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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, 2013

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 30, 2013, the registrant had 53,228,335 shares of common stock outstanding.

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FORM 10-Q  
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ITEM 1. FINANCIAL STATEMENTS.MKS INSTRUMENTS, INC.  
CONSOLIDATED BALANCE SHEETS  
(in thousands, except share and per share data)  
(Unaudited)

	September 30, 2013	December 31, 2012
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 254,778	\$ 287,588
Short-term investments	365,876	327,653
Trade accounts receivable, net	98,133	82,060
Inventories	136,060	134,639
Deferred income taxes	10,059	8,194
Other current assets	28,651	28,048
Total current assets	893,557	868,182
Property, plant and equipment, net	78,020	80,516
Long-term investments	5,183	12,158
Goodwill	150,700	150,733
Intangible assets, net	13,316	11,561
Other assets	31,198	29,412
Total assets	<u>\$ 1,171,974</u>	<u>\$ 1,152,562</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 27,304	\$ 16,803
Accrued compensation	25,190	20,955
Income taxes payable	7,768	4,148
Other current liabilities	35,899	37,405
Total current liabilities	96,161	79,311
Other liabilities	70,391	61,095
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; 53,171,905 and 52,748,849 shares issued and outstanding at September 30, 2013 and December 31, 2012, respectively	113	113
Additional paid-in capital	726,018	718,005
Retained earnings	267,246	278,583
Accumulated other comprehensive income	12,045	15,455
Total stockholders' equity	1,005,422	1,012,156
Total liabilities and stockholders' equity	<u>\$ 1,171,974</u>	<u>\$ 1,152,562</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,	
	2013	2012	2013	2012
Net revenues:				
Products	\$ 139,846	\$ 114,647	\$ 388,998	\$ 427,986
Services	26,607	26,800	76,028	81,726
Total net revenues	<u>166,453</u>	<u>141,447</u>	<u>465,026</u>	<u>509,712</u>
Cost of revenues:				
Cost of products	87,809	68,304	237,590	243,950
Cost of services	16,410	16,572	48,542	48,884
Total cost of revenues	<u>104,219</u>	<u>84,876</u>	<u>286,132</u>	<u>292,834</u>
Gross profit	62,234	56,571	178,894	216,878
Research and development	15,257	14,136	47,318	45,911
Selling, general and administrative	33,158	29,661	102,140	96,332
Litigation	—	5,316	—	5,316
Insurance reimbursement	—	—	(1,071)	—
Completed acquisition costs	—	851	171	1,258
Restructuring	1,126	—	1,364	—
Amortization of intangible assets	361	215	1,537	453
Income from operations	12,332	6,392	27,435	67,608
Interest income	221	299	760	760
Interest expense	13	32	50	92
Income before income taxes	12,540	6,659	28,145	68,276
Provision for income taxes	10,082	4,079	12,606	24,356
Net income	<u>\$ 2,458</u>	<u>\$ 2,580</u>	<u>\$ 15,539</u>	<u>\$ 43,920</u>
Other comprehensive income:				
Changes in value of financial instruments designated as cash flow hedges, net of tax (benefit) expense <sup>(1)</sup>	\$ (891)	\$ (417)	\$ 185	\$ (297)
Foreign currency translation adjustments, net of tax of \$0 for the three and nine months ended September 30, 2013 and 2012	5,593	6,007	(3,582)	1,955
Unrealized gain (loss) on investments, net of tax expense (benefit) <sup>(2)</sup>	48	70	(13)	3
Total comprehensive income	<u>\$ 7,208</u>	<u>\$ 8,240</u>	<u>\$ 12,129</u>	<u>\$ 45,581</u>
Net income per share:				
Basic	<u>\$ 0.05</u>	<u>\$ 0.05</u>	<u>\$ 0.29</u>	<u>\$ 0.83</u>
Diluted	<u>\$ 0.05</u>	<u>\$ 0.05</u>	<u>\$ 0.29</u>	<u>\$ 0.82</u>
Cash dividends per common share	<u>\$ 0.16</u>	<u>\$ 0.16</u>	<u>\$ 0.48</u>	<u>\$ 0.46</u>
Weighted average common shares outstanding:				
Basic	<u>53,165</u>	<u>52,854</u>	<u>52,998</u>	<u>52,679</u>
Diluted	<u>53,513</u>	<u>53,290</u>	<u>53,410</u>	<u>53,240</u>

(1) Tax (benefit) was \$(491) and \$(260) for the three months ended September 30, 2013 and 2012, respectively. Tax expense (benefit) was \$161 and \$(177) for the nine months ended September 30, 2013 and 2012, respectively.

(2) Tax expense was \$26 and \$44 for the three months ended September 30, 2013 and 2012, respectively. Tax (benefit) expense was \$(11) and \$2 for the nine months ended September 30, 2013 and 2012, 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,	
	2013	2012
<b>Cash flows from operating activities:</b>		
Net income	\$ 15,539	\$ 43,920
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	12,715	10,197
Stock-based compensation	11,509	9,900
Provision for excess and obsolete inventory	16,554	12,596
Deferred income taxes	3,623	3,059
Excess tax benefits from stock-based compensation	(825)	(1,998)
Other	1,234	610
Changes in operating assets and liabilities:		
Trade accounts receivable	(17,702)	33,992
Inventories	(17,949)	(893)
Income taxes	3,887	715
Other current assets	(2,974)	2,984
Accrued compensation and other liabilities	5,912	7,516
Accounts payable	10,468	(8,750)
Other non-current assets	(209)	—
Net cash provided by operating activities	<u>41,782</u>	<u>113,848</u>
<b>Cash flows from investing activities:</b>		
Acquisition of businesses, net of cash acquired	(2,326)	(24,385)
Purchases of investments	(374,998)	(363,040)
Maturities of investments	253,231	161,102
Sales of investments	90,580	126,928
Purchases of property, plant and equipment	(9,154)	(11,040)
Other	(59)	(347)
Net cash used in investing activities	<u>(42,726)</u>	<u>(110,782)</u>
<b>Cash flows from financing activities:</b>		
Proceeds from short-term borrowings	6	2,896
Payments on short-term borrowings	(776)	(4,956)
Repurchase of common stock	(2,875)	(7,026)
Net payments related to employee stock awards	(2,464)	(830)
Dividend payments to common stockholders	(25,458)	(24,261)
Excess tax benefits from stock-based compensation	825	1,998
Net cash used in financing activities	<u>(30,742)</u>	<u>(32,179)</u>
Effect of exchange rate changes on cash and cash equivalents	(1,124)	1,165
Decrease in cash and cash equivalents	(32,810)	(27,948)
Cash and cash equivalents at beginning of period	287,588	312,916
Cash and cash equivalents at end of period	<u>\$ 254,778</u>	<u>\$ 284,968</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, 2013 and for the three and nine months ended September 30, 2013 and 2012 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, 2012 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, 2012 filed with the Securities and Exchange Commission on February 26, 2013.

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.

Revision of prior period financial statements

During the three months ended September 30, 2013, the Company identified a prior period error which affected the previous balance sheets of all interim periods in 2013 and all interim and annual periods in 2012 and 2011 and certain footnote disclosures for annual periods in 2012, 2011 and 2010. The Company previously reported the amounts of its uncertain tax positions on the balance sheets net instead of gross. The Company considered the guidance in Accounting Standards Codification (“ASC”) Topic 740-10-45, *Other Presentation Matters* and ASC Topic 210-20, *Offsetting* with respect to this matter. The error had no impact to the income statement, statements of cash flows or the statements of stockholders’ equity of any previously reported periods. In evaluating whether our previously issued consolidated financial statements were materially misstated, the Company considered the guidance in ASC Topic 250, *Accounting Changes and Error Corrections*, ASC Topic 250-10-S99-1, *Assessing Materiality*, and ASC Topic 250-10-S99-2, *Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements*. The Company concluded this error was not material to the prior reporting periods, or to the 2013 results, and therefore, amendments of previously filed reports were not required. Accordingly, during the three months ended September 30, 2013, the Company recorded these prior period adjustments to correct this error. The revisions for these corrections to the applicable prior periods are reflected in the financial information herein and will be reflected in future filings containing such financial information.

The tables below reflect the revisions in the balance sheet line items for the periods ended December 31, 2012 and 2011.

	December 31, 2012		
	As previously reported	Adjustment	As revised
Other assets	\$ 11,692	\$ 17,720	\$ 29,412
Other liabilities	\$ 43,375	\$ 17,720	\$ 61,095

  

	December 31, 2011		
	As previously reported	Adjustment	As revised
Other assets	\$ 12,266	\$ 15,281	\$ 27,547
Other liabilities	\$ 32,211	\$ 15,281	\$ 47,492

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

The tables below reflect the sections in certain footnotes that were affected by the revision for the periods ended December 31, 2012 and 2011.

Other Assets

	December 31, 2012		
	As previously reported	Adjustment	As revised
Deferred tax assets, net	\$ 9,497	\$ —	\$ 9,497
Long-term income tax receivable	—	17,720	17,720
Other	2,195	—	2,195
	<u>\$ 11,692</u>	<u>\$ 17,720</u>	<u>\$ 29,412</u>

  

	December 31, 2011		
	As previously reported	Adjustment	As revised
Deferred tax assets, net	\$ 10,274	\$ —	\$ 10,274
Long-term income tax receivable	—	15,281	15,281
Other	1,992	—	1,992
	<u>\$ 12,266</u>	<u>\$ 15,281</u>	<u>\$ 27,547</u>

Other Liabilities

	December 31, 2012		
	As previously reported	Adjustment	As revised
Long-term income tax payable	\$ 20,880	\$ 17,720	\$ 38,600
Accrued compensation	18,750	—	18,750
Other	3,745	—	3,745
	<u>\$ 43,375</u>	<u>\$ 17,720</u>	<u>\$ 61,095</u>

  

	December 31, 2011		
	As previously reported	Adjustment	As revised
Long-term income tax payable	\$ 16,084	\$ 15,281	\$ 31,365
Accrued compensation	15,174	—	15,174
Other	953	—	953
	<u>\$ 32,211</u>	<u>\$ 15,281</u>	<u>\$ 47,492</u>

Income Taxes

	December 31, 2012		
	As previously reported	Adjustment	As revised
Current taxes:			
United States	\$ 10,431	\$ 4,314	\$ 14,745
State	783	—	783
Foreign	12,074	(4,314)	7,760
	<u>\$ 23,288</u>	<u>\$ —</u>	<u>\$ 23,288</u>

	December 31, 2011		
	<u>As previously reported</u>	<u>Adjustment</u>	<u>As revised</u>
<b>Current taxes:</b>			
United States	\$ 25,824	\$ 15,032	\$ 40,856
State	2,602	—	2,602
Foreign	20,346	(15,032)	5,314
	<u>\$ 48,772</u>	<u>\$ —</u>	<u>\$ 48,772</u>



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

	December 31, 2010		
	As previously reported	Adjustment	As revised
<b>Current taxes:</b>			
United States	\$ 27,789	\$ 8,807	\$ 36,596
State	3,323	—	3,323
Foreign	22,296	(8,807)	13,489
	<u>\$ 53,408</u>	<u>\$ —</u>	<u>\$ 53,408</u>

Segment Note

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

	December 31, 2012		
	As previously reported	Adjustment	As revised
<b>Total segment assets</b>	<b>\$ 216,699</b>	<b>\$ —</b>	<b>\$ 216,699</b>
Cash and cash equivalents and investments	627,399	—	627,399
Other current assets	36,242	—	36,242
Property, plant and equipment, net	80,516	—	80,516
Goodwill and intangible assets, net	162,294	—	162,294
Other assets	11,692	17,720	29,412
<b>Consolidated total assets</b>	<b><u>\$1,134,842</u></b>	<b><u>\$ 17,720</u></b>	<b><u>\$1,152,562</u></b>

	December 31, 2011		
	As previously reported	Adjustment	As revised
<b>Total segment assets</b>	<b>\$ 274,526</b>	<b>\$ —</b>	<b>\$ 274,526</b>
Cash and cash equivalents and investments	573,392	—	573,392
Other current assets	44,856	—	44,856
Property, plant and equipment, net	72,487	—	72,487
Goodwill and intangible assets, net	141,127	—	141,127
Other assets	12,266	15,281	27,547
<b>Consolidated total assets</b>	<b><u>\$1,118,654</u></b>	<b><u>\$ 15,281</u></b>	<b><u>\$1,133,935</u></b>

2) Recently Issued Accounting Pronouncements

In December 2011, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2011-11, “*Disclosures about Offsetting Assets and Liabilities.*” This ASU is intended to enhance the understanding of the effects of netting arrangements on an entity’s financial statements, including financial instruments and derivative instruments that are either offset or subject to a master netting arrangement. The scope of this ASU includes derivatives, sale and repurchase agreements, reverse sale and repurchase agreements, and securities borrowing and lending arrangements. In January 2013, the FASB issued ASU No. 2013-01 “*Clarifying the Scope of Disclosures about Offsetting Assets and Liabilities.*” This standard provided additional guidance on the scope of ASU No. 2011-11. The provisions of this ASU are effective for interim and annual periods beginning on or after January 1, 2013. The adoption of ASU No. 2011-11 did not have a material effect on the Company’s consolidated financial statements.

On February 5, 2013, the FASB issued ASU No. 2013-02, “*Other Comprehensive Income (Topic 220: Reporting of Amounts Reclassified Out of Accumulated Other Comprehensive Income.*” This ASU is intended to improve the reporting of reclassifications out of accumulated other comprehensive income by requiring an entity to provide information about the amounts reclassified out of accumulated other comprehensive income by component. In addition, an entity is required to present, either on the face of the statement where net income is presented or in the notes, significant amounts reclassified out of accumulated other comprehensive income, by the respective line items of net income but only if the amount reclassified is required under U.S. GAAP to be reclassified to net income in its entirety in the same reporting period. For other amounts that are not required under U.S. GAAP to

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

be reclassified in their entirety to net income, an entity is required to cross-reference to other disclosures required under U.S. GAAP that provide additional detail about those amounts. The provisions of this ASU are effective prospectively for interim and annual periods beginning after December 15, 2012. The adoption of ASU No. 2013-12 did not have a material effect on the Company’s consolidated financial statements.

On July 18, 2013, the FASB issued ASU 2013-11, “*Income Taxes (Topic 740): Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists.*” Under the new standard, unrecognized tax benefits will be netted against all available same-jurisdiction loss or other tax carryforwards that would be utilized, rather than only against carryforwards that are created by unrecognized tax benefits. The provisions of this ASU are effective for interim and annual periods beginning on or after December 15, 2013. The adoption of ASU No. 2013-11 is not expected to have a material effect on the Company’s consolidated financial statements.

3) Investments

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

	September 30, 2013	December 31, 2012
<b>Available-for-sale investments:</b>		
Bankers’ acceptance drafts	\$ 330	\$ 242
Time deposits	77,577	52
Commercial paper and corporate obligations	81,308	—
U.S. treasury obligations	—	13,054
U.S. agency obligations	205,702	313,514
	<u>364,917</u>	<u>326,862</u>
<b>Trading investments:</b>		
Mutual funds	959	791
	<u>\$ 365,876</u>	<u>\$ 327,653</u>

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

	September 30, 2013	December 31, 2012
<b>Available-for-sale investments:</b>		
Time deposits	\$ 56	\$ —
U.S. agency obligations	5,127	12,158
	<u>\$ 5,183</u>	<u>\$ 12,158</u>

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, 2013:	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
<b>Short-term investments:</b>				
Bankers’ acceptance drafts	\$ 330	\$ —	\$ —	\$ 330
Time deposits	77,575	5	(3)	77,577
Commercial paper and corporate obligations	81,300	10	(2)	81,308
U.S. agency obligations	205,639	63	—	205,702
	<u>\$364,844</u>	<u>\$ 78</u>	<u>\$ (5)</u>	<u>\$364,917</u>
<b>Long-term investments:</b>				
Time deposits	\$ 56	\$ —	\$ —	\$ 56
U.S. agency obligations	5,122	5	—	5,127
U.S. agency obligations	<u>\$ 5,178</u>	<u>\$ 5</u>	<u>\$ —</u>	<u>\$ 5,183</u>

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

As of December 31, 2012:	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
<b>Short-term investments:</b>				
Time deposits	\$ 52	\$ —	\$ —	\$ 52
Bankers' acceptance drafts	242	—	—	242
U.S. treasury obligations	13,045	9	—	13,054
U.S. agency obligations	313,262	258	(6)	313,514
	<u>\$326,601</u>	<u>\$ 267</u>	<u>\$ (6)</u>	<u>\$326,862</u>
<b>Long-term investments:</b>				
U.S. agency obligations	<u>\$ 12,156</u>	<u>\$ 2</u>	<u>\$ —</u>	<u>\$ 12,158</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 not material for the three and nine months ended September 30, 2013 and 2012, respectively.

The gains and (losses) for trading investments were immaterial for the three and nine months ended September 30, 2013 and 2012.

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 (unadjusted) in active markets for identical assets or liabilities assessed at the measurement 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 – (continued)  
 (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, 2013 and are summarized as follows:

Description	Total September 30, 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	\$ 57,982	\$ 57,982	\$ —	\$ —
Trading securities:				
Mutual funds	959	959	—	—
Available-for-sale securities:				
Bankers' acceptance drafts	330	—	330	—
Time deposits	77,633	—	77,633	—
Commercial paper and corporate obligations	81,308	—	81,308	—
U.S. agency obligations	210,829	195,275	15,554	—
Derivatives – currency forward contracts	746	—	746	—
Total assets	<u>\$ 429,787</u>	<u>\$ 254,216</u>	<u>\$ 175,571</u>	<u>\$ —</u>
<b>Liabilities:</b>				
Derivatives – currency forward contracts	<u>\$ 749</u>	<u>\$ —</u>	<u>\$ 749</u>	<u>\$ —</u>
<b>Reported as follows:</b>				
<b>Assets:</b>				
Cash and cash equivalents <sup>(1)</sup>	\$ 57,982	\$ 57,982	\$ —	\$ —
Short-term investments	365,876	191,107	174,769	—
Other current assets	746	—	746	—
Total current assets	<u>\$ 424,604</u>	<u>\$ 249,089</u>	<u>\$ 175,515</u>	<u>\$ —</u>
Long-term investments	<u>\$ 5,183</u>	<u>\$ 5,127</u>	<u>\$ 56</u>	<u>\$ —</u>
<b>Liabilities:</b>				
Other current liabilities	<u>\$ 749</u>	<u>\$ —</u>	<u>\$ 749</u>	<u>\$ —</u>

(1) The cash and cash equivalent amounts presented in the table above do not include cash of \$192,396 and non-negotiable time deposits of \$4,400 as of September 30, 2013.

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Assets and liabilities of the Company are measured at fair value on a recurring basis as of December 31, 2012 and are summarized as follows:

Description	Total December 31, 2012	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	\$ 51,291	\$ 51,291	\$ —	\$ —
Bankers acceptance drafts	16	—	16	—
Trading securities:				
Mutual funds	791	791	—	—
Available-for-sale securities:				
Bankers' acceptance drafts	242	—	242	—
U.S. treasury obligations	13,054	—	13,054	—
U.S. agency obligations	325,672	295,665	30,007	—
Derivatives – currency forward contracts	961	—	961	—
Total assets	<u>\$ 392,027</u>	<u>\$ 347,747</u>	<u>\$ 44,280</u>	<u>\$ —</u>
<b>Liabilities:</b>				
Derivatives – currency forward contracts	<u>\$ 1,310</u>	<u>\$ —</u>	<u>\$ 1,310</u>	<u>\$ —</u>
<b>Reported as follows:</b>				
<b>Assets:</b>				
Cash and cash equivalents <sup>(1)</sup>	\$ 51,307	\$ 51,291	\$ 16	\$ —
Short-term investments <sup>(2)</sup>	327,601	284,298	43,303	—
Other current assets	961	—	961	—
Total current assets	<u>\$ 379,869</u>	<u>\$ 335,589</u>	<u>\$ 44,280</u>	<u>\$ —</u>
Long-term investments	<u>\$ 12,158</u>	<u>\$ 12,158</u>	<u>\$ —</u>	<u>\$ —</u>
<b>Liabilities:</b>				
Other current liabilities	<u>\$ 1,310</u>	<u>\$ —</u>	<u>\$ 1,310</u>	<u>\$ —</u>

- (1) The cash and cash equivalent amounts presented in the table above do not include cash of \$185,143 and non-negotiable time deposits of \$51,138 as of December 31, 2012.
- (2) The short-term investments presented in the table above do not include non-negotiable time deposits of \$52 as of December 31, 2012.

Trading Mutual Fund Investments

Trading investments consist of certain U.S. and international equity mutual funds and government agency fixed income mutual funds.

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, U.S. treasury obligations 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.

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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 and Euro 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.

As of September 30, 2013 and December 31, 2012, the Company had outstanding forward foreign exchange contracts with gross notional values of \$36,529 and \$41,448, respectively. The following tables provide a summary of the primary net hedging positions and corresponding fair values held as of September 30, 2013 and December 31, 2012:

Currency Hedged (Buy/Sell)	September 30, 2013	
	Gross Notional Value	Fair Value <sup>(1)</sup> Asset/(Liability)
U.S. Dollar/Japanese Yen	\$ 11,763	\$ 746
U.S. Dollar/South Korean Won	18,081	(636)
U.S. Dollar/Euro	4,241	(76)
U.S. Dollar/U.K. Pound Sterling	2,444	(37)
Total	\$ 36,529	\$ (3)

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

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Currency Hedged (Buy/Sell)	December 31, 2012	
	Gross Notional Value	Fair Value <sup>(1)</sup> Asset/(Liability)
U.S. Dollar/Japanese Yen	\$ 13,992	\$ 961
U.S. Dollar/South Korean Won	19,374	(1,180)
U.S. Dollar/Euro	4,217	(57)
U.S. Dollar/U.K. Pound Sterling	3,865	(73)
Total	<u>\$ 41,448</u>	<u>\$ (349)</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:

<u>Derivatives Designated as Hedging Instruments</u>	<u>September 30, 2013</u>	<u>December 31, 2012</u>
<u>Derivative assets:</u>		
Forward exchange contracts	\$ 746	\$ 961
<u>Derivative liabilities:</u>		
Forward exchange contracts	(749)	(1,310)
<b>Total net derivative (liability) designated as hedging instruments<sup>(1)</sup></b>	<b><u>\$ (3)</u></b>	<b><u>\$ (349)</u></b>

(1) The derivative assets of \$746 and derivative liabilities of \$749 are classified in other current assets and other current liabilities, respectively, in the consolidated balance sheet as of September 30, 2013. The derivative assets of \$961 and derivative liabilities of \$1,310 are classified in other current assets and other current liabilities, respectively, in the consolidated balance sheet as of December 31, 2012. 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 losses as of September 30, 2013 that are expected to be reclassified from accumulated OCI into earnings within the next twelve months is \$3.

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

<u>Derivatives Designated as Cash Flow Hedging Relationships</u>	<u>Three Months Ended September 30,</u>		<u>Nine Months Ended September 30,</u>	
	<u>2013</u>	<u>2012</u>	<u>2013</u>	<u>2012</u>
<u>Forward exchange contracts:</u>				
Net (loss) recognized in OCI <sup>(1)</sup>	\$(1,837)	\$(581)	\$ (315)	\$ (312)
Net gain (loss) reclassified from OCI into income <sup>(2)</sup>	\$ 297	\$(739)	\$1,102	\$(1,178)
Net (loss) recognized in expense <sup>(3)</sup>	\$ —	\$ (66)	\$ —	\$ (66)

(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, 2013 and selling, general and administrative expenses for the three and nine months ended September 30, 2012.

(3) Ineffective portion amount excluded from effectiveness testing which is recorded in selling, general and administrative expenses for the three and nine months ended September 30, 2012.

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

Derivatives Not Designated as Hedging Instruments	Three Months Ended September 30,		Nine Months Ended September 30,	
	2013	2012	2013	2012
<b>Forward exchange contracts:</b>				
Net (loss) gain recognized in income <sup>(1)</sup>	\$ (514)	\$ (552)	\$ 141	\$ (552)

(1) The Company has a forward foreign exchange contract that hedges an intercompany loan with its Korean subsidiary. This hedge does not qualify for hedge accounting and any gains (losses) are recorded immediately in selling, general and administrative expenses.

6) Inventories

Inventories consist of the following:

	September 30, 2013	December 31, 2012
Raw materials	\$ 72,240	\$ 76,610
Work-in-process	22,145	19,708
Finished goods	41,675	38,321
	<u>\$ 136,060</u>	<u>\$ 134,639</u>

7) Acquisition

On March 12, 2013, the Company acquired Alter Power Systems S.r.l. (“Alter”), located in Reggio Emilia, Italy. The aggregate purchase price, net of cash acquired and after final debt and working capital adjustments was \$2,426. Total cash paid as of June 30, 2013, net of cash acquired of \$21 was \$2,058. During June 2013, one of two holdback provisions was met and the Company released \$123. The Company will pay the remaining \$368 subject to a final holdback provision being met. Alter develops advanced microwave power generators, components and systems for industrial microwave heating, microwave plasma coating and semiconductor applications. This acquisition strengthens the Company’s existing microwave plasma expertise and product portfolio, and extends its opportunity into high growth, non-plasma microwave applications for industrial processes, food and beverage manufacturing and other markets.

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

Current assets	\$1,053
Property and equipment	211
Intangible assets	2,806
Other assets	67
Total assets acquired	4,137
Debt (Note 11)	770
Deferred taxes and other liabilities	920
Total liabilities assumed	1,690
Total purchase price	2,447
Cash acquired	(21)
Total purchase price, net of cash acquired	<u>\$2,426</u>



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The intangible assets associated with the acquisition are not 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.

Current developed technology	\$2,208	9 year useful life
Trademarks and trade names	598	3 year useful life
	<u>\$2,806</u>	

The results of this acquisition were included in the Company’s consolidated operations beginning on March 12, 2013. The pro forma consolidated statements reflecting the operating results of Alter, had it been acquired as of January 1, 2013, would not differ materially from the operating results of the Company as reported for the quarter ended March 31, 2013. Alter is included in the Company’s Power and Reactive Gas 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, 2012, 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, 2013 and twelve months ended December 31, 2012 were as follows:

	2013			2012		
	Gross Carrying Amount	Accumulated Impairment (Loss)	Net	Gross Carrying Amount	Accumulated Impairment (Loss)	Net
Beginning balance at January 1	\$290,147	\$ (139,414)	\$150,733	\$279,498	\$ (139,414)	\$140,084
Acquired goodwill <sup>(1)</sup>	—	—	—	9,989	—	9,989
Foreign currency translation	(33)	—	(33)	660	—	660
Ending balance at September 30, 2013 and December 31, 2012	<u>\$290,114</u>	<u>\$ (139,414)</u>	<u>\$150,700</u>	<u>\$290,147</u>	<u>\$ (139,414)</u>	<u>\$150,733</u>

(1) In August 2012, the Company purchased Plasmart, Inc. for \$22,607, net of cash acquired. The Company recorded \$9,989 of goodwill in connection with the acquisition.

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Intangible Assets

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

	Gross	Accumulated Amortization	Foreign Currency Translation	Net
As of September 30, 2013:				
Completed technology <sup>(1)</sup>	\$ 84,680	\$ (77,823)	\$ 369	\$ 7,226
Customer relationships	14,571	(9,590)	281	5,262
Patents, trademarks, trade names and other <sup>(1)</sup>	25,636	(24,840)	32	828
	<u>\$124,887</u>	<u>\$ (112,253)</u>	<u>\$ 682</u>	<u>\$13,316</u>

(1) In August 2013, the Company purchased \$268 of net assets of which \$388 was completed technology. In March 2013, the Company purchased Alter for \$2,426, net of cash acquired. The Company recorded \$2,806 of separately identified intangible assets, of which \$2,208 was completed technology and \$598 was trademarks and trade names.

	Gross	Accumulated Amortization	Foreign Currency Translation	Net
As of December 31, 2012:				
Completed technology	\$ 82,084	\$ (77,243)	\$ 254	\$ 5,095
Customer relationships	14,571	(8,886)	312	5,997
Patents, trademarks, trade names and other	25,038	(24,587)	18	469
	<u>\$121,693</u>	<u>\$ (110,716)</u>	<u>\$ 584</u>	<u>\$11,561</u>

Aggregate amortization expense related to acquired intangibles for the three and nine months ended September 30, 2013 were \$361 and \$1,537, respectively. Aggregate amortization expense related to acquired intangibles for the three and nine months ended September 30, 2012 were \$215 and \$453, respectively. Estimated amortization expense for each of the remaining fiscal years is as follows:

Year	Amount
2013 (remaining)	\$ 466
2014	1,768
2015	1,752
2016	1,570
2017	1,541
2018	1,532
Thereafter	4,687

9) Other Assets

	September 30, 2013	December 31, 2012
<b>Other Current Assets:</b>		
Income tax receivable	\$ 10,684	\$ 12,768
Other	17,967	15,280
Total other current assets	<u>\$ 28,651</u>	<u>\$ 28,048</u>
<b>Other Assets:</b>		
Deferred tax assets, net	\$ 9,828	\$ 9,497
Long-term income tax receivable	19,411	17,720
Other	1,959	2,195
Total other assets	<u>\$ 31,198</u>	<u>\$ 29,412</u>

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10) Other Liabilities

	September 30, 2013	December 31, 2012
<b>Other Current Liabilities:</b>		
Product warranties	\$ 6,732	\$ 8,266
Deferred revenue	4,599	9,280
Other	24,568	19,859
<b>Total other current liabilities</b>	<b>\$ 35,899</b>	<b>\$ 37,405</b>
<b>Other Liabilities:</b>		
Long-term income tax payable	\$ 44,309	\$ 38,600
Accrued compensation	21,078	18,750
Other	5,004	3,745
<b>Total other liabilities</b>	<b>\$ 70,391</b>	<b>\$ 61,095</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, 2013 of up to an equivalent of \$23,284 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, 2013 and December 31, 2012.

The Company also had various lines of credit and short and long-term borrowing arrangements as a result of its acquisitions of Plasmart, Inc. in 2012 and Alter in March 2013. All of these lines of credit and borrowing arrangements were paid off and terminated in the second quarter of 2013. There were no outstanding balances at September 30, 2013 and December 31, 2012, respectively.

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,	
	2013	2012
Balance at January 1	\$ 8,266	\$ 8,315
Provision for product warranties	1,705	3,750
Direct charges to warranty liability	(3,142)	(3,733)
Foreign currency translation	(97)	505
<b>Balance at September 30</b>	<b>\$ 6,732</b>	<b>\$ 8,837</b>

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13) Income Taxes

The Company's effective tax rate for the three and nine months ended September 30, 2013 was 80.4% and 44.8%, respectively. The Company's effective tax rate for the three and nine months ended September 30, 2012 was 61.3% and 35.7%, respectively. The effective tax rate for the 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 2002-2011 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. The effective tax rate for the nine months ended September 30, 2012, and related income tax expense was higher than the U.S. statutory tax rate primarily due to the cumulative year-to-date tax effect of a slightly higher annual effective tax rate based on the Company's revised full year forecast, and non-deductible acquisition costs that were offset in part by 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.

At September 30, 2013, the total amount of gross unrecognized tax benefits, which excludes interest and penalties, was approximately \$45,402. At December 31, 2012, the total amount of gross unrecognized tax benefits, which excludes interest and penalties, was approximately \$40,674. The net increase from December 31, 2012 was attributable to an increase in reserves for existing uncertain tax positions. At September 30, 2013, there were \$23,570, excluding interest and penalties, of net unrecognized tax benefits that, if recognized, would affect the annual 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, 2013 and December 31, 2012, the Company had accrued interest on unrecognized tax benefits of approximately \$2,147 and \$1,571, respectively.

On September 13, 2013, the U.S. Department of the Treasury and Internal Revenue Service released final tangible property regulations that provide guidance on the tax treatment regarding the deduction and capitalization of expenditures related to tangible property. While early adoption is available, the effective date to implement these regulations is for tax years beginning on or after January 1, 2014. The Company is currently assessing these rules and the impact to its financial statements, if any, but believes adoption of these regulations will not have a material impact on its consolidated results of operations, cash flows or financial position.

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 present. The statute of limitations for the Company's tax filings in other jurisdictions varies between fiscal years 2006 through present.

While the Company believes it has adequately provided for all tax positions, amounts asserted by taxing authorities could materially differ from the Company's accrued positions as a result of uncertain and complex application of tax regulations. Additionally, the recognition and measurement of certain tax benefits include estimates and judgment by management and inherently includes subjectivity. Accordingly, the Company may record additional provisions or benefits due to U.S. federal, state, and foreign tax-related matters in the future as it revises estimates or settles or otherwise resolves the underlying matters.

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14) Net Income Per Share

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2013	2012	2013	2012
<b>Numerator:</b>				
Net income	\$ 2,458	\$ 2,580	\$ 15,539	\$ 43,920
<b>Denominator:</b>				
Shares used in net income per common share – basic	53,165,000	52,854,000	52,998,000	52,679,000
<b>Effect of dilutive securities:</b>				
Stock options, restricted stock and employee stock purchase plan	348,000	436,000	412,000	561,000
Shares used in net income per common share – diluted	53,513,000	53,290,000	53,410,000	53,240,000
<b>Net income per common share:</b>				
Basic	\$ 0.05	\$ 0.05	\$ 0.29	\$ 0.83
Diluted	\$ 0.05	\$ 0.05	\$ 0.29	\$ 0.82

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, 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.

As of September 30, 2012, stock options and restricted stock units relating to an aggregate of approximately 1,250,000 shares were outstanding. For the three and nine months ended September 30, 2012, the potential dilutive effect of 105,000 and 227,000 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 EquityStock 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, 2013, the Company repurchased 107,000 shares of its common stock for \$2,875, or an average price of \$26.87 per share. No repurchases occurred during the three months ended September 30, 2013.

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, 2013, the Board of Directors authorized three quarterly dividends of \$0.16 per share, which totaled \$25,458 or \$0.48 per share. During the nine months ended September 30, 2012, the Board of Directors declared two quarterly dividends of \$0.15 per share and one quarterly dividend of \$0.16 per share that totaled \$24,261 or \$0.46 per share.

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On October 28, 2013, our Board of Directors declared a quarterly cash dividend of \$0.16 per share to be paid on December 13, 2013 to shareholders of record as of December 2, 2013. 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 has four reportable segments based upon the manner in which information is produced internally and provided to the Company's chief operating decision-maker ("CODM").

The Company develops, manufactures, sells and services products that measure, control, power and monitor critical parameters of advanced manufacturing processes. The Company's 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.

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).

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

The following is net revenues by reportable segment:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2013	2012	2013	2012
Advanced Manufacturing Capital Equipment	\$133,307	\$104,191	\$363,512	\$382,016
Analytical Solutions Group	13,313	15,160	41,217	47,680
Europe Region Sales & Service Operations <sup>(1)</sup>	12,436	13,485	35,287	38,141
Asia Region Sales & Service Operations <sup>(1)</sup>	52,558	46,782	149,267	182,663
Corporate, Eliminations and Other	(45,161)	(38,171)	(124,257)	(140,788)
	<u>\$166,453</u>	<u>\$141,447</u>	<u>\$465,026</u>	<u>\$509,712</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,	
	2013	2012	2013	2012
Advanced Manufacturing Capital Equipment	\$43,151	\$34,829	\$121,647	\$141,521
Analytical Solutions Group	6,758	8,100	21,239	24,485
Europe Region Sales & Service Operations <sup>(1)</sup>	3,427	3,547	10,005	11,292
Asia Region Sales & Service Operations <sup>(1)</sup>	11,580	9,030	31,366	28,143
Corporate, Eliminations and Other	(2,682)	1,065	(5,363)	11,437
	<u>\$62,234</u>	<u>\$56,571</u>	<u>\$178,894</u>	<u>\$216,878</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 capital expenditures by reportable segment for the three and nine months ended September 30, 2013 and 2012:

	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	\$ 1,893	\$ 125	\$ 24	\$ 239	\$ 513	\$2,794
<b>Nine Months Ended September 30, 2013:</b>						
Capital expenditures	\$ 6,599	\$ 265	\$ 137	\$ 435	\$ 1,718	\$9,154

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

	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, 2012:</b>						
Capital expenditures	\$ 2,102	\$ 283	\$ 35	\$ 237	\$ 371	\$ 3,028
<b>Nine Months Ended September 30, 2012:</b>						
Capital expenditures	\$ 6,741	\$ 698	\$ 109	\$ 654	\$ 2,838	\$ 11,040

The following is depreciation and amortization by reportable segment for the three and nine months ended September 30, 2013 and 2012:

	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	\$ 2,861	\$ 319	\$ 86	\$ 294	\$ 685	\$ 4,245
<b>Nine Months Ended September 30, 2013:</b>						
Depreciation and amortization	\$ 8,819	\$ 923	\$ 260	\$ 876	\$ 1,837	\$ 12,715

	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, 2012:</b>						
Depreciation and amortization	\$ 2,409	\$ 248	\$ 102	\$ 537	\$ 344	\$ 3,640
<b>Nine Months Ended September 30, 2012:</b>						
Depreciation and amortization	\$ 6,797	\$ 715	\$ 305	\$ 1,330	\$ 1,050	\$ 10,197

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, 2013:</b>						
Segment assets:						
Accounts receivable(1)	\$ 14,645	\$ 4,263	\$ 6,611	\$ 36,380	\$ 36,234	\$ 98,133
Inventory	107,935	4,354	3,950	28,532	(8,711)	136,060
<b>Total segment assets</b>	<b>\$ 122,580</b>	<b>\$ 8,617</b>	<b>\$ 10,561</b>	<b>\$ 64,912</b>	<b>\$ 27,523</b>	<b>\$ 234,193</b>

	Product Groups		Foreign Sales & Service Operations		Corporate, Eliminations and Other	Total
	Advanced Manufacturing Capital Equipment	Analytical Solutions Group	Europe	Asia		
<b>December 31, 2012:</b>						
Segment assets:						
Accounts receivable(1)	\$ 9,644	\$ 5,889	\$ 5,813	\$ 32,088	\$ 28,626	\$ 82,060
Inventory	108,397	3,841	3,691	29,534	(10,824)	134,639
<b>Total segment assets</b>	<b>\$ 118,041</b>	<b>\$ 9,730</b>	<b>\$ 9,504</b>	<b>\$ 61,622</b>	<b>\$ 17,802</b>	<b>\$ 216,699</b>

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



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

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

	September 30, 2013	December 31, 2012
Total segment assets	\$ 234,193	\$ 216,699
Cash and cash equivalents and investments	625,837	627,399
Other current assets	38,710	36,242
Property, plant and equipment, net	78,020	80,516
Goodwill and intangible assets, net	164,016	162,294
Other assets	31,198	29,412
Consolidated total assets	<u>\$ 1,171,974</u>	<u>\$ 1,152,562</u>

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 four 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,	
	2013	2012	2013	2012
Instruments and Control Products	\$ 60,615	\$ 57,761	\$ 184,729	\$ 205,654
Power and Reactive Gas Products	72,471	52,031	182,294	199,864
Vacuum Products	18,098	15,435	53,588	53,158
Analytical Solutions Group Products	15,269	16,220	44,415	51,036
	<u>\$ 166,453</u>	<u>\$ 141,447</u>	<u>\$ 465,026</u>	<u>\$ 509,712</u>

Sales of Instruments and Control Products, Power and Reactive Gas Products and Vacuum 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.

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.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2013	2012	2013	2012
Net revenues:				
United States	\$ 91,286	\$ 73,775	\$ 252,704	\$ 259,954
Korea	16,491	12,574	46,597	54,472
Japan	13,825	14,270	40,243	67,122
Europe	20,433	21,341	57,958	65,800
Asia (excluding Korea and Japan)	24,418	19,487	67,524	62,364
	<u>\$ 166,453</u>	<u>\$ 141,447</u>	<u>\$ 465,026</u>	<u>\$ 509,712</u>

	September 30, 2013	December 31, 2012
Long-lived assets:(1)		
United States	\$ 61,404	\$ 62,203
Europe	5,175	5,844
Asia	13,398	14,664
	<u>\$ 79,977</u>	<u>\$ 82,711</u>

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

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

Major Customers

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2013	2012	2013	2012
Customer A	16.4%	13.9%	16.7%	14.8%
Customer B	13.5%	8.5%	11.8%	10.3%

17) Restructuring

In the second and third quarters of 2013, the Company initiated restructuring plans to consolidate a small sales office and a small engineering facility to other MKS facilities. The plans included a small reduction in headcount of approximately 27 people.

The Company recorded restructuring charges of \$1,126 and \$1,364 for the three and nine months ended September 30, 2013, respectively. The restructuring charges were primarily for severance and other charges associated with the reductions in workforce. The restructuring plans are expected to be completed by December 31, 2013.

18) Commitments and Contingencies

In the third quarter of 2012, we incurred \$5,316 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 \$1,071 from our insurance company relating to the 2012 litigation settlement.

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, 2012 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, 2013 and 2012, approximately 66% and 64% of our net revenues, respectively, were 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 to semiconductor capital equipment manufacture and semiconductor device manufacture customers declined by 6% for the nine months ended September 30, 2013 compared to the same period in the prior year. Throughout all of 2012, we witnessed a drop in semiconductor capital spending, but conditions stabilized in the fourth quarter of 2012 and our semiconductor net revenues have increased sequentially in the first three quarters of 2013. In the three months ended September 30, 2013 we saw a sequential increase of 10% from the three months ended June 30, 2013. 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 other advanced markets, which exclude semiconductor capital equipment and semiconductor device product applications, declined by 14% for the nine months ended September 30, 2013 compared to the same period for the prior year. This decline was primarily caused by a significant decrease in our solar product revenues, which declined by 72% for the nine months ended September 30, 2013, as this industry has contracted over the past few years due to oversupply. Excluding sales to customers in the solar market, revenues to other advanced markets declined by 6% for the nine months ended September 30, 2013 compared to the same period in the prior year.

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A significant portion of our net revenues is to customers in international markets. For the nine months ended September 30, 2013 and 2012, international net revenues accounted for approximately 46% and 49% 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 March 12, 2013, we completed our acquisition of Alter Power Systems S.r.l. (“Alter”) located in Reggio Emilia, Italy. Alter develops advanced microwave power generators, components and systems for industrial microwave heating, microwave plasma coating and semiconductor applications. The purchase price net of cash acquired and after final debt and working capital adjustments, was \$2.4 million. Total cash paid as of June 30, 2013, net of cash acquired was \$2.1 million. During June 2013, one of two holdback provisions was met and we released an additional \$0.1. We will pay the remaining \$0.4 subject to a final holdback provision being met.

### 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, 2012. 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, 2012 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,	
	2013	2012	2013	2012
Net revenues:				
Product	84.0%	81.1%	83.7%	84.0%
Services	16.0	18.9	16.3	16.0
Total net revenues	100.0	100.0	100.0	100.0
Cost of revenues:				
Cost of product revenues	52.7	48.3	51.1	47.9
Cost of service revenues	9.9	11.7	10.4	9.6
Total cost of revenues	62.6	60.0	61.5	57.5
Gross profit	37.4	40.0	38.5	42.5
Research and development	9.2	10.0	10.2	9.0
Selling, general and administrative	19.9	21.0	22.0	18.9
Insurance reimbursement	—	—	(0.2)	—
Litigation	—	3.8	—	1.0
Completed acquisition costs	—	0.6	—	0.2
Restructuring	0.7	—	0.3	—
Amortization of intangible assets	0.2	0.1	0.3	0.1
Income from operations	7.4	4.5	5.9	13.3
Interest income, net	0.1	0.2	0.1	0.1
Income from operations before income taxes	7.5	4.7	6.0	13.4
Provision for income taxes	6.0	2.9	2.7	4.8
Net income	1.5%	1.8%	3.3%	8.6%

### Net Revenues

(dollars in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2013	2012	% Change	2013	2012	% Change
Product	\$ 139.8	\$ 114.6	22.0%	\$ 389.0	\$ 428.0	(9.1)%
Service	26.6	26.8	(0.7)	76.0	81.7	(7.0)
Total net revenues	\$ 166.4	\$ 141.4	17.7%	\$ 465.0	\$ 509.7	(8.8)%

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Product revenues increased \$25.2 million during the three months ended September 30, 2013 compared to the same period in the prior year. Product revenues from customers in the semiconductor markets increased by 41.7%, while product revenues to customers in our non-semiconductor markets decreased by 6.8%. The increase in the semiconductor markets we serve was mainly the result of volume increases we have seen in three consecutive quarters in 2013 in product revenues to the semiconductor markets. The decrease in our non-semiconductor markets was primarily caused by decreases in our solar and general industrial markets.

Product revenues decreased \$39.0 million during the nine months ended September 30, 2013, compared to the same period in the prior year. Product revenues from customers in the semiconductor markets decreased by 5.5% and product revenues to customers in our non-semiconductor markets decreased by 15.6%. The decrease in the semiconductor markets we serve was mainly the result of large volume decreases throughout 2012, although we have seen smaller increases in three consecutive quarters in 2013. The decrease in products revenues for the non-semiconductor markets was primarily caused by decreases in the solar markets, which decreased by 73.8%.

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 remained relatively flat for the three months ended September 30, 2013 compared to the same period in the prior year. Service revenues decreased \$5.7 million during the nine months ended September 30, 2013, compared to the same period in the prior year, which is consistent with the decrease in product revenues.

Total international net revenues, including product and service, were \$75.2 million and \$212.3 million for the three and nine months ended September 30, 2013, or 45.2% and 45.7% of net revenues, compared to \$67.7 million and \$249.8 million for the three and nine months ended September 30, 2012, or 47.8% and 49.0% of net revenues, respectively. The increase in the three month period ended September 30, 2013 compared to the same period in the prior year is primarily attributed to an increase in sales in Korea (which was partially attributed to our acquisition of Plasmart, Inc. ("Plasmart") in August 2012) and other Asian markets, excluding Japan.

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

	Three Months Ended September 30,			Nine Month Ended September 30,		
	2013	2012	% Change	2013	2012	% Change
Net revenues:						
Advanced Manufacturing Capital Equipment	\$ 133.3	\$ 104.2	27.9%	\$ 363.5	\$ 382.0	(4.8)%
Analytical Solutions Group	13.3	15.1	(12.2)	41.2	47.7	(13.6)
Europe Region Sales & Service	12.4	13.5	(7.8)	35.3	38.1	(7.5)
Asia Region Sales & Service	52.6	46.8	12.3	149.3	182.7	(18.3)
Corporate, Eliminations and Other	(45.2)	(38.2)	(18.3)	(124.3)	(140.8)	11.7
Total net revenues	<u>\$ 166.4</u>	<u>\$ 141.4</u>	<u>17.7%</u>	<u>\$ 465.0</u>	<u>\$ 509.7</u>	<u>(8.8)%</u>

Net revenues for the Advanced Manufacturing Capital Equipment and Asia Region Sales & Service segments increased by 27.9 % and 12.3%, respectively, for the three months ended September 30, 2013 compared to the same period in the prior year. These increases are mainly due to an increase of 57.6% in revenues from our top two customers for the three months ended September 30, 2013 compared to the same period in the prior year. These customers are mainly in the semiconductor market. Net revenues for the Advanced Manufacturing Capital Equipment and Asia Region Sales & Service segments decreased by 4.8% and 18.3%, respectively for the nine months ended September 30, 2013 compared to the same period in the prior year. This decrease was mainly a result of lower semiconductor revenue volumes.

The decrease in net revenues of 7.8% and 7.5% for the three and nine months ended September 30, 2013, respectively, in the Europe Region Sales & Service segment and 12.2% and 13.6% for the three and nine months ended September 30, 2013, respectively, for the Analytical Solutions Group segment, compared to the same periods in the prior year was mainly due to the fact that sales to the semiconductor industry represent a smaller portion of sales for these segments. As these segments are much smaller than the Advanced Manufacturing Capital Equipment segment and Asia Region Sales & Service segment, a small dollar change can cause the percentage change to significantly increase or decrease.

## [Gross Profit](#)

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2013	2012	% Points Change	2013	2012	% Points Change
Gross profit as a percentage of net revenues:						
Product	37.2%	40.4%	(3.2)	38.9%	43.0%	(4.1)
Service	38.3	38.2	0.1	36.2	40.2	(4.0)
Total gross profit percentage	<u>37.4%</u>	<u>40.0%</u>	<u>(2.6)</u>	<u>38.5%</u>	<u>42.5%</u>	<u>(4.0)</u>

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Gross profit as a percentage of net product revenues decreased by 3.2 percentage points for the three months ended September 30, 2013, compared to the same period in the prior year. The decrease is primarily due to higher excess and obsolete inventory charges of 4.0 percentage points primarily related to a unique product in a solar application in which slowing market conditions provide uncertainty as to the net realizable value of this inventory, unfavorable product mix of 1.4 percentage points and unfavorable foreign exchange of 0.8 percentage points. These decreases were partially offset by favorable revenue volumes of 2.7 percentage points and lower warranty charges of 0.5 percentage points.

Gross profit as a percentage of net product revenues decreased by 4.1 percentage points for the nine months ended September 30, 2013, compared to the same period in the prior year. The decrease is primarily due to unfavorable product mix of 3.1 percentage points, higher excess and obsolete inventory charges of 1.1 percentage points and unfavorable revenue volumes of 0.6 percentage points. These decreases were partially offset by lower warranty charges of 0.6 percentage points and lower overhead expenses of 0.4 percentage points.

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

Gross profit as a percentage of net service revenues remained relatively flat for the three months ended September 30, 2013, compared to the same period in the prior year.

Gross profit as a percentage of net service revenues decreased by 4.0 percentage points for the nine months ended September 30, 2013, compared to the same period in the prior year. The decrease is primarily due to unfavorable product mix of 1.1 percentage points, higher overhead spending of 1.0 percentage points, unfavorable revenue volumes of 0.9 percentage points and unfavorable foreign exchange of 0.7 percentage points.

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

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2013	2012	% Points Change	2013	2012	% Points Change
<b>Gross profit:</b>						
Advanced Manufacturing Capital Equipment	32.4%	33.4%	(1.0)	33.5%	37.0%	(3.5)
Analytical Solutions Group	50.8	53.4	(2.6)	51.5	51.4	0.1
Europe Region Sales & Service	27.6	26.3	1.3	28.4	29.6	(1.2)
Asia Region Sales & Service	22.0	19.3	2.7	21.0	15.4	5.6
Corporate, Eliminations and Other	5.9	(2.8)	8.7	4.3	(8.1)	12.4
<b>Total gross profit</b>	<b>37.4%</b>	<b>40.0%</b>	<b>(2.6)</b>	<b>38.5%</b>	<b>42.5%</b>	<b>(4.0)</b>

Gross profit as a percentage of net revenues for the Advanced Manufacturing Capital Equipment segment decreased 1.0 percentage points and 3.5 percentage points for the three and nine months ended September 30, 2013, compared to the same periods in the prior year. The decrease for the three months ended September 30, 2013 is primarily related to higher excess and obsolete inventory charges and unfavorable product mix, partially offset by favorable revenue volumes and lower warranty charges. The decrease for the nine months ended September 30, 2013 is primarily related to higher excess and obsolete inventory charges, unfavorable product mix and unfavorable revenue volumes.

Gross profit as a percentage of net revenues for the Analytical Solutions Group decreased 2.6 percentage points and increased 0.1 percentage points for the three and nine months ended September 30, 2013, respectively, compared to the same periods in the prior year. The decrease for the three months ended September 30, 2013 is primarily related to higher warranty charges, unfavorable product mix and unfavorable revenue volumes. The increase for the nine months ended September 30, 2013, is primarily related to favorable product mix, partially offset by unfavorable revenue volumes.

Gross profit as a percentage of net revenues for the Europe Region Sales & Service operations increased 1.3 percentage points and decreased 1.2 percentage points for the three and nine months ended September 30, 2013, compared to the same periods in the prior year. The increase for the three months ended September 30, 2013 is primarily related to favorable product mix. The decrease for the nine months ended September 30, 2013 is primarily related higher excess and obsolete inventory charges, higher warranty costs and unfavorable revenue volumes.

Gross profit as a percentage of net revenues for the Asia Region Sales & Service operations increased 2.7 percentage points and 5.6 percentage points for the three and nine months ended September 30, 2013, respectively, compared to the same periods in the prior year. The increase for the three months ended September 30, 2013 is primarily related to lower overhead spending, favorable product mix and favorable

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revenue volumes partially offset by unfavorable foreign exchange. The increase for the nine months ended September 30, 2013 is primarily related to favorable product mix, lower excess and obsolete inventory charges, partially offset by unfavorable foreign exchange and unfavorable revenue volumes.

### Research and Development

<i>(dollars in millions)</i>	<u>Three Months Ended September 30,</u>			<u>Nine Months Ended September 30,</u>		
	<u>2013</u>	<u>2012</u>	<u>% Change</u>	<u>2013</u>	<u>2012</u>	<u>% Change</u>
Research and development expenses	\$ 15.2	\$ 14.1	7.9%	\$ 47.3	\$ 45.9	3.1%

Research and development expenses increased \$1.1 million for the three months ended September 30, 2013, compared to the same period in the prior year. This increase includes an increase of \$1.2 million in compensation related expenses and an increase of \$0.3 million in project materials. These increases are partially offset by a decrease in patent costs of \$0.2 million.

Research and development expenses increased \$1.4 million for the nine months ended September 30, 2013, compared to the same period in the prior year. This increase includes an increase of \$2.0 million in compensation related expenses and an increase of \$0.3 million in patent related expenses. These increases are partially offset by a decrease in consulting and professional fees of \$0.5 million, a decrease of \$0.2 million in project materials and a decrease of \$0.2 million in travel and entertainment expenses.

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 as well as legal costs associated with maintaining our intellectual property.

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>	<u>Three Months Ended September 30,</u>			<u>Nine Months Ended September 30,</u>		
	<u>2013</u>	<u>2012</u>	<u>% Change</u>	<u>2013</u>	<u>2012</u>	<u>% Change</u>
Selling, general and administrative expenses	\$ 33.2	\$ 29.7	11.8%	\$ 102.1	\$ 96.3	6.0%

Selling, general and administrative expenses increased by \$3.5 million for the three months ended September 30, 2013, compared to the same period in the prior year. This increase is primarily attributed to a \$3.3 million increase in salaries and compensation related expenses.

Selling, general and administrative expenses increased by \$5.8 million for the nine months ended September 30, 2013, compared to the same period in the prior year. This increase includes a \$6.1 million increase in salaries and compensation related expense, \$0.8 million due to unfavorable foreign exchange and \$0.7 million of bad debt expense. These increases are partially offset by a decrease of \$1.5 million in commissions and a \$1.4 million decrease in consulting and professional fees.

### Litigation

<i>(dollars in millions)</i>	<u>Three Months Ended September 30,</u>			<u>Nine Months Ended September 30,</u>		
	<u>2013</u>	<u>2012</u>	<u>% Change</u>	<u>2013</u>	<u>2012</u>	<u>% Change</u>
Litigation	\$ —	\$ 5.3	(100.0)%	\$ —	\$ 5.3	(100.0)%

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We settled litigation with shareholders of one of our former subsidiaries for \$5.3 million, during the three months ended September 30, 2012. The complaint alleged certain claims against us including breach of contract and implied covenants, and statutory violations. The claims sought unspecified damages and equitable relief. This litigation was long standing and we made the decision to reach a settlement primarily to eliminate future legal expenses related to the suit.

### Insurance reimbursement

<i>(dollars in millions)</i>	Three Months Ended September 30,			Nine Months Ended September 30,		
	2013	2012	% Change	2013	2012	% Change
Insurance reimbursement	\$ —	\$ —	— %	\$ (1.1)	\$ —	(100.0)%

In the second quarter of 2013, we recovered \$1.1 million from our insurance company relating to the 2012 litigation settlement with certain former shareholders that we settled in the third quarter of 2012.

### Completed Acquisition Costs

<i>(dollars in millions)</i>	Three Months Ended September 30,			Nine Months Ended September 30,		
	2013	2012	% Change	2013	2012	% Change
Completed acquisition costs	\$ —	\$ 0.9	(100.0)%	\$ 0.2	\$ 1.3	(86.4)%

We incurred \$0.2 million of acquisition costs in the nine months ended September 30, 2013 related to the acquisition of Alter in March 2013. These costs are comprised of legal fees.

We incurred \$0.9 million and \$1.3 million of acquisition costs in the three and nine months ended September 30, 2012, respectively, related to the Plasmart acquisition in August of 2012. These costs are comprised of investment banking fees, legal fees and due diligence fees.

### Restructuring

<i>(dollars in millions)</i>	Three Months Ended September 30,			Nine Months Ended September 30,		
	2013	2012	% Change	2013	2012	% Change
Restructuring	\$ 1.1	\$ —	100.0%	\$ 1.4	\$ —	100.0%

The three and nine month periods ended September 30, 2013, include restructuring charges primarily related to the consolidation of certain facilities. The majority of these costs are related to severance expenses and we expect these programs to be completed by December 31, 2013.

### Amortization of Intangible Assets

<i>(dollars in millions)</i>	Three Months Ended September 30,			Nine Months Ended September 30,		
	2013	2012	% Change	2013	2012	% Change
Amortization of intangible assets	\$ 0.4	\$ 0.2	67.9%	\$ 1.5	\$ 0.5	239.3%

Amortization expense for the three and nine months ended September 30, 2013 increased by \$0.2 million and \$1.0 million, compared to the same periods in the prior year. These increases are primarily attributed to an increase in intangible assets from our August 2012 acquisition of Plasmart, Inc. and our March 2013 acquisition of Alter, offset by intangible assets that became fully amortized.

### Interest Income, Net

<i>(dollars in millions)</i>	Three Months Ended September 30,			Nine Months Ended September 30,		
	2013	2012	% Change	2013	2012	% Change
Interest income, net	\$ 0.2	\$ 0.3	(22.1)%	\$ 0.7	\$ 0.7	6.3%

Interest income, net remained relatively flat for the three and nine months ended September 30, 2013.

### Provision for Income Taxes

<i>(dollars in millions)</i>	Three Months Ended September 30,			Nine Months Ended September 30,		
	2013	2012	% Change	2013	2012	% Change
Provision for income taxes	\$ 10.1	\$ 4.1	147.2%	\$ 12.6	\$ 24.4	(48.2)%

Our effective tax rate for the three and nine months ended September 30, 2013 was 80.4% and 44.8%, respectively. Our effective tax rate for the three and nine months ended September 30, 2012 was 61.3% and 35.7%. The effective tax rate for the 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



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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 2002-2011 covered under our 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 the geographic mix of income and profits earned by our 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. The effective tax rate for the nine months ended September 30, 2012, and related income tax expense was higher than the U.S. statutory tax rate primarily due to the cumulative year-to-date tax effect of a slightly higher annual effective tax rate based on the Company's revised full year forecast, and non-deductible acquisition costs that were offset in part by the geographic mix of income and profits earned by our international subsidiaries being taxed at rates lower than the U.S. statutory rate.

At September 30, 2013, our total amount of gross unrecognized tax benefits, which excludes interest and penalties, was approximately \$45.4 million. At December 31, 2012, our total amount of gross unrecognized tax benefits, which excludes interest and penalties, was approximately \$40.7 million. The net increase from December 31, 2012 was attributable to an increase in reserves for existing uncertain tax positions. At September 30, 2013, there were \$23.6 million, excluding interest and penalties, of net unrecognized tax benefits that, if recognized, would affect the annual tax rate. We accrue 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, 2013 and December 31, 2012, we had accrued interest on unrecognized tax benefits of approximately \$2.1 million and \$1.6 million, respectively.

On September 13, 2013, the U.S. Department of the Treasury and Internal Revenue Service released final tangible property regulations that provide guidance on the tax treatment regarding the deduction and capitalization of expenditures related to tangible property. While early adoption is available, the effective date to implement these regulations is for tax years beginning on or after January 1, 2014. We are currently assessing these rules and the impact to our financial statements, if any, but believe adoption of these regulations will not have a material impact on our consolidated results of operations, cash flows or financial position.

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 quarter ended June 30, 2012. As a result, the U.S. statute of limitations remains open between tax years 2007 through present. The statute of limitations for our tax filings in other jurisdictions varies between fiscal years 2006 through present.

Our future effective income tax rate depends on various factors, such as tax legislation and the geographic composition of our pre-tax income. 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 regulations. Additionally, the recognition and measurement of certain tax benefits include estimates and judgment by management and inherently includes subjectivity. Accordingly, we could record additional provisions or benefits due to U.S. federal, state, and foreign tax-related matters in the future as we revise estimates or settle or otherwise resolve the underlying matters.

## **Liquidity and Capital Resources**

Cash and cash equivalents and short-term investments totaled \$620.6 million at September 30, 2013 compared to \$615.2 million at December 31, 2012.

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 \$40.8 million offset by increases in working capital of \$18.6 million. The 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 and other liabilities of \$5.9 million and an increase in income taxes of \$3.9 million.

Net cash provided by operating activities was \$113.8 million for the nine months ended September 30, 2012 and resulted mainly from net income of \$43.9 million, which included non-cash charges of \$32.7 million and a decrease in working capital of \$35.6 million. The decrease in working capital consisted primarily of a \$34.0 million decrease in trade accounts receivable as a result of lower revenues and favorable collections, a \$7.5 million increase in accrued compensation and other liabilities, and a \$3.0 million decrease in other current assets, offset by a decrease in accounts payable of \$8.8 million.

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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 the acquisition of Alter. Net cash used in investing activities of \$110.8 million for the nine months ended September 30, 2012, resulted primarily from the \$24.4 million for the acquisition of Plasmart, net purchases of short-term and long-term investments of \$75.0 million, and \$11.0 million in purchases of production related equipment.

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. Net cash used in financing activities was \$32.2 million for the nine months ended September 30, 2012 and consisted primarily of \$24.3 million of dividend payments made to common stockholders, \$7.0 million related to the repurchase of common stock and \$2.1 million of net payments made on short-term borrowings.

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, 2013 of up to an equivalent of \$23.3 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, 2013 and December 31, 2012.

We also had various lines of credit and short and long-term borrowing arrangements as a result of our acquisitions of Plasmart, Inc. in 2012 and Alter in March 2013. All of these lines of credit and borrowing arrangements were paid off and terminated in the second quarter of 2013. There were no outstanding balances at September 30, 2013 and December 31, 2012.

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 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, 2013, we repurchased approximately 107,000 shares of our common stock for \$2.9 million at an average price of \$26.87 per share. No repurchases occurred during three months ended September 30, 2013.

During the nine months ended September 30, 2013, our Board of Directors declared three quarterly dividends of \$0.16 per share that totaled \$25.5 million.

On October 28, 2013, the Board of Directors declared a quarterly cash dividend of \$0.16 per share to be paid on December 13, 2013 to stockholders of record as of December 2, 2013. 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, 2013 consisted of \$347.0 million held in the U.S. and \$273.6 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, or share repurchases in the next twelve months and foreseeable future.

### **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 December 2011, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2011-11, "*Disclosures about Offsetting Assets and Liabilities*." This ASU is intended to enhance the understanding of the effects of netting arrangements on an entity's financial statements, including financial instruments and derivative instruments that are either offset or subject to a master netting arrangement. The scope of this ASU includes derivatives, sale and repurchase agreements, reverse sale and repurchase agreements, and securities borrowing and lending arrangements. In January 2013, the FASB issued ASU No. 2013-01 "*Clarifying the Scope of Disclosures about Offsetting Assets and Liabilities*." This standard provided additional guidance on the scope of ASU 2011-11. The provisions of this ASU are effective for interim and annual periods beginning on or after January 1, 2013. The adoption of ASU No. 2011-11 did not have a material effect on our consolidated financial statements.

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On February 5, 2013, the FASB issued ASU No. 2013-02, *“Other Comprehensive Income (Topic 220): Reporting of Amounts Reclassified Out of Accumulated Other Comprehensive Income.”* This ASU is intended to improve the reporting of reclassifications out of accumulated other comprehensive income by requiring an entity to provide information about the amounts reclassified out of accumulated other comprehensive income by component. In addition, an entity is required to present, either on the face of the statement where net income is presented or in the notes, significant amounts reclassified out of accumulated other comprehensive income, by the respective line items of net income but only if the amount reclassified is required under U.S. GAAP to be reclassified to net income in its entirety in the same reporting period. For other amounts that are not required under U.S. GAAP to be reclassified in their entirety to net income, an entity is required to cross-reference to other disclosures required under U.S. GAAP that provide additional detail about those amounts. The provisions of this ASU are effective prospectively for interim and annual periods beginning after December 15, 2012. The adoption of ASU No. 2013-02 did not have a material effect on our consolidated financial statements.

On July 18, 2013, the FASB issued ASU No. 2013-11, *“Income Taxes (Topic 740): Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists.”* Under the new standard, unrecognized tax benefits will be netted against all available same-jurisdiction loss or other tax carryforwards that would be utilized, rather than only against carryforwards that are created by unrecognized tax benefits. The provisions of this ASU are effective for interim and annual periods beginning on or after December 15, 2013. The adoption of ASU No. 2013-11 is not expected to have a material effect on our consolidated financial statements.

### 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, 2012 filed with the Securities and Exchange Commission on February 26, 2013. As of September 30, 2013, there were no material changes in our exposure to market risk from December 31, 2012.

### 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, 2013. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under 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 Securities and Exchange Commission’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, 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, 2013, 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 quarter ended September 30, 2013 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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### PART II. OTHER INFORMATION

#### ITEM 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, 2012 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
3.2(2)	Articles of Amendment, as filed with the Secretary of State of Massachusetts on May 18, 2001
3.3(3)	Articles of Amendment, as filed with the Secretary of State of Massachusetts on May 16, 2002
3.4(4)	Amended and Restated By-Laws
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.

- (1) Incorporated by reference to Exhibit 3.1 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 Exhibit 3.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2001.
- (3) Incorporated by reference to Exhibit 3.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2002.
- (4) Incorporated by reference to Exhibit 3.3 to the Registration Statement on Form S-1 filed with the Securities and Exchange Commission on January 28, 1999, as amended.

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.

November 6, 2013

MKS INSTRUMENTS, INC.

By: /s/ Seth H. Bagshaw

Seth H. Bagshaw

Vice President, Chief Financial Officer and Treasurer

(Principal Financial Officer)

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, Leo Berlinghieri, 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 6, 2013

/s/ Leo Berlinghieri

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Leo Berlinghieri  
Chief Executive Officer  
(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 6, 2013

/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, 2013, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Leo Berlinghieri, Chief Executive Officer 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 6, 2013

/s/ Leo BerlinghieriLeo Berlinghieri  
Chief Executive Officer

Dated: November 6, 2013

/s/ Seth H. BagshawSeth H. Bagshaw  
Vice President, Chief Financial Officer and Treasurer