	\$ 362.1	30.6%
Analytical Solutions Group	15.1	13.3	13.3	44.5	41.2	8.1
Europe Region Sales & Service	14.3	12.4	14.9	41.3	35.3	17.1
Asia Region Sales & Service	55.4	52.6	5.4	177.9	149.3	19.2
Corporate, Eliminations and Other	(50.9)	(44.7)	(13.8)	(158.7)	(122.9)	(29.2)
Total net revenues	<u>\$ 186.8</u>	<u>\$ 166.4</u>	<u>12.2%</u>	<u>\$ 577.8</u>	<u>\$ 465.0</u>	<u>24.3%</u>

Net revenues increased in our Advanced Manufacturing Capital Equipment segment by 15.1% and 30.6% for the three and nine months ended September 30, 2014, respectively, compared to the same periods in the prior year. These increases were mainly driven by an increase in net revenues from our top two customers which represented approximately 30.7% and 32.3% of our net revenues for the three and nine months ended September 30, 2014, respectively. The increase was also driven by revenue from our acquisition of GP, which occurred during the three months ended June 30, 2014. This segment sells mainly in the semiconductor market where net revenues from semiconductor capital equipment manufacturers and semiconductor device manufacturers increased by 9.9% and 30.5% for the three and nine months ended September 30, 2014, respectively, compared to the same periods in the prior year.

Net revenues increased for our Analytical Solutions Group segment by 13.3% and 8.1% for the three and nine months ended September 30, 2014, respectively, compared to the same periods in the prior year. This increase was primarily driven by volume increases. For this segment, we sell to customers making up many different markets including general industrial, solar, film, medical, analysis metrology and other markets, which are included in our other advanced markets. Revenues from our other advanced markets increased by 17.4% and 11.9% for the three and nine months ended September 30, 2014, respectively, compared to the same periods in the prior year.

Net revenues increased for our Europe Region Sales & Service segment by 14.9% and 17.1% for the three and nine months ended September 30, 2014, respectively, compared to the same periods in the prior year. For this segment, we sell to customers making up many different markets including general industrial, solar, film, medical, analysis metrology and other markets. Revenues from our other advanced markets increased by 17.4% and 11.9% for the three and nine months ended September 30, 2014, respectively, compared to the same periods in the prior year.

Net revenues increased for our Asia Region Sales & Service segment by 5.4% and 19.2% for the three and nine months ended September 30, 2014, respectively, compared to the same periods in the prior year. These increases are primarily driven by increases in sales for Korea and Japan, where we mainly sell into the semiconductor markets.

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### Gross Profit

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2014	2013	% Points Change	2014	2013	% Points Change
Gross profit as a percentage of net revenues:						
Product	43.7%	37.2%	6.5	44.3%	38.9%	5.4
Service	35.3	38.3	(3.0)	34.8	36.2	(1.4)
Total gross profit percentage	<u>42.5%</u>	<u>37.4%</u>	<u>5.1</u>	<u>43.0%</u>	<u>38.5%</u>	<u>4.5</u>

Gross profit on product revenues increased by 6.5 percentage points for the three months ended September 30, 2014, compared to the same period in the prior year. The increase is primarily due to an increase of 4.2 percentage points due to lower excess and obsolete inventory charges and 2.3 percentage points related to higher revenue volume. Excess and obsolete inventory charges are lower due to the recognition of a special excess and obsolete inventory charge during the three months ended September 30, 2013, primarily related to a unique product in a solar application in which slowing market conditions provided uncertainty as to the net realizable value of this inventory.

Gross profit on product revenues increased by 5.4 percentage points for the nine months ended September 30, 2014, compared to the same period in the prior year. The increase is primarily due to an increase of 4.1 percentage points from higher revenue volumes and 1.8 percentage points due to lower excess and obsolete inventory charges. Excess and obsolete inventory charges are lower due to the recognition of a special excess and obsolete inventory charge during the three months ended September 30, 2013, primarily related to a unique product in a solar application in which slowing market conditions provided uncertainty as to the net realizable value of this inventory.

Cost of service revenues, which includes salaries and related expenses and other fixed costs, consists primarily of providing services for repair, software services and training.

Gross profit on service revenues decreased by 3.0 percentage points for the three months ended September 30, 2014, compared to the same period in the prior year. The decrease is primarily attributed to a net decrease of 2.0 percentage points due to higher material costs.

Gross profit on service revenues decreased by 1.4 percentage points for the nine months ended September 30, 2014, compared to the same period in the prior year. The decrease is primarily due to a decrease of 0.7 percentage points due to higher overhead and higher excess and obsolete and warranty charges.

The following is gross profit as a percentage of net revenues by reportable segment:

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2014	2013	% Points Change	2014	2013	% Points Change
Gross profit:						
Advanced Manufacturing Capital Equipment	40.5%	32.5%	8.0	40.4%	33.6%	6.8
Analytical Solutions Group	50.8	50.8	—	49.5	51.5	(2.0)
Europe Region Sales & Service	29.5	27.6	1.9	29.2	28.4	0.8
Asia Region Sales & Service	14.4	22.0	(7.6)	17.2	21.0	(3.8)
Corporate, Eliminations and Other	4.8	6.0	(1.2)	4.7	4.4	0.3
Total gross profit	<u>42.5%</u>	<u>37.4%</u>	<u>5.1</u>	<u>43.0%</u>	<u>38.5%</u>	<u>4.5</u>

Gross profit for the Advanced Manufacturing Capital Equipment segment increased 8.0 and 6.8 percentage points for the three and nine month periods ended September 30, 2014, respectively, compared to the same periods in the prior year. These increases are primarily attributed to higher revenue volumes, favorable product mix and lower excess and obsolete inventory charges.

Gross profit for the Analytical Solutions Group segment remained flat for the three months ended September 30, 2014 and decreased 2.0 percentage points for the nine month period ended September 30, 2014, compared to the same periods in the prior year. The decrease for the nine month period ended September 30, 2014 is primarily attributed to unfavorable product mix.

Gross profit for the Europe Region Sales & Service segment increased 1.9 and 0.8 percentage points for the three and nine month periods ended September 30, 2014, respectively, compared to the same periods in the prior year. These increases are primarily attributed to favorable changes in foreign exchange rates and higher revenue volume.

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Gross profit for the Asia Region Sales & Service operations decreased 7.6 and 3.8 percentage points for the three and nine month periods ended September 30, 2014, respectively, compared to the same periods in the prior year. The decreases are primarily attributed to unfavorable product mix.

### Research and Development

<i>(dollars in millions)</i>	Three Months Ended September 30,			Nine Months Ended September 30,		
	2014	2013	% Change	2014	2013	% Change
Research and development expenses	\$ 15.8	\$ 15.2	3.7%	\$ 46.9	\$ 47.3	(1.0)%

Research and development expenses increased \$0.6 million for the three months ended September 30, 2014, compared to the same period in the prior year. The increase is primarily attributed to an increase of \$0.5 million in compensation related costs.

Research and development expense decreased \$0.4 million for the nine months ended September 30, 2014, compared to the same period in the prior year. The decrease is primarily attributed to a decrease of \$0.9 million in project materials, partially offset by an increase of \$0.7 million in compensation related costs.

Our research and development is primarily focused on developing and improving our instruments, components, subsystems and process control solutions to improve process performance and productivity.

We have thousands of products and our research and development efforts primarily consist of a large number of projects related to these products, none of which is individually material to us. Current projects typically have durations of 3 to 30 months depending upon whether the product is an enhancement of existing technology or a new product. Our current initiatives include projects to enhance the performance characteristics of older products, to develop new products and to integrate various technologies into subsystems. These projects support in large part, the transition in the semiconductor industry to smaller integrated circuit geometries and in the flat panel display and solar markets to larger substrate sizes, which require more advanced process control technology. Research and development expenses consist primarily of salaries and related expenses for personnel engaged in research and development, fees paid to consultants, material costs for prototypes and other expenses related to the design, development, testing and enhancement of our products.

We believe that the continued investment in research and development and ongoing development of new products are essential to the expansion of our markets, and we expect to continue to make significant investment in research and development activities. We are subject to risks if products are not developed in a timely manner, due to rapidly changing customer requirements and competitive threats from other companies and technologies. Our success primarily depends on our products being designed into new generations of equipment for the semiconductor industry and other advanced technology markets. We develop products that are technologically advanced so that they are positioned to be chosen for use in each successive generation of semiconductor capital equipment. If our products are not chosen to be designed into our customers' products, our net revenues may be reduced during the lifespan of those products.

### Selling, General and Administrative

<i>(dollars in millions)</i>	Three Months Ended September 30,			Nine Months Ended September 30,		
	2014	2013	% Change	2014	2013	% Change
Selling, general and administrative expenses	\$ 32.4	\$ 33.2	(2.4)%	\$ 99.2	\$ 102.1	(2.9)%

Selling, general and administrative expenses decreased by \$0.8 million in the three months ended September 30, 2014, compared to the same period in the prior year. The decrease is primarily attributed to a \$1.1 million decrease in compensation related costs, a \$0.3 million decrease in travel expenses and a \$0.3 million decrease in bad debt expense. These decreases are partially offset by a \$1.4 million increase due to unfavorable changes in foreign exchange rates.

Selling, general and administrative expenses decreased by \$2.9 million for the nine months ended September 30, 2014, compared to the same period in the prior year. The decrease is primarily attributed to a \$1.5 million decrease in compensation related costs, a \$1.0 million decrease in bad debt expense, a \$0.6 million decrease in travel expenses and a \$0.3 million decrease due to favorable changes in foreign exchange rates. These decreases are partially offset by an increase in commission expense of \$0.8 million.

### Insurance Reimbursement

<i>(dollars in millions)</i>	Three Months Ended September 30,			Nine Months Ended September 30,		
	2014	2013	% Change	2014	2013	% Change
Insurance reimbursement	\$ —	\$ —	0.0%	\$ —	\$ (1.1)	(100.0)%

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In the third quarter of 2012, we incurred \$5.3 million in charges to settle litigation with former shareholders of one of our former subsidiaries. This litigation was long standing and the decision to reach a settlement was made to eliminate future legal expenses related to the suit. In the second quarter of 2013, we recovered \$1.1 million from our insurance company relating to the 2012 litigation settlement and recorded a gain in our consolidated statement of operations.

### Acquisition Costs

<i>(dollars in millions)</i>	Three Months Ended September 30,			Nine Months Ended September 30,		
	2014	2013	% Change	2014	2013	% Change
Acquisition costs	\$ —	\$ —	0.0%	\$ 0.5	\$ 0.2	191.4%

We incurred \$0.5 million of acquisition costs in the nine months ended September 30, 2014, which was comprised primarily of legal fees related to the GP acquisition that was completed during the second quarter of 2014. We incurred \$0.2 million of acquisition costs in the nine months ended September 30, 2013 related to our acquisition of Alter S.r.l. in March 2013. These costs are comprised of legal fees.

### Restructuring

<i>(dollars in millions)</i>	Three Months Ended September 30,			Nine Months Ended September 30,		
	2014	2013	% Change	2014	2013	% Change
Restructuring	\$ 1.2	\$ 1.1	8.6%	\$ 2.0	\$ 1.4	44.4%

The three and nine months ended September 30, 2014, includes restructuring charges primarily related to severance costs associated with a reduction in workforce of approximately 111 people throughout the Company. The three and nine months ended September 30, 2013, includes restructuring charges primarily related to the consolidation of certain facilities.

### Amortization of Intangible Assets

<i>(dollars in millions)</i>	Three Months Ended September 30,			Nine Months Ended September 30,		
	2014	2013	% Change	2014	2013	% Change
Amortization of intangible assets	\$ 1.8	\$ 0.4	387.1%	\$ 3.2	\$ 1.5	109.0%

Amortization expense increased by \$1.4 million and \$1.7 million for the three and nine months ended September 30, 2014, respectively, compared to the same periods in the prior year. The increases are primarily attributed to increases in amortization expense from the intangible assets acquired through our GP acquisition that was completed during the second quarter of 2014.

### Interest Income, Net

<i>(dollars in millions)</i>	Three Months Ended September 30,			Nine Months Ended September 30,		
	2014	2013	% Change	2014	2013	% Change
Interest income, net	\$ 0.4	\$ 0.2	90.0%	\$ 0.9	\$ 0.7	21.3%

Interest income, increased by \$0.2 million for both the three and nine months ended September 30, 2014, compared to the same periods in the prior year. The increases are attributed to a change in the mix of our investment portfolio.

### Provision for Income Taxes

<i>(dollars in millions)</i>	Three Months Ended September 30,			Nine Months Ended September 30,		
	2014	2013	% Change	2014	2013	% Change
(Benefit) provision for income taxes	\$ (0.6)	\$ 10.1	(105.7)%	\$ 15.9	\$ 12.6	25.8%

Our effective tax rate for the three and nine months ended September 30, 2014 was (2.0)% and 16.3%, respectively. The effective tax rate for the three and nine months ended September 30, 2014 was lower than the U.S. statutory tax rate primarily due to the discrete release of income tax reserves related to the effective settlement of foreign tax examinations in the first and third quarters of 2014. The effective tax rate for the three and nine months ended September 30, 2014 also benefited from a third quarter discrete release of income tax reserves related to the expiration of the statute of limitations for a previously open tax year and a third quarter discrete benefit resulting from foreign tax credits recognized on the payment of a dividend from a foreign subsidiary. The geographic mix of income and profits earned by our international subsidiaries being taxed at rates lower than the U.S. statutory tax rate and the deduction for domestic production activities also had a significant impact in reducing the effective tax rate in the three and nine month periods.

Our effective tax rate for the three and nine months ended September 30, 2013 was 80.4% and 44.8%, respectively. The effective tax rate for the three and nine months ended September 30, 2013, and related income tax expense was higher than the U.S. statutory tax rate primarily due to a decision made during the quarter ended September 30, 2013 to pay currently, at a substantially reduced rate, taxes on certain accumulated earnings of our Israeli subsidiary relating to calendar year periods 2002 through 2011 covered under a tax holiday that expired on December 31, 2011. This additional charge was partially offset by additional U.S. tax incentives realized and recognized as

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discrete events during the three months ended September 30, 2013, and the geographic mix of income and profits earned by our international subsidiaries being taxed at rates lower than the U.S. statutory rate. Additionally, we realized and recognized certain tax incentives as discrete events during the three months ended March 31, 2013. These incentives were reinstated under The American Taxpayer Relief Act of 2012 that was signed into law on January 2, 2013.

We and our subsidiaries are subject to examination by federal, state and foreign tax authorities. The Internal Revenue Service commenced an examination of our U.S. federal tax filings for open tax years 2007 through 2009 during the three months ended June 30, 2012.

Our future effective tax rate depends on various factors, including the impact of tax legislation, the geographic composition of our pre-tax income, and changes in tax reserves for unrecognized tax benefits. We monitor these factors and timely adjust our effective tax rate accordingly. Additionally, the effective tax rate could be adversely affected by changes in the valuation of deferred tax assets and liabilities. In particular, the carrying value of deferred tax assets, which are predominantly in the United States, is dependent on our ability to generate sufficient future taxable income in the United States. While we believe we have adequately provided for all tax positions, amounts asserted by taxing authorities could materially differ from our accrued positions as a result of uncertain and complex application of tax law and regulations. Additionally, the recognition and measurement of certain tax benefits include estimates and judgment by management. Accordingly, we could record additional provisions or benefits for U.S. federal, state, and foreign taxes matters in future periods as new information becomes available.

### **Liquidity and Capital Resources**

Cash and cash equivalents and short-term investments totaled \$435.5 million at September 30, 2014, compared to \$589.6 million at December 31, 2013.

Net cash provided by operating activities was \$67.7 million for the nine months ended September 30, 2014 and resulted mainly from net income of \$81.6 million, which included non-cash charges of \$33.1 million offset by increases in working capital of \$46.6 million. The net increase in working capital was primarily due to a net decrease in income taxes of \$26.8 million, an increase in inventories of \$14.5 million, a decrease in accrued compensation of \$14.1 million, mainly related to a retirement payment to our former chief executive officer, a decrease in accounts payable of \$9.2 million and an increase in other current assets of \$3.1 million. These increases are offset by an increase in other current and non-current liabilities of \$9.9 million, a decrease in trade accounts receivable of \$9.3 million, and a decrease in other assets of \$1.8 million.

Net cash provided by operating activities was \$41.8 million for the nine months ended September 30, 2013 and resulted mainly from net income of \$15.5 million, which included non-cash charges of \$45.5 million offset by increases in working capital of \$18.6 million. The net increase in working capital was primarily due to an increase in inventories of \$17.9 million and an increase in accounts receivable of \$17.7 million, both of which are the result of increased business levels, and an increase in other current assets of \$3.0 million, offset by an increase in accounts payable of \$10.5 million as a result of increased business levels, an increase in accrued compensation of \$6.6 million and a net decrease in income taxes of \$3.9 million.

Net cash used in investing activities of \$8.7 million for the nine months ended September 30, 2014 resulted primarily from \$87.0 million of cash used for the acquisition of GP and \$9.4 million in purchases of production related equipment, partially offset by \$86.0 million in net sales and maturities of short-term and long-term investments. Net cash used in investing activities of \$42.7 million for the nine months ended September 30, 2013, resulted primarily from \$31.2 million in net purchases of short-term and long-term investments, \$9.2 million in purchases of production related equipment and \$2.3 million of cash used primarily for our acquisition of Alter S.r.l.

Net cash used in financing activities was \$46.0 million for the nine months ended September 30, 2014 and consisted primarily of \$26.1 million of dividend payments made to common stockholders and \$20.8 million related to the repurchase of our common stock. Net cash used in financing activities was \$30.7 million for the nine months ended September 30, 2013 and consisted primarily of \$25.5 million of dividend payments made to common stockholders, \$2.9 million related to the repurchase of common stock and \$2.5 million of net payments related to employee stock awards.

Our Japanese subsidiary has lines of credit and short-term borrowing arrangements with two financial institutions which generally expire and are renewed at three month intervals. The lines of credit provide for aggregate borrowings as of September 30, 2014 of up to an equivalent of \$21.0 million U.S. dollars. One of the borrowing arrangements has an interest rate based on the Tokyo Interbank Offer Rate at the time of borrowing and the other has an interest rate based on the Japanese Short-term Prime Lending Rate. There were no borrowings outstanding under these arrangements at September 30, 2014 and December 31, 2013.

On July 25, 2011, our Board of Directors approved a share repurchase program for the repurchase of up to an aggregate of \$200 million of our outstanding common stock from time to time in open market purchases, privately negotiated transactions or through other appropriate



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means. The timing and quantity of any shares repurchased depends upon a variety of factors, including business conditions, stock market conditions and business development activities, including but not limited to merger and acquisition opportunities. These repurchases may be commenced, suspended or discontinued at any time without prior notice. During the nine months ended September 30, 2014, we repurchased approximately 728,000 shares of our common stock for \$20.8 million at an average price of \$28.59 per share. During the nine months ended September 30, 2013, we repurchased approximately 107,000 shares of our common stock for \$2.9 million at an average price of \$26.87 per share.

During the nine months ended September 30, 2014, our Board of Directors declared one quarterly dividend of \$0.16 and two quarterly dividends of \$0.165 per share that totaled \$26.1 million.

On October 27, 2014, the Board of Directors declared a quarterly cash dividend of \$0.165 per share to be paid on December 12, 2014 to stockholders of record as of December 1, 2014. Future dividend declarations, if any, as well as the record and payment dates for such dividends, are subject to the final determination of our Board of Directors.

Our total cash and cash equivalents and short-term marketable investments at September 30, 2014 consisted of \$193.8 million held in the U.S. and \$241.7 million held by our foreign subsidiaries, substantially all of which would be subject to tax in the U.S. if returned to the U.S. We believe our existing U.S. cash and short-term investment balances are adequate to meet domestic operating needs, including estimated working capital, planned capital expenditure requirements and any future cash dividends, if declared, during the next twelve months and the foreseeable future.

As previously noted, we completed the acquisition of GP in the second quarter of 2014, for approximately \$87 million.

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

We do not have any financial partnerships with unconsolidated entities, such as entities often referred to as structured finance, special purpose entities or variable interest entities, which are often established for the purpose of facilitating off-balance sheet arrangements or for other contractually narrow or limited purposes. Accordingly, we have no off-balance sheet arrangements that have or are reasonably expected to have a current or future effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources that are material to investors.

### **Recently Issued Accounting Pronouncements**

In May 2014 the Financial Accounting Standards Board issued Accounting Standards Update (“ASU”) No. 2014-09, “Revenue from Contracts with Customers (Topic 606),” which supersedes all existing revenue recognition requirements, including most industry-specific guidance. The new standard requires a company to recognize revenue when it transfers goods and services to customers in an amount that reflects the consideration that the company expects to be entitled to in exchange for those goods or services. The 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 from costs incurred to obtain or fulfill a contract. This pronouncement is effective for annual reporting periods beginning after December 15, 2016, including interim periods within that reporting period. The two permitted transition methods under the new standard are the full retrospective method, in which case the standard would be applied to each prior reporting period presented, or the modified retrospective method, in which case the cumulative effect of applying the standard would be recognized at the date of initial application. We have not yet selected a transition method. We are currently evaluating the requirements of ASU No. 2014-09 and have not yet determined its impact on our consolidated financial statements.

In August 2014, the Financial Accounting Standards Board issued ASU No. 2014-15, Presentation of Financial Statements—Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern. Under the new guidance, management will be required to assess an entity’s ability to continue as a going concern, and to provide related footnote disclosures in certain circumstances. The provisions of this ASU are effective for annual periods beginning after December 15, 2016, and for annual and interim periods thereafter. This ASU is not expected to have an impact on our financial statements or disclosures.

### **ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.**

Information concerning market risk is contained in the section entitled “Quantitative and Qualitative Disclosures About Market Risk” contained in our Annual Report on Form 10-K for the year ended December 31, 2013 filed with the Securities and Exchange Commission on February 26, 2014. As of September 30, 2014, there were no material changes in our exposure to market risk from December 31, 2013.



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### ITEM 4. CONTROLS AND PROCEDURES.

#### **Evaluation of Disclosure Controls and Procedures**

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of September 30, 2014. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), means controls and other procedures of an issuer that are designed to ensure that information required to be disclosed by the issuer in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Exchange Act is accumulated and communicated to the issuer’s management, including its principal executive and principal financial officers, or persons performing similar functions as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of September 30, 2014, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms and is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer as appropriate to allow timely decisions regarding required disclosure.

#### **Changes in Internal Control over Financial Reporting**

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the three months ended September 30, 2014 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.

We are subject to various legal proceedings and claims, which have arisen in the ordinary course of business.

In the opinion of management, the ultimate disposition of these matters will not have a material adverse effect on our results of operations, financial condition or cash flows.

### ITEM 1A. RISK FACTORS.

Information regarding risk factors affecting the Company’s business are discussed in the Company’s Annual Report on Form 10-K for the year ended December 31, 2013 in the section entitled “Risk Factors.” There have been no material changes from the risks disclosed therein.

### ITEM 6. EXHIBITS.

<u>Exhibit No.</u>	<u>Exhibit Description</u>
+3.1(1)	Restated Articles of Organization of the Registrant
+3.2(2)	Articles of Amendment to Articles of Organization, as filed with the Secretary of State of Massachusetts on May 18, 2001
+3.3(3)	Articles of Amendment to Articles of Organization, as filed with the Secretary of State of Massachusetts on May 16, 2002
+3.4(4)	Amended and Restated By-Laws of the Registrant
†10.1	Amendments, dated July 31, 2014, August 29, 2014 and September 15, 2014, respectively, to Global Supply Agreement, dated April 21, 2005, by and between the Registrant and Applied Materials, Inc.
10.2*	Separation Agreement and General Release, dated September 26, 2014, between Paul Loomis and the Registrant
10.3*	Form of Restricted Stock Unit Agreement for Employees under the 2014 Stock Incentive Plan
31.1	Certification of Principal Executive Officer pursuant to Rule 13a-14(a)/Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended
31.2	Certification of Principal Financial Officer pursuant to Rule 13a-14(a)/Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended
32.1	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
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Calculation Linkbase Document.
101.LAB	XBRL Taxonomy Labels Linkbase Document.
101.PRE	XBRL Taxonomy Presentation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.

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- + Previously filed
  - \* Management contract or compensatory plan arrangement.
  - † Confidential Treatment has been requested as to certain portions of this Exhibit. Such portions have been omitted and filed separately with the Securities and Exchange Commission.
- (1) Incorporated by reference to the Registration Statement on Form S-4 (File No. 333-49738) filed with the Securities and Exchange Commission on November 13, 2000.
  - (2) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2001.
  - (3) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2002.
  - (4) Incorporated by reference to the Current Report on Form 8-K filed with the Securities and Exchange Commission on May 6, 2014.

SIGNATURE

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.

MKS INSTRUMENTS, INC.

November 5, 2014

By: /s/ Seth H. Bagshaw  
Seth H. Bagshaw  
Vice President, Chief Financial Officer and Treasurer  
(Principal Financial Officer)

Confidential Materials omitted and filed separately with the  
Securities and Exchange Commission. Double asterisks denote omissions.



3050 Bowers Avenue | P.O. Box 58039  
Santa Clara, California 95054, U.S.A.  
Telephone: 408 727 5555  
www.appliedmaterials.com

July 31, 2014

Mr. Greg Melvin  
Business Development Manager  
134 Rio Robles Drive  
San Jose, CA 95134

Reference: Global Supply Agreement (GSA), dated April 21, 2005

Dear Greg:

The parties acknowledge that they are still negotiating an amendment to the current GSA which (in addition to other provisions) would create an evergreen term for the amended GSA. MKS has asked for additional time to review Applied's latest proposal for this amendment and so the parties agree to extend the GSA beyond July 30, 2014 until August 31, 2014.

In the interest of a successful conclusion to negotiations, the following performance criteria will be required of both parties during this period:

1. Two Business Days (48 hours) turnaround of agreement drafts
2. Daily discussions between the parties led by Commodity Business Manager (Applied) and Account Manager (MKS) on contractual language topics that are unresolved
3. If negotiations are not completed by August 14th, a negotiation review with the executives of both parties will be held no later than August 18th at a time and location to be determined by Applied

Unless the GSA is terminated sooner, the term of the GSA will now expire on August 31st. If, however, MKS fails to perform to the criteria listed above, or if an additional extension period is required, Applied, at its discretion, can modify payment terms which Applied had previously agreed could stay "as is" to Applied's standard payment terms of net [\*\*] days for a period of no less than [\*\*] days.

All other terms and conditions of the GSA remain unchanged. Additionally, any addenda or other agreements that expire upon the expiration or termination of the GSA shall also be extended through August 31st, unless terminated sooner in accordance with their terms.

Sincerely,

/s/ John A. Casey

John A. Casey  
Sr. Commodity Business Manager

/s/ John A. Casey  
Applied Materials

8/1/14  
Date

/s/ Greg Melvin  
MKS Instruments

8/1/14  
Date



3050 Bowers Avenue | P.O. Box 58039  
Santa Clara, California 95054, U.S.A.  
Telephone: 408 727 5555  
www.appliedmaterials.com

August 29, 2014

Mr. Greg Melvin  
Business Development Manager  
134 Rio Robles Drive  
San Jose, CA 95134

Reference: Global Supply Agreement (GSA) Extension Letter, dated July 31st, 2014

Dear Greg:

The parties acknowledge that they are still negotiating an amendment to the current GSA which (in addition to other provisions) would create an evergreen term for the amended GSA.

The parties have agreed that additional time is required to complete negotiations. The expiration date for the current extension letter is modified from August 31st, 2014 to September 15th, 2014.

All other terms and conditions of the GSA remain unchanged. Additionally, any addenda or other agreements that expire upon the expiration or termination of the GSA shall also be extended through September 15th, unless terminated sooner in accordance with their terms.

Sincerely,

/s/ John A. Casey

John A. Casey  
Sr. Commodity Business Manager

/s/ John A. Casey  
\_\_\_\_\_  
Applied Materials

8/29/14  
\_\_\_\_\_  
Date

/s/ Greg Melvin  
\_\_\_\_\_  
MKS Instruments

8/29/14  
\_\_\_\_\_  
Date



3050 Bowers Avenue | P.O. Box 58039  
Santa Clara, California 95054, U.S.A.  
Telephone: 408 727 5555  
www.appliedmaterials.com

September 15, 2014

Mr. Greg Melvin  
Business Development Manager  
134 Rio Robles Drive  
San Jose, CA 95134

Reference: Global Supply Agreement (GSA) Extension Letter, dated July 31st, 2014

Dear Greg:

The parties acknowledge that they are still negotiating an amendment to the current GSA which (in addition to other provisions) would create an evergreen term for the amended GSA.

The parties have agreed that additional time is required to complete negotiations. The expiration date for the current extension letter is modified from September 15th 2014 to September 30th, 2014.

All other terms and conditions of the GSA remain unchanged. Additionally; any addenda or other agreements that expire upon the expiration or termination of the GSA shall also be extended through September 30th, unless terminated sooner in accordance with their terms.

Sincerely,

/s/ John A. Casey

John A. Casey  
Sr. Commodity Business Manager

/s/ John A. Casey  
\_\_\_\_\_  
Applied Materials

9/15/14  
\_\_\_\_\_  
Date

/s/ Greg Melvin  
\_\_\_\_\_  
MKS Instruments

9/15/14  
\_\_\_\_\_  
Date

**SEPARATION AGREEMENT AND GENERAL RELEASE****Introduction**

Paul Loomis having notified MKS Instruments, Inc. of his voluntary resignation, Loomis and MKS Instruments, Inc. hereby enter into this Separation Agreement and General Release (the "Agreement"), dated 9/26/14, pursuant to which, among other things, Loomis provides MKS Instruments, Inc. with a general release of claims in exchange for the receipt of certain payments and benefits to which he is otherwise not entitled.

**Terms**

1. As used in this Agreement, the following words shall mean the following:

(a) "Corporation" means MKS Instruments, Inc., its subsidiaries, divisions, successors and assigns, its affiliated and predecessor companies or corporations, and their successors and assigns.

(b) "Executive" means Paul Loomis, his heirs, dependents, beneficiaries, executors, administrators, successors, assigns and anyone acting on his behalf.

(c) "Releasees" shall mean the Corporation, its present or former directors, officers, shareholders, members, employees, attorneys and agents, whether in their individual or official capacities and the current and former trustees or administrators of any pension or other benefit plan applicable to the employees or former employees of the Corporation in their official and individual capacities.

2. On June 6, 2014, Executive notified the Corporation of his intent to resign. The Corporation and the Executive agree that Executive will remain employed with the Corporation through and including September 5, 2014 (the "Separation Date") under the terms and conditions set forth in, and subject to the terms and conditions of, his Employment Agreement dated February 24, 2014 (the "Employment Agreement"). Except as otherwise provided in this Agreement or required under the terms of MKS-sponsored benefit plans, following the Separation Date, the Corporation shall have no further obligations to Executive.

3. If Executive performs his duties faithfully and cooperates in the transition of his duties to the employee or employees designated by the Corporation to assume them, and after receiving this signed Agreement from Executive and upon the expiration of the revocation period described in Paragraph 7(d) (the "Effective Date"), the Corporation will provide Executive with the following payments and benefits:

(a) A lump sum payment of \$42,784, which is equal to Executive's salary for the period from the Separation Date through October 31, 2014, less applicable taxes and required withholdings within 8 days of the expiration of the revocation period set forth in Paragraph 7(d) of this Agreement.

(b) If Executive elects continuation of his health insurance benefits pursuant to COBRA, the Corporation will pay Executive's portion of his COBRA premium through and including January 31, 2015.

4. In exchange for receiving the payments and benefits described in paragraph 2 and 3 of the Agreement, Executive releases the Releasees from, and waives, any claim that Executive may have against any of them for any act, omission, incident or situation which may have occurred at any time up until the Effective Date of this Release. This includes releasing and forever discharging the Releasees from and waiving:

(a) Any claims arising under Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act, the Americans with Disabilities Act, the Rehabilitation Act, the Equal Pay Act, 42 U.S.C. §§ 1981, 1982, 1983 and 1985, the Massachusetts Fair Employment Practices Act, M.G.L. c. 151B; the Fair Labor Standards Act; the Family and Medical Leave Act, 29 U.S.C. § 2601 et seq., the Massachusetts Civil Rights Act; the Massachusetts Equal Rights Law; the Massachusetts Minimum Fair Wages Statute (M.G.L. c. 151, §§ 1A and 1B); the Massachusetts Payment of Wages Statute (M.G.L. c. 149, § 148, et seq.); and any other claims arising under Chapters 149 through 154 of the Massachusetts General Laws, and any amendments to these statutes;

(b) Any claims arising under the Family and Medical Leave Act, the National Labor Relations Act, the Sarbanes-Oxley Act of 2002, and all other federal, state, and local laws or ordinances relating to employment;

(c) Any claims arising under the Employee Retirement Income Security Act ("ERISA") (but not claims to vested ERISA benefits) or any other federal or state law pertaining to employee retirement or welfare benefits;

(d) Any claims arising under federal common law or under the common law of any state, including but not limited to, actions in tort, defamation and breach of contract, all claims to any non-vested ownership interest in the Corporation contractual or otherwise, including but not limited to, claims to stock, stock options, restricted stock units or any other form of equity-based compensation; and any claim or damage arising out of Executive's employment with or separation from the Corporation.

(e) Any claims arising under any other federal, state or local statutory or regulatory provision;

(f) Any claims for attorneys' fees and/or costs.

(g) Executive expressly agrees and understands that the release of claims contained in this Agreement is a general release and that any reference to specific claims arising out of or in connection with Executive's employment and/or its termination is not intended to limit the release of claims. Executive expressly agrees and understands that this general release means that he is releasing, remising and discharging the Releasees from and with respect to all claims, whether known or unknown, asserted or unasserted, and whether or not the claims arise out of or in connection with Executive's employment and/or its termination, or otherwise.



Notwithstanding the above, this Agreement does not prevent Executive from pursuing any right or claim which cannot be waived by law. Excepted from this promise not to sue are claims under the ADEA to the extent such an exception is required by law. Further excepted are any claims that cannot be waived by law, including the right to file an application for unemployment insurance benefits and the right to file a charge of discrimination with an administrative agency and/or to participate or assist in an agency investigation. By signing this Agreement, however, Executive is waiving any right to recover any relief in federal or state court, in any administrative proceeding or in arbitration, whether such a claim for relief is brought by Executive or through a federal or state agency or as part of a class action proceeding. This Agreement also does not prevent Executive from pursuing any claim to enforce this Agreement or from asserting any future rights Executive may have to any vested benefits that Executive may be entitled to receive.

5. By signing this Agreement, Executive is hereby acknowledging and agreeing that: (a) Executive is competent to enter into this Agreement and is fully aware of his right to discuss any and all aspects of this Agreement with an attorney of his choice; (b) except for the promises contained in the Agreement, the Corporation has made no other promise of any kind to Executive to cause Executive to sign this Agreement; (c) what Executive is receiving under the Agreement is in addition to anything of value to which he already is entitled; (d) what Executive is receiving is adequate and satisfactory to him; and (e) the payments and benefits specified in the Agreement constitute full and final payment in settlement of all waivable claims of any kind, known or unknown, which Executive may have against the Releasees. Executive further acknowledges that he has carefully read and fully understand all of the provisions of this Agreement, that Executive has had the opportunity to discuss the provisions of this Agreement with an attorney, and that Executive is voluntarily entering into this Agreement.

6. Executive expressly acknowledges that he is not eligible for and will not receive any bonus for 2014, any other bonus or any other compensation pursuant to any bonus or commission plan, policy, practice or agreement. Executive specifically agrees that, notwithstanding any other agreement, his Separation Date (September 5, 2014) shall be considered the date his employment ceased, for all purposes, including but not limited to, for purposes of calculating the vesting of any stock, stock options, restricted stock units or any other form of equity-based compensation. All stock options unvested as of the Separation Date shall be forfeited.

7. This Agreement is intended to comply with the Older Workers Benefit Protection Act of 1990 with regard to Executive's waiver of rights under the ADEA.

(a) Executive acknowledges that he is specifically waiving rights and claims under the ADEA.

(b) The waiver of rights and claims under the ADEA does not extend to any rights of claims arising after the date Executive executes this Agreement.

(c) Executive acknowledges that the Corporation has advised him in writing to consult with an attorney prior to signing this Agreement. Employee further acknowledges that he has had the opportunity to consult with an attorney of his choice with respect to all terms and conditions set forth in this Agreement and to have advice of counsel with respect to his decision to sign and enter into this agreement.

(d) Executive acknowledges and agrees that he has been given a period of up to twenty-one (21) days in which to consider the terms of this Agreement and that this Agreement shall not become effective until seven (7) days following the date of his signature. Prior to that time, Executive may elect to revoke this Agreement. If Executive chooses to revoke this Agreement, Executive agrees to notify the Chair of the Board of Directors of the Corporation in writing. If Executive does not sign and return the Agreement within the specified period, or Executive revokes it, Executive will forfeit any payments contingent on the Agreement. Unless revoked by the Executive, this Agreement shall become effective eight calendar days after the date that Executive signs this Agreement, as evidenced by the date adjacent to his signature at the end of this Agreement (the "Effective Date"). This Agreement shall not be effective and shall be deemed void as if never made if, prior to the Effective Date, Executive revokes his earlier acceptance of this Agreement. Payments contingent upon the Executive entering into the Agreement will not be made (or begin) prior to the expiration of the period specified for revoking this Agreement. If the period for signing and returning the Agreement extends into a later taxable year, any payments contingent upon the Agreement will be made (or begin) in the later taxable year.

8. By signing this Agreement, Executive is hereby acknowledging and agreeing that Executive has been paid all sums due and owing to him as of the date hereof including, but not limited to, all salary, bonus, business expenses, allowances, vacation pay and other benefits and perquisites as a result of Executive's employment with the Corporation, and has received any leaves (paid or unpaid) to which he was entitled during his employment and the Corporation has not denied or interfered with his ability to request or take such leave.

9. Executive agrees that his employment relationship with the Corporation has been severed and forever waives any right to reinstatement, recall or future employment with the Corporation.

10. Executive agrees and acknowledges that Paragraphs 7, 8, 10, 11 and 12 of his Employment Agreement concerning Trade Secrets, Inventions and Patents, Noncompetition, Non-Solicitation and Non-disparagement remain in full force and effect and are incorporated herein by reference. Following Executive's Separation Date all provisions of Executive's Employment Agreement with the exception of those listed in this Paragraph shall be superseded by the terms of this Agreement.

11. This Agreement represents the full and complete understanding of Executive and the Corporation. No prior or contemporaneous oral or written agreements may be offered to alter their terms. This Agreement may not be modified except in a written document signed by both parties.

12. If any portion or provision of this Agreement (including, without limitation, any portion or provision of any section of this Agreement) shall to any extent be declared illegal or unenforceable by a court of competent jurisdiction, then the remainder of this Agreement, or the

application of such portion or provision in circumstances other than those as to which it is so declared illegal or unenforceable, shall not be affected thereby, and each portion and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

13. This Agreement shall be governed by and interpreted in accordance with the laws of the Commonwealth of Massachusetts, without regard to its conflict of law provisions and except to the extent federal law applies.

14. PLEASE READ CAREFULLY. PAUL LOOMIS SHOULD CONSULT WITH COUNSEL BEFORE SIGNING THIS DOCUMENT. THIS AGREEMENT INCLUDES A RELEASE OF KNOWN AND UNKNOWN CLAIMS.

WITNESS: /s/ Alysha LeBlanc  
9/26/14

PAUL LOOMIS  
/s/ Paul Loomis  
9/26/14

ATTEST: /s/ SallyAnn Bouley  
10/6/14  
Date

MKS INSTRUMENTS, INC.  
By: /s/ Cathy Langtry 10/6/14  
Cathy Langtry Date  
Vice President  
Global Human Resources

## MKS INSTRUMENTS, INC.

Restricted Stock Unit Agreement  
Granted Under the 2014 Stock Incentive Plan

AGREEMENT made «Grant Date» (the “Grant Date”), between MKS Instruments, Inc., a Massachusetts corporation (the “Company”), and «Participant Name» (the “Participant”).

For valuable consideration, receipt of which is acknowledged, the parties hereto agree as follows:

1. General. The Company hereby grants to the Participant restricted stock units (“RSUs”) with respect to the number of shares set forth in Exhibit A hereto (the “Shares”) of common stock, no par value, of the Company (“Common Stock”), subject to the terms and conditions set forth in this Agreement and in the Company’s 2014 Stock Incentive Plan (the “Plan”). The RSUs represent a promise by the Company to deliver Shares upon vesting.

(a) Definitions.

(i) “Code” means the U.S. Internal Revenue Code of 1986, as amended.

(ii) “Determination Date” (if applicable) is defined in Exhibit A hereto.

(iii) “Disability” means disability as defined in Section 216(i)(1) of the U.S. Social Security Act.

(iv) “Employ” or “employment” with the Company includes employment with a parent or subsidiary of the Company as defined in Code Section 424(e) or (f), during the time in which such entity is a parent or subsidiary of the Company.

(v) “Forfeiture” means any forfeiture of RSUs pursuant to Section 2.

(vi) “Retirement” means a voluntary termination of employment by the Participant after he or she is at least age sixty (60) and has at least ten (10) Years of Service with the Company. A Participant’s termination shall not be deemed to be on account of Retirement unless he or she provides the Company with notice of the Retirement at least sixty (60) days in advance of his or her proposed termination date and assists in the orderly transition of duties as requested by the Company. The Company may waive such advance notice requirement in its sole discretion.

(vii) “Vesting Date” is defined on Exhibit A hereto.

(viii) “Years of Service” means the total number of years of employment since Participant’s original date of employment with the Company; provided, however, that if the Participant left or was terminated from employment with the Company and was then rehired, any previous employment period shall be included in the Years of Service only if (A) the Participant’s absence from employment with the Company did not exceed five (5) years and (B) the total number of days employed by the Company exceeds the total number of days that the Participant was absent from employment.

(b) Vesting Period. Subject to the terms and conditions of this Agreement (including the Forfeiture provisions described in Section 2 below), the RSUs shall vest according to the terms set forth in Exhibit A. As soon as practicable after each applicable Vesting Date, but no later than thirty (30) days following the Vesting Date, the Company shall instruct its transfer agent to deposit the Shares subject to the RSUs into the Participant's existing equity account at Fidelity Stock Plan Services, LLC, or such other broker with which the Company has established a relationship ("Broker"), subject to payment in accordance with Section 6 of all applicable [withholding]<sup>1</sup> taxes. Notwithstanding the above, the Shares may be distributed following the date contemplated in this Section 1(b) solely to the extent permitted or required under Code Section 409A and regulations thereunder ("Section 409A").

## 2. Forfeiture.

(a) Cessation of Employment. In the event that the Participant ceases to be employed by the Company for any reason or no reason (except for death, Disability or Retirement), with or without cause, prior to a Vesting Date, all of the Participant's unvested RSUs shall automatically be forfeited as of such cessation. For purposes hereof, employment shall not be considered as having ceased during any bona fide leave of absence if such leave of absence has been approved in writing by the Company. However, in the event of any leave of absence, the Company may, in its sole discretion, suspend vesting of the RSUs, subject to applicable law and the provisions of Section 409A. The vesting of the RSUs shall not be affected by any change in the type of employment the Participant has with the Company so long as the Participant continuously maintains employment. In the event that the Participant ceases to be employed by the Company by reason of death, Disability or Retirement prior to a Vesting Date, then all of the Participant's unforfeited RSUs shall become immediately and fully vested (subject to any performance criteria in Exhibit A) and shall no longer be subject to the Forfeiture provisions under this Agreement and the Shares subject to such RSUs shall be delivered to the Participant as soon as practicable (but no later than thirty (30) days) following the Participant's termination date, provided, however, that, if such death, Disability or Retirement occurs prior to the Determination Date, if any, then the number of RSUs to be so vested shall be determined, and become vested, on the Determination Date, and the Shares subject to such vested portion of the RSUs shall be delivered to the Participant as soon as practicable (but no later than thirty (30) days) following such Determination Date.

(b) [Change in Control<sup>2</sup>. Notwithstanding the foregoing, if, prior to any Vesting Date, and within two years after the effectiveness of a Change in Control (as defined below), the Participant is (i) terminated by the Company without Cause (as defined below) or (ii) terminates his employment for Good Reason (as defined below), then, all (or, in the case of a performance-based RSU that is still subject to performance criteria per Exhibit A, the Target Number of RSUs (as defined on Exhibit A, if applicable) of the Participant's unforfeited RSUs shall become immediately and fully vested and shall no longer be subject to the Forfeiture provisions under this Agreement. For purposes of this section "Change in Control" means the first to occur of any of the following events: (I) any "person" (as that term is used in Section 13 and 14(d)(2) of the Securities Exchange Act of 1934 ("Exchange Act")) becomes the beneficial owner (as that term is used in Section 13(d) of the Exchange Act), directly or indirectly, of fifty percent (50%) or more of the Company's capital

<sup>1</sup> Delete for employees outside of the United States.

<sup>2</sup> Only certain of the Company's officers and other employees designated by the Compensation Committee of the Board of Directors will be entitled to acceleration of vesting upon a Change in Control.

stock entitled to vote in the election of directors; (II) the shareholders of the Company approve any consolidation or merger of the Company, other than a consolidation or merger of the Company in which the holders of the common stock of the Company immediately prior to the consolidation or merger hold more than fifty percent (50%) of the common stock of the surviving corporation immediately after the consolidation or merger; or (III) the shareholders of the Company approve the sale or transfer of all or substantially all of the assets of the Company to parties that are not within a “controlled group of corporations” (as defined in Code Section 1563) in which the Company is a member. For purposes of this Agreement, “Cause” shall mean conviction for the commission of a felony, willful failure by the Participant to perform his responsibilities to the Company, or willful misconduct by the Participant. For purposes of this section, “Good Reason” shall mean termination of the Participant’s employment by the Participant within 90 days following (I) a material diminution in the Participant’s positions, duties and responsibilities from those described in the Participant’s Employment Agreement, (II) a material reduction in the Participant’s base salary (other than a reduction which is part of a general salary reduction program affecting senior executives of the Company), (III) a material reduction in the aggregate value of the pension and welfare benefits provided to the Participant from those in effect prior to the Change in Control (other than a reduction which is proportionate to the reductions applicable to other senior executives pursuant to a cost-saving plan that includes all senior executives), (IV) a material breach of any provision of the Participant’s Employment Agreement by the Company or (V) the Company’s requiring the Participant to be based at a location that creates for the Participant a one way commute in excess of 60 miles from his primary residence, except for required travel on the Company’s business to an extent substantially consistent with the business travel obligations of the Participant under the Participant’s Employment Agreement. Notwithstanding the foregoing, a termination shall not be treated as a termination for Good Reason (I) if the Participant shall have consented in writing to the occurrence of the event giving rise to the claim of termination for Good Reason or (II) unless the Participant shall have delivered a written notice to the Company within thirty (30) days of his having actual knowledge of the occurrence of one of such events stating that he intends to terminate his employment for Good Reason and specifying the factual basis for such termination, and such event, if capable of being cured, shall not have been cured within thirty (30) days of the receipt of such notice.]<sup>2</sup>

(c) Clawback. In the event that (i) the Participant is, at any time during the period beginning on the Grant Date and ending on the Vesting Date (or, if later, on the Determination Date) an “executive officer” of the Company (as defined in Rule 3b-7 under the Exchange Act) and (ii) the RSUs are (or were at any time) subject to performance criteria per Exhibit A, then the RSUs (and any Shares issued under the RSUs) shall be subject to potential cancellation, recoupment, rescission, payback or other action in accordance with the terms of any applicable Company clawback policy (the “Clawback Policy”) or any applicable law, as may be in effect from time to time. The Participant hereby acknowledges and consents to the Company’s application, implementation and enforcement of (i) any applicable Clawback Policy as may be in effect from time to time and (ii) any provision of applicable law relating to cancellation, recoupment, rescission or payment of compensation, and agrees that the Company may take such actions as may be necessary to effectuate the Clawback Policy without further consideration or action.

3. Restrictions on Transfer. The Participant shall not sell, assign, transfer, pledge, hypothecate or otherwise dispose of, by operation of law or otherwise (collectively “transfer”) any RSUs, or any interest therein; provided that the Participant may transfer the RSUs to the extent necessary to fulfill a domestic relations order (as defined in Section 414(p)(1)(B) of the Code).

4. Provisions of the Plan. This Agreement is subject to the provisions of the Plan, a copy of which is furnished to the Participant with this Agreement.

5. Section 409A. To the extent the Participant is or becomes subject to U.S. Federal income taxation, the RSUs and payments made pursuant to this Agreement are intended to comply with or qualify for an exemption from the requirements of Section 409A and this Agreement shall be construed consistently therewith. Neither the Company nor the Participant shall have any right to accelerate or defer payment under this Agreement except to the extent specifically permitted or required by Section 409A. Terms defined in the Agreement shall have the meanings given such terms under Section 409A if and to the extent required to comply with Section 409A, including that references to “termination of employment” shall be considered to be references to a “separation from service” as defined under Section 409A. Notwithstanding any other provision of this Agreement, the Company reserves the right, to the extent it deems necessary or advisable, in its sole discretion, to unilaterally amend the Plan and/or this Agreement to ensure that all awards hereunder qualify for exemption from or otherwise comply with Section 409A; provided, however, that the Company makes no undertaking to preclude Section 409A from applying to this Award or to guarantee compliance therewith. Any payments described in this Section 5 that are due within the “short term deferral period” as defined in Section 409A shall not be treated as deferred compensation unless applicable law requires otherwise. If and to the extent any portion of any payment, compensation or other benefit provided to the Participant in connection with his or her employment termination is determined to constitute “nonqualified deferred compensation” within the meaning of Section 409A and the Participant is a specified employee as defined in Section 409A(2)(B)(i) of the Code, as determined by the Company in accordance with its procedures, by which determination the Participant hereby agrees that he or she is bound, such portion of the payment, compensation or other benefit shall not be paid before the day that is six months plus one day after the date of separation from service (as determined under Section 409A (the “New Payment Date”)), except as Section 409A may then permit. The aggregate of any payments that otherwise would have been paid to the Participant during the period between the date of separation from service and the New Payment Date shall be paid to the Participant in a lump sum on the New Payment Date, and any remaining payments will be paid on their original schedule. Notwithstanding the foregoing, the Company, its affiliates, directors, officers and agents shall have no liability to a Participant, or any other party, if the RSU that is intended to be exempt from, or compliant with, Section 409A is not so exempt or compliant, or for any action taken by the Company’s Board of Directors, a committee thereof or its delegates.

6. Withholding Taxes<sup>3</sup>.

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<sup>3</sup> This section is applicable to employees who are located in the United States. For employees located outside of the United States, Section 6 shall read as follows:

(a) The Company's obligation to deliver Shares to the Participant upon the vesting of RSUs shall be subject to the satisfaction of all income tax (including federal, state and local taxes), social insurance, payroll tax, payment on account or other tax related withholding requirements ("Withholding Taxes"). In order to satisfy all Withholding Taxes of the Participant's RSUs, the Participant agrees to the following:

(b) The Participant hereby elects to satisfy all Withholding Taxes obligation that may arise through the retention by the Company of Shares. Accordingly, the Participant hereby instructs the Company, with no further action by the Participant, to deduct and retain from the number of Shares to which the Participant is entitled from the RSUs then vested or scheduled to vest such number of Shares as is equal to the value of the Withholding Taxes. The fair market value of such surrendered Shares will be based on the closing price of the Company's Common Stock on the respective vesting date, provided, however, that if such date is not a trading day, the Company shall use the closing price on the first trading day following such date.

(c) Participant has reviewed with the Participant's own tax advisors the federal, state, local and foreign tax consequences of this equity award and the transactions contemplated by this Agreement. The Participant is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. The Participant understands that the Participant (and not the Company) shall be responsible for the Participant's own tax liability that may arise as a result of this equity award or the transactions contemplated by this Agreement.

(d) The Participant represents to the Company that, as of the date hereof, he/she is not aware of any material nonpublic information about the Company or the Common Stock. The Participant and the Company have structured this Agreement to constitute a "binding contract" relating to the retention by the Company of Common Stock pursuant to this Section 6, consistent with the affirmative defense to liability under Section 10(b) of the Securities Exchange Act of 1934 under Rule 10b5-1(c) promulgated under such Act.

7. Nature of the Grant. In signing this Agreement, the Participant acknowledges that:

(a) The Plan is established voluntarily by the Company, it is discretionary in nature and may be modified, amended, suspended or terminated by the Company at any time, except to the extent otherwise provided in the Plan and this Agreement.

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6. Taxes.

(a) The Company's obligation to deliver Shares to the Participant upon the vesting of the RSUs shall be subject to the satisfaction of all income tax, social insurance, payroll tax or other tax related requirements.

(b) The Participant has reviewed with the Participant's own tax advisors the tax consequences of this equity award and the transactions contemplated by this Agreement. The Participant is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. The Participant understands that the Participant (and not the Company) shall be responsible for the Participant's own tax liability that may arise as a result of this equity award or the transactions contemplated by this Agreement.



(b) The grant of RSUs is voluntary and occasional and does not create any contractual or other right to receive future awards of RSUs, or benefits in lieu of RSUs even if RSUs have been awarded repeatedly in the past.

(c) All decisions with respect to future grants of RSUs, if any, will be at the sole discretion of the Company.

(d) The Participant's participation in the Plan is voluntary.

(e) RSUs are not part of normal or expected compensation or salary for any purpose, including, but not limited to, calculation of any wage payment, severance, redundancy, or other end of service payments, bonuses, long-service awards, pension or retirement benefits or similar payments and in no event should be considered as compensation for, or relating in any way to, past services for the Company or the Participant's employer or arising under any employment agreement.

(f) No voting or dividend or distribution rights apply with respect to the RSUs.

(g) The future value of the underlying Shares is unknown and cannot be predicted with certainty.

(h) If the Participant receives Shares upon vesting, the value of such Shares acquired on vesting of RSUs may increase or decrease in value.

(i) In consideration of the grant of RSUs, no claim or entitlement to compensation or damages arises from termination of the RSUs or diminution in value of the RSUs or Shares received upon vesting of RSUs resulting from termination of the Participant's employment by the Company or the Participant's employer (for any reason whatsoever and whether or not in breach of local labor laws) and the Participant irrevocably releases the Company and his or her employer from any such claim that may arise; if, notwithstanding the foregoing, any such claim is found by a court of competent jurisdiction to have arisen, then, by signing this Agreement, the Participant shall be deemed irrevocably to have waived his or her entitlement to pursue such claim.

(j) If the Participant ceases to be an employee (whether or not in breach of local labor laws), the Participant's right to receive RSUs and vest under the Plan, if any, will terminate effective as of the date that the Participant is no longer actively employed by the Company and will not be extended by any notice period mandated under local law (*e.g.*, active employment would not include a period of "garden leave" or similar period pursuant to local law); the Committee shall have the exclusive discretion to determine when the Participant is no longer actively employed for purposes of the Plan.

8. Data Privacy Notice and Consent. The Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of his or her personal data as described in this paragraph, by and among, as applicable, the Participant's employer and the Company and its subsidiaries and affiliates for, among other purposes, implementing, administering and managing the Participant's participation in the Plan. The

Participant understands that the Company and its subsidiaries hold certain personal information about the Participant, including the Participant's name, home address and telephone number, date of birth, social security number or identification number, salary, nationality, job title, any Shares or directorships held in the Company, details of all options or any other entitlement to Shares awarded, canceled, exercised, vested, unvested or outstanding in the Participant's favor, for the purpose of managing and administering the Plan ("Data"). The Participant further understands that the Company and/or its subsidiaries will transfer Data amongst themselves as necessary for employment purposes, including implementation, administration and management of the Participant's participation in the Plan, and that the Company and/or any of its subsidiaries may each further transfer Data to Broker or such other stock plan service provider or other third parties assisting the Company with processing of Data. The Participant understands that these recipients may be located in the United States, and that the recipient's country may have different data privacy laws and protections than in the Participant's country. The Participant authorizes them to receive, possess, use, retain and transfer the Data, in electronic or other form, for the purposes described in this section, including any requisite transfer to Broker or such other stock plan service provider or other third party as may be required for the administration of the Plan and/or the subsequent holding of Shares of stock on the Participant's behalf. The Participant understands that he or she may, at any time, request access to the Data, request any necessary amendments to it or refuse or withdraw the consents herein, in any case without cost, by contacting in writing his or her local human resources representative. The Participant understands, however, that withdrawal of consent may affect the Participant's ability to participate in or realize benefits from the Plan. For more information on the consequences of refusal to consent or withdrawal of consent, the Participant understands that he or she may contact his or her local human resources representative.

#### 9. Miscellaneous.

(a) No Rights to Employment. The Participant acknowledges and agrees that the vesting of the RSUs pursuant to Section 1 and Exhibit A hereof is earned only in accordance with the terms of such sections. The Participant further acknowledges and agrees that the transactions contemplated hereunder and the vesting schedule set forth herein do not constitute an express or implied promise of continued engagement as an employee for the vesting period, for any other period, or at all.

(b) Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, and each other provision of this Agreement shall be severable and enforceable to the extent permitted by law.

(c) Waiver. Any provision for the benefit of the Company contained in this Agreement may be waived, either generally or in any particular instance, by the Board of Directors of the Company or its delegate.

(d) Binding Effect. This Agreement shall be binding upon and inure to the benefit of the Company and the Participant and their respective heirs, executors, administrators, legal representatives, successors and assigns, subject to the restrictions on transfer set forth in Section 3 of this Agreement.

(e) Notice. All notices required or permitted hereunder shall be in writing and deemed effectively given upon personal delivery or five days after deposit in the United States Post Office, by registered or certified mail, postage prepaid, addressed to the other party hereto at the address shown beneath his or its respective signature to this Agreement, or at such other address or addresses as either party shall designate to the other in accordance with this Section 9(e).

(f) Pronouns. Whenever the context may require, any pronouns used in this Agreement shall include the corresponding masculine, feminine or neuter forms, and the singular form of nouns and pronouns shall include the plural, and vice versa.

(g) Language. If the Participant has received this Agreement or any other document related to the Plan translated into a language other than English and if the translated version is different than the English version, the English version will control.

(h) Electronic Delivery. The Company may, in its sole discretion, decide to deliver any documents related to participation in the Plan, RSUs granted under the Plan or future RSUs that may be granted under the Plan by electronic means or to request the Participant's consent to participate in the Plan by electronic means. The Participant hereby consents to receive such documents by electronic delivery and, if requested, to agree to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

(i) Entire Agreement. This Agreement and the Plan constitute the entire agreement between the parties, and supersedes all prior agreements and understandings, relating to the subject matter of this Agreement.

(j) Amendment. Except as provided in Section 5, this Agreement may be amended or modified only by a written instrument executed by both the Company and the Participant.

(k) Governing Law. This Agreement shall be construed, interpreted and enforced in accordance with the internal laws of the Commonwealth of Massachusetts without regard to any applicable conflicts of laws.

(l) The Participant's Acknowledgments. The Participant acknowledges that he or she: (i) has read this Agreement; (ii) has been represented in the preparation, negotiation, and execution of this Agreement by legal counsel of the Participant's own choice or has voluntarily declined to seek such counsel; (iii) understands the terms and consequences of this Agreement; and (iv) is fully aware of the legal and binding effect of this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

MKS INSTRUMENTS, INC.

By: \_\_\_\_\_  
Name:  
Title:  
2 Tech Drive  
Andover, MA 01810

«Electronic Signature»

Participant's Signature

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER  
PURSUANT TO RULE 13a-14(a)/RULE 15d-14(a) OF THE  
SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, Gerald G. Colella, certify that:

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

Date: November 5, 2014

/s/ Gerald G. Colella

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Gerald G. Colella  
Chief Executive Officer and President  
(Principal Executive Officer)

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER  
PURSUANT TO RULE 13a-14(a)/RULE 15d-14(a) OF THE  
SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, Seth H. Bagshaw, certify that:

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

Date: November 5, 2014

/s/ Seth H. Bagshaw

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Seth H. Bagshaw  
Vice President, Chief Financial Officer and Treasurer  
(Principal 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

In connection with the Quarterly Report on Form 10-Q of MKS Instruments, Inc. (the "Company") for the period ended September 30, 2014, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Gerald G. Colella, Chief Executive Officer and President of the Company, and Seth H. Bagshaw, Vice President, Chief Financial Officer and Treasurer of the Company, each hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, based on his knowledge:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 5, 2014

/s/ Gerald G. Colella

Gerald G. Colella

Chief Executive Officer and President

Dated: November 5, 2014

/s/ Seth H. Bagshaw

Seth H. Bagshaw

Vice President, Chief Financial Officer and Treasurer