
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, DC 20549

FORM 10-Q

(MARK ONE)

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

For the quarterly period ended June 30, 2012

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

MKS INSTRUMENTS, INC.

(Exact name of registrant as specified in its charter)

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

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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>

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 July 27, 2012, the registrant had 52,874,664 shares of common stock outstanding.

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS.

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

	June 30, 2012	December 31, 2011
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 409,216	\$ 312,916
Short-term investments	196,350	252,603
Trade accounts receivable, net	104,827	120,894
Inventories	145,609	153,632
Deferred income taxes	10,516	10,618
Other current assets	25,078	34,238
Total current assets	891,596	884,901
Property, plant and equipment, net	73,983	72,487
Long-term investments	17,568	7,873
Goodwill	140,084	140,084
Intangible assets, net	1,031	1,043
Other assets	10,658	12,266
Total assets	<u>\$1,134,920</u>	<u>\$ 1,118,654</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term borrowings	\$ —	\$ 1,932
Accounts payable	23,430	24,853
Accrued compensation	21,973	21,774
Income taxes payable	4,602	7,548
Other current liabilities	34,567	40,324
Total current liabilities	84,572	96,431
Other liabilities	35,939	32,211
Commitments and contingencies (Note 14)		
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; 52,870,425 and 52,491,948 shares issued and outstanding at June 30, 2012 and December 31, 2011, respectively	113	113
Additional paid-in capital	712,921	707,419
Retained earnings	291,765	268,870
Accumulated other comprehensive income	9,610	13,610
Total stockholders' equity	<u>1,014,409</u>	<u>990,012</u>
Total liabilities and stockholders' equity	<u>\$1,134,920</u>	<u>\$ 1,118,654</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)

	<u>Three Months Ended June 30,</u>		<u>Six Months Ended June 30,</u>	
	<u>2012</u>	<u>2011</u>	<u>2012</u>	<u>2011</u>
Net revenues:				
Products	\$ 148,851	\$ 198,737	313,339	\$406,184
Services	28,546	25,750	54,926	50,154
Total net revenues	<u>177,397</u>	<u>224,487</u>	<u>368,265</u>	<u>456,338</u>
Cost of revenues:				
Cost of products	84,622	105,086	175,646	216,301
Cost of services	16,259	14,413	32,312	28,688
Total cost of revenues	<u>100,881</u>	<u>119,499</u>	<u>207,958</u>	<u>244,989</u>
Gross profit	<u>76,516</u>	<u>104,988</u>	<u>160,307</u>	<u>211,349</u>
Research and development	15,591	15,582	31,775	32,478
Selling, general and administrative	32,959	31,851	67,078	64,558
Amortization of intangible assets	119	250	238	500
Income from operations	<u>27,847</u>	<u>57,305</u>	<u>61,216</u>	<u>113,813</u>
Interest income	200	309	461	585
Interest expense	51	—	60	5
Income before income taxes	<u>27,996</u>	<u>57,614</u>	<u>61,617</u>	<u>114,393</u>
Provision for income taxes	9,424	19,013	20,277	37,749
Net income	<u>\$ 18,572</u>	<u>\$ 38,601</u>	<u>\$ 41,340</u>	<u>\$ 76,644</u>
Other comprehensive income:				
Changes in value of financial instruments designated as cash flow hedges, net of tax (benefit) expense (1)	(522)	(517)	114	(123)
Foreign currency translation adjustments, net of tax of \$0 for the three and six months ended June 30, 2012 and 2011	(4,353)	2,207	(4,052)	5,328
Unrealized (loss) gain on investments, net of tax (benefit) expense (2)	(25)	(8)	(61)	39
Total comprehensive income	<u>\$ 13,672</u>	<u>\$ 40,283</u>	<u>\$ 37,341</u>	<u>\$ 81,888</u>
Net income per share:				
Basic	<u>\$ 0.35</u>	<u>\$ 0.74</u>	<u>\$ 0.79</u>	<u>\$ 1.48</u>
Diluted	<u>\$ 0.35</u>	<u>\$ 0.73</u>	<u>\$ 0.78</u>	<u>\$ 1.46</u>
Cash dividends per common share	<u>\$ 0.15</u>	<u>\$ 0.15</u>	<u>\$ 0.30</u>	<u>\$ 0.30</u>
Weighted average common shares outstanding:				
Basic	<u>52,679</u>	<u>52,346</u>	<u>52,591</u>	<u>51,877</u>
Diluted	<u>53,206</u>	<u>52,906</u>	<u>53,214</u>	<u>52,646</u>

(1) Tax (benefit) was \$(330) and \$(307) for the three months ended June 30, 2012 and 2011, respectively. Tax expense (benefit) was \$89 and \$(75) for the six months ended June 30, 2012 and 2011, respectively.

(2) Tax (benefit) was \$(16) and \$(5) for the three months ended June 30, 2012 and 2011, respectively. Tax (benefit) expense was \$(48) and \$24 for the six months ended June 30, 2012 and 2011, respectively.

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

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

	Six Months Ended June 30,	
	2012	2011
Cash flows from operating activities:		
Net income	\$ 41,340	\$ 76,644
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	6,557	6,374
Stock-based compensation	7,079	6,048
Provision for excess and obsolete inventory	8,377	6,458
Deferred income taxes	2,179	2,485
Excess tax benefits from stock-based compensation	(1,995)	(5,218)
Other	486	299
Changes in operating assets and liabilities:		
Trade accounts receivable	14,584	(10,953)
Inventories	(1,044)	(12,880)
Income taxes	2,955	(365)
Other current assets	4,022	(9,885)
Accrued compensation and other liabilities	(1,180)	2,614
Accounts payable	(1,365)	(2,897)
Net cash provided by operating activities	<u>81,995</u>	<u>58,724</u>
Cash flows from investing activities:		
Purchases of investments	(199,576)	(197,574)
Maturities and sales of investments	246,024	192,944
Purchases of property, plant and equipment	(8,012)	(6,265)
Other	(26)	(166)
Net cash provided by (used in) investing activities	<u>38,410</u>	<u>(11,061)</u>
Cash flows from financing activities:		
Proceeds from short-term borrowings	2,896	13,404
Payments on short-term borrowings	(4,771)	(12,791)
Repurchase of common stock	(4,960)	—
Net (payments) proceeds related to employee stock-based compensation	(1,088)	24,662
Dividend payments to common stockholders	(15,806)	(15,628)
Excess tax benefit from stock-based compensation	1,995	5,218
Net cash (used in) provided by financing activities	<u>(21,734)</u>	<u>14,865</u>
Effect of exchange rate changes on cash and cash equivalents	(2,371)	1,534
Increase in cash and cash equivalents	96,300	64,062
Cash and cash equivalents at beginning of period	312,916	162,476
Cash and cash equivalents at end of period	<u>\$ 409,216</u>	<u>\$ 226,538</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 June 30, 2012 and for the three and six months ended June 30, 2012 and 2011 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, 2011 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, 2011 filed with the Securities and Exchange Commission on February 24, 2012.

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

2) Recently Issued Accounting Pronouncements

In September 2011, the Financial Accounting Standards Board (“FASB”) issued an Accounting Standards Update (“ASU”) which simplifies how companies test goodwill for impairment. Under these amendments, an entity has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If, after assessing the totality of events or circumstances, an entity determines it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then performing the two-step impairment test is unnecessary. However, if an entity concludes otherwise, then it is required to perform the first step of the two-step impairment test by calculating the fair value of the reporting unit and comparing the fair value with the carrying amount of the reporting unit, as described in the goodwill accounting standard. The amendments are effective for annual and interim goodwill impairment tests performed for fiscal years beginning after December 15, 2011. Early adoption was permitted. The Company adopted this new ASU in the fourth quarter of 2011. This new ASU did not have a material effect on the Company’s consolidated financial statements.

In June 2011, the FASB issued an ASU which eliminates the option to present the components of other comprehensive income as part of the statement of equity and requires an entity to present the total of comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. The amendments were effective retrospectively for fiscal years, and interim periods within those years, beginning after December 15, 2011. The ASU requires changes in presentation only. The Company adopted this new ASU in the first quarter of 2012, electing to present the components of other comprehensive income as one continuous statement. This new ASU did not have a material effect on the Company’s consolidated financial statements.

In May 2011, the FASB issued an ASU which applies to all reporting entities that are required or permitted to measure or disclose the fair value of an asset, a liability, or an instrument classified in a reporting entity’s shareholders’ equity in the financial statements. The amendments do not extend the use of fair value accounting, but provide guidance on how it should be applied where its use is already required or permitted by other standards within U.S. GAAP. The amendments change the wording used to describe many requirements in U.S. GAAP for measuring fair value and for disclosing information about fair value measurements. Additionally, the ASU clarifies the FASB’s intent about the application of existing fair value measurements. The amendments in this ASU are to be applied prospectively. For public entities, the amendments were effective during interim and annual periods beginning after December 15, 2011. The Company adopted the new ASU in the first quarter of 2012. This new ASU did not have a material effect on the Company’s consolidated financial statements.

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

3) Investments

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

	June 30, 2012	December 31, 2011
Available-for-sale investments:		
Time deposits	\$ 36	\$ 37
Bankers' acceptance drafts	5,499	962
U.S. treasury obligations	—	29,404
U.S. agency obligations	190,053	221,565
	<u>195,588</u>	<u>251,968</u>
Trading investments:		
Mutual funds	762	635
	<u>\$ 196,350</u>	<u>\$ 252,603</u>

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

	June 30, 2012	December 31, 2011
U.S. treasury obligations	\$ 8,035	\$ —
U.S. agency obligations	9,533	7,873
	<u>\$ 17,568</u>	<u>\$ 7,873</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 June 30, 2012:	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
Short-term investments:				
Time deposits	\$ 36	\$ —	\$ —	\$ 36
Bankers' acceptance drafts	5,499	—	—	5,499
U.S. agency obligations	190,082	17	(46)	190,053
	<u>\$ 195,617</u>	<u>\$ 17</u>	<u>\$ (46)</u>	<u>\$ 195,588</u>
Long-term investments:				
U.S. treasury obligations	8,033	2	—	8,035
U.S. agency obligations	9,532	1	—	9,533
	<u>\$ 17,565</u>	<u>\$ 3</u>	<u>\$ —</u>	<u>\$ 17,568</u>

As of December 31, 2011:	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
Short-term investments:				
Time deposits	\$ 37	\$ —	\$ —	\$ 37
Bankers' acceptance drafts	962	—	—	962
U.S. treasury obligations	29,393	11	—	29,404
U.S. agency obligations	221,516	56	(7)	221,565
	<u>\$ 251,908</u>	<u>\$ 67</u>	<u>\$ (7)</u>	<u>\$ 251,968</u>
Long-term investments:				
U.S. agency obligations	\$ 7,876	\$ —	\$ (3)	\$ 7,873

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

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 six months ended June 30, 2012 and 2011, respectively.

The unrealized gains and losses for trading investments were immaterial for the three and six months ended June 30, 2012. The Company did not have trading securities as of June 30, 2011.

4) Fair Value Measurements

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

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

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

In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, we categorize 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.

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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 June 30, 2012, are summarized as follows:

Description	June 30, 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)
Assets:				
Cash equivalents:				
Money market funds	\$ 207,700	\$ 207,700	\$ —	\$ —
Bankers' acceptance drafts	184	—	184	—
Trading securities:				
Mutual funds	762	762	—	—
Available-for-sale securities:				
Bankers' acceptance drafts	5,499	—	5,499	—
U.S. treasury obligations	8,035	—	8,035	—
U.S. agency obligations	199,586	175,345	24,241	—
Derivatives – currency forward contracts	444	—	444	—
Total assets	<u>\$ 422,210</u>	<u>\$ 383,807</u>	<u>\$ 38,403</u>	<u>\$ —</u>
Liabilities:				
Derivatives – currency forward contracts	<u>\$ 827</u>	<u>\$ —</u>	<u>\$ 827</u>	<u>\$ —</u>
Reported as follows:				
Assets:				
Cash and cash equivalents (1)	\$ 207,884	\$ 207,700	\$ 184	\$ —
Short-term investments (2)	196,314	166,574	29,740	—
Other current assets	444	—	444	—
Total current assets	<u>\$ 404,642</u>	<u>\$ 374,274</u>	<u>\$ 30,368</u>	<u>\$ —</u>
Long-term investments	<u>\$ 17,568</u>	<u>\$ 9,533</u>	<u>\$ 8,035</u>	<u>\$ —</u>
Liabilities:				
Other current liabilities	<u>\$ 827</u>	<u>\$ —</u>	<u>\$ 827</u>	<u>\$ —</u>

- (1) The cash and cash equivalent amounts presented in the table above do not include cash of \$167,364 and non-negotiable time deposits of \$33,968 as of June 30, 2012.
- (2) The short-term investments presented in the table above do not include non-negotiable time deposits of \$36 as of June 30, 2012.

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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 December 31, 2011, are summarized as follows:

Description	December 31, 2011	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)
Assets:				
Cash equivalents:				
Money market funds	\$ 137,976	\$ 137,976	\$ —	\$ —
Trading securities:				
Mutual funds	635	635	—	—
Available-for-sale securities:				
Bankers' acceptance drafts	962	—	962	—
U.S. treasury obligations	29,404	—	29,404	—
U.S. agency obligations	229,438	147,546	81,892	—
Derivatives – currency forward contracts	531	—	531	—
Total assets	\$ 398,946	\$ 286,157	\$ 112,789	\$ —
Liabilities:				
Derivatives – currency forward contracts	\$ 1,054	\$ —	\$ 1,054	\$ —
Reported as follows:				
Assets:				
Cash and cash equivalents (1)	\$ 137,976	\$ 137,976	\$ —	\$ —
Short-term investments (2)	252,566	140,308	112,258	—
Other current assets	531	—	531	—
Total current assets	\$ 391,073	\$ 278,284	\$ 112,789	\$ —
Long-term investments	\$ 7,873	\$ 7,873	\$ —	\$ —
Liabilities:				
Other current liabilities	\$ 1,054	\$ —	\$ 1,054	\$ —

- (1) The cash and cash equivalent amounts presented in the table above do not include cash of \$146,035 and non-negotiable time deposits of \$28,905 as of December 31, 2011.
- (2) The short-term investments presented in the table above do not include non-negotiable time deposits of \$37 as of December 31, 2011.

Money Market Funds

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

Trading Mutual Fund Investments

As of June 30, 2012 and December 31, 2011, trading investments consisted of certain U.S. and international equity mutual funds and government agency fixed income mutual funds. During 2011, management changed the designation of the investments from available-for-sale to trading investments.

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

As of June 30, 2012 and December 31, 2011, available-for-sale investments consisted of time deposits and drafts denominated in the Euro currency, U.S. treasury obligations and U.S. agency obligations. U.S. agency obligations include certain corporate obligations issued under the government's Term Loan Guarantee Program which removed any credit risk associated with the corporate issuing entity, as they become obligations of the U.S. government should the corporate issuer be unable to honor its obligations.

The Company measures its debt and equity investments at fair value. The Company's available-for-sale investments are classified within Level 1 and Level 2 of the fair value hierarchy.

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

Derivatives

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

5) Derivatives

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

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

The Company hedges a portion of its forecasted foreign currency denominated intercompany sales of inventory, over a maximum period of eighteen months, using forward foreign exchange contracts accounted for as cash-flow hedges related to Japanese, South Korean, British and European 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 June 30, 2012 and December 31, 2011, the Company had outstanding forward foreign exchange contracts with gross notional values of \$51,575 and \$36,119, respectively. The following tables provide a summary of the primary net hedging positions and corresponding fair values held as of June 30, 2012 and December 31, 2011:

<u>Currency Hedged (Buy/Sell)</u>	June 30, 2012	
	Gross Notional Value	Fair Value (1)
U.S. Dollar/Japanese Yen	\$ 23,848	\$ (107)
U.S. Dollar/South Korean Won	19,893	(471)
U.S. Dollar/Euro	4,025	181
U.S. Dollar/U.K. Pound Sterling	3,809	14
Total	<u>\$ 51,575</u>	<u>\$ (383)</u>

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 (in thousands, except share and per share data)

<u>Currency Hedged (Buy/Sell)</u>	<u>December 31, 2011</u>	
	Gross Notional Value	Fair Value (1)
U.S. Dollar/Japanese Yen	\$ 18,676	\$ (961)
U.S. Dollar/South Korean Won	10,799	60
U.S. Dollar/Euro	3,869	288
U.S. Dollar/U.K. Pound Sterling	2,775	90
Total	\$ 36,119	\$ (523)

(1) Represents the net receivable (payable) 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>June 30, 2012</u>	<u>December 31, 2011</u>
Derivative assets:		
Forward exchange contracts	\$ 444	\$ 531
Derivative liabilities:		
Forward exchange contracts	(827)	(1,054)
Total net derivative liability designated as hedging instruments (1)	\$ (383)	\$ (523)

(1) The derivative asset of \$444 and derivative liability of \$827 are classified in other current assets and other current liabilities, respectively, in the consolidated balance sheet as of June 30, 2012. The derivative asset of \$531 and derivative liability of \$1,054 are classified in other current assets and other current liabilities, respectively, in the consolidated balance sheet as of December 31, 2011.

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 June 30,</u>		<u>Six Months Ended June 30,</u>	
	2012	2011	2012	2011
Forward exchange contracts:				
Net (loss) gain recognized in OCI (1)	\$(1,065)	\$(157)	\$ 398	\$ (319)
Net gain (loss) reclassified from OCI into income (2)	74	(949)	(439)	(1,475)

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

(2) Effective portion classified in selling, general and administrative expenses.

6) Inventories

Inventories consist of the following:

	<u>June 30, 2012</u>	<u>December 31, 2011</u>
Raw materials	\$ 80,239	\$ 78,501
Work-in-process	20,409	21,298
Finished goods	44,961	53,833
	\$ 145,609	\$ 153,632

7) 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

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

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, 2011, 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 losses during the six months ended June 30, 2012 and twelve months ended December 31, 2011 were as follows:

	2012			2011		
	Gross Carrying Amount	Accumulated Impairment Loss	Net	Gross Carrying Amount	Accumulated Impairment Loss	Net
Beginning balance at January 1	\$279,498	\$(139,414)	\$140,084	\$279,434	\$(139,414)	\$140,020
Acquired goodwill (1)	—	—	—	64	—	64
Ending balance at June 30, 2012 and December 31, 2011	<u>\$279,498</u>	<u>\$(139,414)</u>	<u>\$140,084</u>	<u>\$279,498</u>	<u>\$(139,414)</u>	<u>\$140,084</u>

- (1) In September 2011, the Company purchased a product line from GE Osmonics, Inc. for \$458. The Company recorded \$315 of intangible assets and \$64 of goodwill in connection with the acquisition.

Intangible Assets

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

As of June 30, 2012:

	Gross	Accumulated Amortization	Net
Completed technology (1)	\$ 77,055	\$ (76,853)	\$ 202
Customer relationships	9,190	(8,550)	640
Patents, trademarks, trade names and other	24,703	(24,514)	189
	<u>\$110,948</u>	<u>\$(109,917)</u>	<u>\$1,031</u>

As of December 31, 2011:

	Gross	Accumulated Amortization	Net
Completed technology	\$ 76,829	\$ (76,829)	\$ —
Customer relationships	9,190	(8,393)	797
Patents, trademarks, trade names and other	24,703	(24,457)	246
	<u>\$110,722</u>	<u>\$(109,679)</u>	<u>\$1,043</u>

- (1) Intangible assets of \$226 were re-classified from other assets to intangible assets during the quarter ended March 31, 2012. This related to in-process research and development which was completed during the first quarter of 2012, related to a previous acquisition.

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Aggregate amortization expense related to acquired intangibles for the three and six months ended June 30, 2012 was \$119 and \$238, respectively. Aggregate amortization expense related to intangible assets for the three and six months ended June 30, 2011 was \$250 and \$500, respectively. Estimated amortization expense for the remainder of the fiscal year, each of the next five fiscal years and thereafter is as follows:

Year	Amount
2012 (remaining)	\$ 238
2013	475
2014	97
2015	81
2016	81
2017	36
Thereafter	23

8) Debt

The Company's Japanese subsidiary has lines of credit and short-term borrowing arrangements with two financial institutions which provide for aggregate borrowings as of June 30, 2012 of up to an equivalent of \$31,462 U.S. dollars, at an average interest rate of 0.65%, which generally expire and are renewed at three month intervals. There were no borrowings outstanding under these arrangements at June 30, 2012. There were \$1,932 total borrowings outstanding under these arrangements at December 31, 2011.

9) 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:

	Six Months Ended June 30,	
	2012	2011
Balance at January 1	\$ 8,315	\$ 9,865
Provision for product warranties	2,886	3,638
Direct charges to warranty liability	(2,475)	(3,832)
Balance at June 30	<u>\$ 8,726</u>	<u>\$ 9,671</u>

10) Income Taxes

The Company's effective tax rate for the three and six months ended June 30, 2012 was 33.7% and 32.9%, respectively. The Company's effective tax rates for both the three and six months ended June 30, 2011 was 33.0%. The effective tax rates for the six months ended June 30, 2012 and 2011, and the related income tax provisions were lower than the U.S. statutory tax rate primarily due to 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 June 30, 2012, the total amount of gross unrecognized tax benefits, which excludes interest and penalties, was approximately \$37,505. At December 31, 2011, the total amount of gross unrecognized tax benefits, which excludes interest and penalties, was approximately \$35,151. The net increase from December 31, 2011 was attributable to an increase in reserves for existing uncertain tax positions. If these benefits were recognized in a future period, the timing of which is not estimable, the net unrecognized tax benefit of \$16,864, excluding interest and penalties, would impact the Company's effective tax rate as of June 30, 2012. 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 June 30, 2012 and December 31, 2011, the Company had accrued interest on unrecognized tax benefits of approximately \$1,294 and \$973, respectively.

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

The Company and its subsidiaries are subject to examination by federal, state and foreign tax authorities. The Internal Revenue Service commenced an examination of its U.S. federal tax filings for open tax years through 2009 during the quarter ended June 30, 2012. The statute of limitations for the Company’s tax filings varies by tax jurisdiction between fiscal years 2001 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.

11) Net Income Per Share

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2012	2011	2012	2011
Numerator:				
Net income	\$ 18,572	\$ 38,601	\$ 41,340	\$ 76,644
Denominator:				
Shares used in net income per common share – basic	52,679,000	52,346,000	52,591,000	51,877,000
Effect of dilutive securities:				
Stock options, restricted stock and employee stock purchase plan	527,000	560,000	623,000	769,000
Shares used in net income per common share – diluted	53,206,000	52,906,000	53,214,000	52,646,000
Net income per common share:				
Basic	\$ 0.35	\$ 0.74	\$ 0.79	\$ 1.48
Diluted	\$ 0.35	\$ 0.73	\$ 0.78	\$ 1.46

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 June 30, 2012, stock options and restricted stock units relating to an aggregate of approximately 1,277,000 shares were outstanding. For the three and six months ended June 30, 2012, the potential dilutive effect of 479,000 and 288,000 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 June 30, 2011, stock options and restricted stock units relating to an aggregate of approximately 1,638,000 shares were outstanding. For the three and six months ended June 30, 2011, the potential dilutive effect of 331,000 and 256,000 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.

12) Stockholder’s Equity

Stock Repurchase Program

On July 25, 2011, MKS’ 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 will depend 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.

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NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS – (continued)
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During the six months ended June 30, 2012, the Company repurchased 168,000 shares of its common stock for \$4,960 for an average price of \$29.52 per share.

Cash Dividends

Holders of the Company's common stock are entitled to receive dividends when they are declared by the Company's Board of Directors. During the six months ended June 30, 2012, the Board of Directors declared two quarterly dividends of \$0.15 per share, which totaled \$15,806 or \$0.30 per share. 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.

On July 30, 2012, the Company's Board of Directors declared a quarterly cash dividend of \$0.16 per share to be paid on September 14, 2012 to shareholders of record as of August 31, 2012.

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

Effective in the second quarter of fiscal year 2012, the Company changed its financial reporting structure to include 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 had previously reported as a single operating and reporting segment.

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, Analytical Solutions Group ("ASG") Products, Asia Region Sales & Service and Europe 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 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.

ASG Products, 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 ASG Product group includes materials delivery, gas composition analysis and information technology products. The Europe and Asia sales and service segments mainly resell and service the Advanced Manufacturing Capital Equipment and ASG 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 ASG products 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 sales and gross profit (loss).

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 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 June 30,		Six Months Ended June 30,	
	2012	2011	2012	2011
Advanced Manufacturing Capital Equipment	\$134,601	\$189,674	\$ 277,824	\$ 381,412
Analytical Solutions Group	16,727	14,918	32,521	30,144
Europe Sales & Service Operations (1)	12,449	20,759	24,656	42,164
Asia Sales & Service Operations (1)	63,783	80,035	135,882	168,841
Corporate, Eliminations and Other	(50,163)	(80,899)	(102,618)	(166,223)
	<u>\$177,397</u>	<u>\$224,487</u>	<u>\$ 368,265</u>	<u>\$ 456,338</u>

The following is gross profit by reportable segment:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2012	2011	2012	2011
Advanced Manufacturing Capital Equipment	\$48,858	\$ 79,816	\$106,695	\$160,121
Analytical Solutions Group	8,284	7,511	16,384	15,247
Europe Sales & Service Operations (1)	3,742	5,354	7,745	11,249
Asia Sales & Service Operations (1)	11,851	11,513	19,113	24,248
Corporate, Eliminations and Other	3,781	794	10,370	484
	<u>\$76,516</u>	<u>\$104,988</u>	<u>\$160,307</u>	<u>\$211,349</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 only 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 six months ended June 30, 2012 and 2011:

	Product Groups		Foreign Sales & Service Operations		Corporate, Eliminations and Other	Total
	Advanced Manufacturing Capital Equipment	Analytical Solutions Group	Europe	Asia		
Three Months Ended June 30, 2012:						
Capital expenditures	<u>\$ 1,464</u>	<u>\$ 300</u>	<u>\$ 29</u>	<u>\$ 124</u>	<u>\$ 1,528</u>	<u>\$3,445</u>
Six Months Ended June 30, 2012:						
Capital expenditures	<u>\$ 4,639</u>	<u>\$ 415</u>	<u>\$ 74</u>	<u>\$ 417</u>	<u>\$ 2,467</u>	<u>\$8,012</u>
Three Months Ended June 30, 2011:						
Capital expenditures	<u>\$ 2,912</u>	<u>\$ 136</u>	<u>\$ 70</u>	<u>\$ 389</u>	<u>\$ 427</u>	<u>\$3,934</u>
Six Months Ended June 30, 2011:						
Capital expenditures	<u>\$ 4,764</u>	<u>\$ 220</u>	<u>\$ 127</u>	<u>\$ 476</u>	<u>\$ 678</u>	<u>\$6,265</u>

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

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		
June 30, 2012:						
Segment assets:						
Accounts receivable	\$ 13,333	\$ 5,937	\$ 6,437	\$ 45,632	\$ 33,488	\$ 104,827
Inventory	117,862	4,479	3,662	33,552	(13,946)	145,609
Total segment assets	\$ 131,195	\$ 10,416	\$ 10,099	\$ 79,184	\$ 19,542	\$ 250,436

	Product Groups		Foreign Sales & Service Operations		Corporate, Eliminations and Other	Total
	Advanced Manufacturing Capital Equipment	Analytical Solutions Group	Europe	Asia		
December 31, 2011:						
Segment assets:						
Accounts receivable	\$ 24,224	\$ 5,099	\$ 6,079	\$ 60,242	\$ 25,250	\$ 120,894
Inventory	119,314	4,442	3,828	45,828	(19,780)	153,632
Total segment assets	\$ 143,538	\$ 9,541	\$ 9,907	\$ 106,070	\$ 5,470	\$ 274,526

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

	June 30, 2012	December 31, 2011
Total segment assets	\$ 250,436	\$ 274,526
Cash and cash equivalents and investments	623,134	573,392
Other current assets	35,594	44,856
Property, plant and equipment, net	73,983	72,487
Goodwill and intangible assets, net	141,115	141,127
Other assets	10,658	12,266
Consolidated total assets	\$ 1,134,920	\$ 1,118,654

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 June 30,		Six Months Ended June 30,	
	2012	2011	2012	2011
Instruments and Control Products	\$ 71,589	\$ 103,671	\$ 147,888	\$ 199,594
Power and Reactive Gas Products	70,267	83,523	147,833	180,005
Vacuum Products	17,695	21,411	37,723	44,644
Analytical Solutions Group Products	17,846	15,882	34,821	32,095
	\$ 177,397	\$ 224,487	\$ 368,265	\$ 456,338

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.

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

Geographic

Information about the Company’s operations in different geographic regions is presented in the tables below. Net sales 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 sales.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2012	2011	2012	2011
Net revenues				
United States	\$ 91,075	\$ 110,412	\$ 186,179	\$ 221,015
Japan	19,419	27,551	52,852	52,190
Europe	22,474	30,852	44,459	60,556
Asia (excluding Japan)	44,429	55,672	84,775	122,577
	<u>\$ 177,397</u>	<u>\$ 224,487</u>	<u>\$ 368,265</u>	<u>\$ 456,338</u>
		<u>June 30, 2012</u>		<u>December 31, 2011</u>
Long-lived assets (1)				
United States		\$ 59,022		\$ 56,760
Japan		3,474		3,908
Europe		5,369		5,437
Asia (excluding Japan)		7,927		8,374
		<u>\$ 75,792</u>		<u>\$ 74,479</u>

(1) Long-lived assets include property, plant and equipment, net and certain other assets.

Major Customers

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2012	2011	2012	2011
Customer A	14.9%	14.1%	14.7%	14.0%
Customer B	11.3%	9.2%	11.0%	9.5%

14) Commitments and Contingencies

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

The Company reviewed its contractual obligations and commercial commitments as of June 30, 2012 and determined that there were no significant changes from the ones set forth in the notes to the consolidated financial statements included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2011 other than as follows:

A lawsuit was filed against the Company and certain of its affiliates by a former shareholder of a former subsidiary of the Company. The complaint alleges certain claims against the Company including breach of contract and implied covenants, and statutory violations. The claims seek unspecified damages and equitable relief. The Company believes that it has meritorious factual and legal defenses to the allegations raised and intends to defend this matter vigorously. While management does not believe that any loss will be material to its financial position or liquidity, there can be no assurance that any such loss won’t be material to any one reporting period.

MKS INSTRUMENTS, INC.

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 at some point 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, 2011 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 manufactured products. 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 industrial, medical, pharmaceutical manufacturing, energy generation, environmental monitoring and other advanced manufacturing companies, as well as university, government and industrial research laboratories. For the six months ended June 30, 2012 and 2011, approximately 65% and 62% of our net sales, 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.

Effective in the second quarter of fiscal 2012, we changed our reporting segments from one to four segments based upon the information that is provided to the Company's chief operating decision maker. The Company's new reportable segments are: Advanced Manufacturing Capital Equipment, Analytical Solutions Group ("ASG"), Europe Sales and Service, and Asia Sales and Service.

The Advanced Manufacturing Capital Equipment segment includes the development, manufacture, 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. The ASG Products group includes, materials delivery, gas composition analysis and information technology products. The Europe and Asia sales and service groups mainly resell and service the Advanced Manufacturing Capital Equipment and ASG products sold into their respective regions.

Net revenues to semiconductor capital equipment manufacture and semiconductor device manufacture customers declined by 14% for the six months ended June 30, 2012 compared to the same period in the prior year. In the second quarter of 2012, we have seen a weakening in our orders and sales in the semiconductor markets as worldwide economic uncertainty and slowing consumer spending resulted in lower electronics demand and a slowing of investments in semiconductor production capacity. 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 27% for the six months ended June 30, 2012 compared to the same period for the prior year. This decline was primarily caused by decreases in the solar and LED markets, which in total declined by 62%, as manufacturers utilize existing capacity from 2010 and 2011. Our net revenues to all other non-semiconductor markets (excluding solar and LED) declined by 6% for the six months ended June 30, 2012 compared to the same period for the prior year. These advanced and growing markets include LED, medical, pharmaceutical, environmental, thin films, solar and other markets and we anticipate that these markets will grow and could represent a larger portion of our revenue.

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A significant portion of our net revenues is to customers in international markets. For the six months ended June 30, 2012 and 2011, international net revenues accounted for approximately 49% and 52% of our net revenues, respectively. A significant portion of our international net revenues were in Japan, China and Korea. We expect that international net revenues will continue to represent a significant percentage of our total net revenues.

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, 2011. 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, 2011 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 June 30,		Six Months Ended June 30,	
	2012	2011	2012	2011
Net revenues:				
Product	83.9%	88.5%	85.1%	89.0%
Services	16.1	11.5	14.9	11.0
Total net revenues	100.0%	100.0%	100.0%	100.0%
Cost of revenues:				
Cost of product revenues	47.7	46.8	47.7	47.4
Cost of service revenues	9.2	6.4	8.8	6.3
Total cost of revenues	56.9%	53.2%	56.5%	53.7%
Gross profit	43.1%	46.8%	43.5%	46.3%
Research and development	8.8	6.9	8.6	7.1
Selling, general and administrative	18.5	14.2	18.2	14.1
Amortization of intangible assets	0.1	0.1	0.1	0.1
Income from operations	15.7%	25.5%	16.6%	25.0%
Interest income, net	0.1	0.1	0.1	0.1
Income from operations before income taxes	15.8%	25.7%	16.7%	25.1%
Provision for income taxes	5.3	8.5	5.5	8.3
Net income	10.5%	17.2%	11.2%	16.8%

Net Revenues (dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2012	2011	% Change	2012	2011	% Change
Net Revenues:						
Product	\$148.9	\$198.7	(25.1)%	\$313.3	\$406.2	(22.9)%
Service	28.5	25.8	10.9	54.9	50.1	9.5
Total net revenues	\$177.4	\$224.5	(21.0)%	\$368.2	\$456.3	(19.3)%

Product revenues decreased \$49.8 million and \$92.9 million during the three and six months ended June 30, 2012, respectively, compared to the same periods for the prior year. Product revenues from customers in the semiconductor markets decreased by 25% and 17% for the three and six month periods in 2012 compared to 2011, while product revenues to customers in our non-semiconductor markets decreased by 26% and 32% for the same periods. The decrease in the semiconductor markets we serve was mainly the result of the worldwide economic uncertainty and slowing consumer spending resulting in lower electronics demand and a slowing of investments in semiconductor production capacity. The decrease in the non-semiconductor markets was primarily caused by decreases in the solar and LED markets as end market customers utilize existing product shipments from 2010 and 2011.

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Service revenues consisted mainly of fees for services relating to the maintenance and repair of our products and software services, installation and training. Service revenues increased \$2.7 million and \$4.8 million, during the three and six months ended June 30, 2012, compared to the same period for the prior year mainly due to our investment in 2011 to grow our worldwide service business.

Total international net revenues, including product and service, were \$86.3 million and \$182.1 million or 48.7% and 49.4%, for the three and six months ended June 30, 2012, respectively. Total international net revenues, including product and service, were \$114.1 million, and \$235.3 million, or 50.8% and 51.6% of net revenues for the three and six months ended June 30, 2011, respectively. The decrease is mainly attributed to a decrease in sales in China, mainly attributed to a large solar shipment during the three months ended March 31, 2011 and a decrease in sales in Japan and Europe.

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

	Three Months Ended June 30,			Six Months Ended June 30,		
	2012	2011	% Change	2012	2011	% Change
Net revenues:						
Advanced Manufacturing Capital Equipment	\$ 134.6	\$ 189.7	(29.0)%	\$ 277.8	\$ 381.4	(27.2)%
Analytical Solutions Group	16.7	14.9	12.1	32.5	30.1	7.9
Europe Sales & Service Operations	12.4	20.8	(40.0)	24.7	42.2	(41.5)
Asia Sales & Service Operations	63.8	80.0	(20.3)	135.9	168.8	(19.5)
Corporate, Eliminations and Other	(50.1)	(80.9)	38.0	(102.6)	(166.2)	38.3
Total net revenues	\$ 177.4	\$ 224.5	(21.0)%	\$ 368.3	\$ 456.3	(19.3)%

Net revenues for the Advanced Manufacturing Capital Equipment and Asia Sales & Service segments decreased between 19.5% and 29.0% for the three and six month periods ended June 30, 2012 compared to the same periods in the prior year. This is consistent with our overall consolidated revenue decreases for the same periods, since both of these groups sell into the semiconductor and non-semiconductor markets and comprise the majority of our consolidated revenues. The decrease in the Europe Sales & Service segment of 40.0% and 41.5% for the three and six month periods were mainly caused by lower revenues in Germany related to the solar market. The increase in net revenues in ASG of 12.1% and 7.9% for the three and six month periods ended June 30, 2012 compared to the same periods in the prior year is mainly caused by an increase in sales of certain products to semiconductor device manufacturers.

Gross Profit

	Three Months Ended June 30,			Six Months Ended June 30,		
	2012	2011	% Points Change	2012	2011	% Points Change
Gross profit as percentage of net revenues:						
Product	43.1%	47.1%	(4.0)%	43.9%	46.8%	(2.9)%
Service	43.0	44.0	(1.0)	41.2	42.8	(1.6)
Total gross profit percentage	43.1%	46.8%	(3.7)%	43.5%	46.3%	(2.8)%

Gross profit on product revenues decreased by 4.0 percentage points for the three months ended June 30, 2012, compared to the same period for the prior year. The decrease is primarily due to a decrease of 2.5 percentage points due to lower revenue volumes, 0.7 percentage points due to higher excess and obsolete related charges, 0.6 percentage points due to unfavorable foreign exchange, 0.5 percentage points related to higher overhead and 0.2 percentage points due to higher warranty charges. These decreases were partially offset by an increase of 0.5 percentage points primarily related to favorable product mix. The higher overhead percentage is mainly due to less overhead absorption as a result of the decreased revenue volumes.

Gross profit on product revenues decreased by 2.9 percentage points for the six months ended June 30, 2012, compared to the same period for the prior year. The decrease is mainly due to a decrease of 2.1 percentage points due to lower revenue volumes, 1.4 percentage points due to higher warranty charges, 1.2 percentage points due to higher overhead spending and less overhead absorption and 1.1 percentage points due to higher excess and obsolete related charges. These decreases were partially offset by 3.0 percentage points related to favorable product mix.

Cost of service revenues, which includes salaries and related expenses and other fixed costs, consists primarily of providing services for repair and software services and training. Service gross profit decreased by 1.0 percentage points for the three months ended June 30, 2012. The decrease is primarily due to a decrease of 3.2 percentage points primarily due to higher overhead, as a result of our continued investment in our service business. These decreases were partially offset by 1.2 percentage points due to higher revenue volumes and 1.1 percentage points related to product mix.

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Service gross profit decreased by 1.6 percentage points for the six months ended June 30, 2012. This decrease is primarily due to a decrease of 2.0 percentage points due to higher overhead spending and a decrease of 0.8 percentage points due to unfavorable product mix. These decreases were offset by 1.2 percentage points due to favorable revenue volumes.

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

	Three Months Ended June 30,			Six Months Ended June 30,		
	2012	2011	% Points Change	2012	2011	% Change
Gross profit:						
Advanced Manufacturing Capital Equipment	36.3%	42.1%	(5.8)%	38.4%	42.0%	(3.6)%
Analytical Solutions Group	49.5	50.3	(0.8)	50.4	50.6	(0.2)
Europe Sales & Service Operations	30.1	25.8	4.3	31.4	26.7	4.7
Asia Sales & Service Operations	18.6	14.4	4.2	14.1	14.4	(0.3)
Corporate, Eliminations and Other	(7.5)	(1.0)	(6.5)	(10.1)	(0.3)	(9.8)
Total net revenues	43.1%	46.8%	(3.7)%	43.5%	46.3%	(2.8)%

Gross profit as a percentage of net revenues for the Advanced Manufacturing Capital Equipment group decreased 5.8 and 3.6 percentage points for the three and six month periods ended June 30, 2012, compared to the same periods in the prior year. The decreases are primarily related to lower revenue volumes and higher excess and obsolescence related charges.

Gross profit as a percentage of net revenues for the Analytical Solutions Group decreased 0.8 and 0.2 percentage points for the three and six month periods ended June 30, 2012, compared to the same periods in the prior year. The decrease is primarily related to higher overhead spending, partially offset by higher revenue volumes.

Gross profit as a percentage of net revenues for the Europe Sales and Service Operations increased 4.3 and 4.7 percentage points for the three and six month periods ended June 30, 2012, compared to the same periods in the prior year. The increase is primarily related to favorable product mix, partially offset by lower revenue volumes.

Gross profit as a percentage of net revenues for the Asia Sales and Service Operations increased 4.2 and decreased 0.3 percentage points for the three and six month periods ended June 30, 2012, compared to the same periods in the prior year. The increase of 4.2% is primarily related to favorable product mix and lower overhead and warranty costs, partially offset by lower revenue volumes. The decrease of 0.3% is mainly due to lower revenue volumes and higher excess and obsolete charges, partially offset by favorable product mix.

Research and Development (dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2012	2011	% Change	2012	2011	% Change
Research and development expenses	\$15.6	\$15.6	0.1%	\$31.8	\$32.5	(2.2)%

Research and development expense was flat for the three months ended June 30, 2012, compared to the same period for the prior year.

Research and development expense decreased \$0.7 million for the six months ended June 30, 2012, compared to the same period for the prior year. This decrease is primarily attributed to a decrease of \$0.6 million in consulting costs, due to changes in the timelines of certain projects.

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

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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 and defending 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 (dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2012	2011	% Change	2012	2011	% Change
Selling, general and administrative expenses	\$33.0	\$31.9	3.5%	\$67.1	\$64.6	3.9%

Selling, general and administrative expenses increased \$1.1 million for the three months ended June 30, 2012, compared to the same period for the prior year. The increase includes a \$2.2 million increase in consulting and professional fees and a \$0.3 million increase in information technology costs. These increases were primarily offset by a \$1.1 million decrease related to favorable foreign exchange rates and a \$0.3 million decrease in advertising, public relations and investor relations expenses.

Selling, general and administrative expenses increased \$2.5 million for the six months ended June 30, 2012, compared to the same period for the prior year. The increase includes a \$2.3 million increase in consulting and professional fees and a \$1.2 million increase in compensation expense. These increases were primarily offset by a \$0.6 million decrease in advertising, public relations and investor relations expenses and a \$0.4 million decrease related to favorable foreign exchange rates.

Amortization of Intangible Assets (dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2012	2011	% Change	2012	2011	% Change
Amortization of intangible assets	\$0.1	\$0.3	(52.4)%	\$0.2	\$0.5	(52.4)%

Amortization expense for the three and six months ended June 30, 2012 decreased by \$0.2 million and \$0.3 million, respectively, compared to the same period for the prior year, as certain intangible assets became fully amortized.

Interest Income, Net (dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2012	2011	% Change	2012	2011	% Change
Interest income, net	\$0.1	\$0.3	(51.8)%	\$0.4	\$0.6	(30.9)%

Interest income, net decreased modestly for the three and six months ended June 30, 2012 compared to the same period for the prior year, resulting from slightly lower interest rates and a change in our investment portfolio.

Provision for Income Taxes (dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2012	2011	2012	2011
Provision for income taxes	\$ 9.4	\$ 19.0	\$ 20.3	\$ 37.7

Our effective tax rate for the three and six months ended June 30, 2012 was 33.7% and 32.9%, respectively. Our effective tax rate for both the three and six months ended June 30, 2011 was 33.0%. The effective tax rates for the six months ended June 30, 2012 and 2011, and the related income tax provisions were lower than the U.S. statutory tax rate primarily due to the geographic mix of income and profits earned by our international subsidiaries being taxed at rates lower than the U.S. statutory rate.

At June 30, 2012, our total amount of gross unrecognized tax benefits, which excludes interest and penalties, was approximately \$37.5 million. At December 31, 2011, our total amount of gross unrecognized tax benefits, which excludes interest and penalties, was approximately \$35.2 million. The net increase from December 31, 2011 was attributable to an increase in reserves for existing uncertain tax positions. If these benefits were recognized in a future period, the timing of which is not estimable, the net unrecognized tax benefit of \$16.9

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million, excluding interest and penalties, would impact our effective 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 June 30, 2012 and December 31, 2011, we had accrued interest on unrecognized tax benefits of approximately \$1.3 million and \$1.0 million, respectively.

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 through 2009 during the quarter ended June 30, 2012. The statute of limitations for our tax filings varies by tax jurisdiction between fiscal years 2001 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, cash equivalents and short-term investments totaled \$605.6 million at June 30, 2012 compared to \$565.5 million at December 31, 2011. This increase was mainly attributable to our net cash provided by operating activities as a result of our net income and decreases in working capital, partially offset by dividend payments to our common shareholders, repurchases of common stock and capital expenditures.

Net cash provided by operating activities was \$82.0 million for the six months ended June 30, 2012 and resulted mainly from net income of \$41.3 million, which included non-cash charges of \$22.0 million and a decrease in working capital of \$18.0 million. The decrease in working capital consisted primarily of a \$14.6 million decrease in trade accounts receivable and a \$4.0 million decrease in other current assets.

Net cash provided by operating activities of \$58.7 million for the six months ended June 30, 2011, resulted mainly from net income of \$76.6 million which included non-cash charges of \$18.9 million, partially offset by an increase of \$34.4 million in working capital. The increase in working capital consisted primarily of a \$12.9 million increase in inventory and an \$11.0 million increase in trade accounts receivable, both a result of our increased business levels in the first six months of 2011, and a \$9.9 million increase in other current assets partially due to an increase in our value-added tax receivable.

Net cash provided by investing activities of \$38.4 million for the six months ended June 30, 2012, resulted primarily from net maturities and sales of \$46.4 million of short-term and long-term investments partially offset by \$8.0 million in purchases of production related equipment. Net cash used in investing activities of \$11.1 million for the six months ended June 30, 2011, resulted primarily from \$6.3 million in purchases of production related equipment and net purchases of \$4.6 million of short-term and long-term investments.

Net cash used in financing activities was \$21.7 million for the six months ended June 30, 2012 and consisted primarily of \$15.8 million of dividend payments made to common stockholders, \$5.0 million related to the repurchase of common stock and \$1.9 million of net payments made on short-term borrowings. Net cash provided by financing activities was \$14.9 million for the six months ended June 30, 2011 and consisted primarily of \$24.7 million net cash received related to employee stock awards and \$5.2 million from excess tax benefits from stock-based compensation. These increases were partially offset by dividend payments to common stockholders of an aggregate of \$15.6 million.

Our Japanese subsidiary has lines of credit and short-term borrowing arrangements with two financial institutions which provide for aggregate borrowings as of June 30, 2012 of up to an equivalent of \$31.5 million U.S. dollars, at an average interest rate of 0.65%, which generally expire and are renewed at three month intervals. There were no borrowings outstanding under these arrangements at June 30, 2012. There were \$1.9 million total borrowings outstanding under these arrangements at December 31, 2011.

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 will depend 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 six months ended June 30, 2012, we repurchased approximately 168,000 shares of our common stock for \$5.0 million at an average price of \$29.52 per share.

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During the six months ended June 30, 2012, our Board of Directors declared two quarterly dividends of \$0.15 per share, which totaled \$15.8 million or \$0.30 per share. 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.

On July 30, 2012, the Company's Board of Directors declared a quarterly cash dividend of \$0.16 per share to be paid on September 14, 2012 to shareholders of record as of August 31, 2012.

We believe that our current cash position and available borrowings will be sufficient to satisfy our estimated working capital and planned capital expenditure requirements through the next 12 months and the 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 September 2011, the Financial Accounting Standards Board ("FASB") issued an Accounting Standards Update ("ASU") which simplifies how companies test goodwill for impairment. Under these amendments, an entity has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If, after assessing the totality of events or circumstances, an entity determines it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then performing the two-step impairment test is unnecessary. However, if an entity concludes otherwise, then it is required to perform the first step of the two-step impairment test by calculating the fair value of the reporting unit and comparing the fair value with the carrying amount of the reporting unit, as described in the goodwill accounting standard. The amendments are effective for annual and interim goodwill impairment tests performed for fiscal years beginning after December 15, 2011. Early adoption was permitted. We adopted this new ASU in the fourth quarter of 2011. This new ASU did not have a material effect on our consolidated financial statements.

In June 2011, the FASB issued an ASU which eliminates the option to present the components of other comprehensive income as part of the statement of equity and requires an entity to present the total of comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. The amendments were effective retrospectively for fiscal years, and interim periods within those years, beginning after December 15, 2011. The ASU requires changes in presentation only. We adopted this new ASU in the first quarter of 2012, electing to present the components of other comprehensive income as one continuous statement. This new ASU did not have a material effect on our consolidated financial statements.

In May 2011, the FASB issued an ASU which applies to all reporting entities that are required or permitted to measure or disclose the fair value of an asset, a liability, or an instrument classified in a reporting entity's shareholders' equity in the financial statements. The amendments do not extend the use of fair value accounting, but provide guidance on how it should be applied where its use is already required or permitted by other standards within U.S. GAAP. The amendments change the wording used to describe many requirements in U.S. GAAP for measuring fair value and for disclosing information about fair value measurements. Additionally, the ASU clarifies the FASB's intent about the application of existing fair value measurements. The amendments in this ASU are to be applied prospectively. For public entities, the amendments were effective during interim and annual periods beginning after December 15, 2011. We adopted the new ASU in the first quarter of 2012. This new ASU did not 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, 2011 filed with the Securities and Exchange Commission on February 24, 2012. As of June 30, 2012, there were no material changes in our exposure to market risk from December 31, 2011.

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 June 30, 2012. 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 June 30, 2012, 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 June 30, 2012 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS.

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

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

ITEM 1A. RISK FACTORS.

Information regarding risk factors affecting the Company’s business are discussed in the Company’s Annual Report on Form 10-K for the year ended December 31, 2011 in the section entitled “Risk Factors.” There have been no material changes from the risks disclosed therein other than as follows:

The Company may have risks associated with export violations in its Shanghai office.

As previously announced, in May of 2012, an employee from the Company’s Shanghai, China subsidiary was arrested as part of a U.S. government investigation into violations of U.S. law, including providing false information to obtain U.S. export licenses for certain MKS pressure transducers. U.S. government authorities have made it clear that MKS is not a target of the investigation. MKS is cooperating with the government and is conducting its own investigation into these matters. While MKS does not expect any of the alleged violations to have a material adverse effect upon its business, the disruption caused by this matter could adversely affect its Shanghai sales office. Additionally, the Company cannot be certain of the outcome of the governmental or internal investigations, which could include the identification of other violations, and fines, penalties, restrictions on export activities or other governmental actions.

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

The following table sets forth certain information with respect to repurchases of our common stock during the three months ended June 30, 2012.

ISSUER PURCHASES OF EQUITY SECURITIES

<u>Period</u>	<u>Total Number of Shares Purchased</u>	<u>Average Price Paid per Share</u>	<u>Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs⁽¹⁾⁽²⁾</u>	<u>Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs⁽¹⁾</u>
April 1 – April 30, 2012	40,000	\$ 28.20	40,000	\$ 193,144,000
May 1 – May 31, 2012	4,000	\$ 27.82	4,000	\$ 193,033,000
June 1 – June 30, 2012	—	\$ —	—	\$ 193,033,000
Total	44,000	\$ 28.17	44,000	

- (1) On July 25, 2011, our Board of Directors approved a share repurchase program (the “Program”) for the repurchase of up to an aggregate of \$200 million of our common stock from time to time in open market purchases, privately negotiated transactions or through other appropriate means, which we announced on July 27, 2011. The timing and quantity of any shares repurchased will depend 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.
- (2) We have repurchased approximately 254,000 shares of our common stock pursuant to the Program since its adoption.

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
10.1*	Employment Agreement dated as of August 3, 2012 between Seth Bagshaw and the Registrant
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. **

* Management contract or compensatory plan arrangement.

** Pursuant to Rule 406T of Regulation S-T, the Interactive Data Files on Exhibit 101 hereto are deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, as amended, are deemed not filed for purposes of Section 18 of the Securities and Exchange Act of 1934, as amended, and otherwise are not subject to liability under those sections.

- (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.

MKS INSTRUMENTS, INC.

August 3, 2012

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

EMPLOYMENT AGREEMENT

EMPLOYMENT AGREEMENT dated August 3, 2012 ("Employment Agreement"), by and between MKS Instruments, Inc., a Massachusetts Corporation (the "Corporation"), and Seth Bagshaw of Boxford, MA (the "Employee").

WHEREAS, the Corporation and the Employee desire to provide for the employment of the Employee by the Corporation:

NOW, THEREFORE, in consideration of the premises and the mutual promises contained herein, the Corporation and the Employee hereby agree as follows:

(1) Term of Employment:

(a) The Corporation hereby employs the Employee, and the Employee hereby accepts employment with the Corporation, for a period commencing as of August 3, 2012 continuing thereafter until terminated as provided in this Section (1) or Section (5).

(b) The Corporation may terminate Employee's employment at any time for any reason, or no reason, by notifying Employee of such termination. The employment of the Employee under this Employment Agreement shall terminate thirty (30) days after the date of such notice; provided, however, that the employment of the Employee under this Employment Agreement is subject to prior termination as hereinafter provided in Section (5)(b) and (c). Notwithstanding the above, the Corporation shall be entitled, at its sole discretion, to waive its obligation to continue active employment of the Employee during the 30 day notice period. In the event the Corporation elects at any time to waive its obligation to continue active employment of the Employee during the 30 day notice period, the Corporation shall continue to pay the Employee his customary Base Salary (as defined in Section (4)) and will reimburse Employee for the premiums (if any) he pays for continuation of life insurance should he elect to exercise the conversion feature (if any) of the Corporation's group life policy then in effect and for the premiums (if any) for the continuation under the federal COBRA program of such medical/dental insurance as Employee may then receive through the balance of the 30 day notice period.

(c) Employee may terminate employment by delivering notice of resignation no later than thirty (30) days prior to the intended date of termination of employment ("Resignation Date"); provided, however, that the Corporation may at any time and for any reason, or no reason, accelerate the Resignation Date to any date prior thereto up to and including the date Employee delivers such notice of resignation, which such acceleration shall not, in any event, be deemed a termination by Corporation of Employee's employment. Unless the employment is terminated pursuant to Section (5), the Corporation shall, if it terminates the employment prior to the Resignation Date, continue to pay Employee his customary Base Salary (as defined in Section (4)) and will

reimburse Employee for the premiums (if any) he pays for continuation of life insurance should he elect to exercise the conversion feature (if any) of the Corporation's group life policy then in effect and for the premiums (if any) for the continuation under the federal COBRA program of such medical/dental insurance as Employee may then receive, through the balance of the 30 day notice period.

(2) Capacity: Employee is being paid to perform such duties and exercise such powers, authorities and discretions in relation to the Corporation as are customary and incidental to Employee's position and such other services that are delegated or assigned to him by the CEO & President of the Corporation or his designee, including any authorized manager or supervisor of the Employee. It shall be a condition to Employee's employment hereunder that Employee execute and deliver to the Corporation that Confidential Information Agreement of MKS Instruments, Inc. ("Confidential Information Agreement") attached hereto as Attachment 1, and by execution of this Employment Agreement, Employee (i) acknowledges receipt of the Confidential Information Agreement and (ii) agrees to be bound by all of the terms of the Confidential Information Agreement.

(3) Extent of Services: During the term of employment of the Employee under this Employment Agreement, the Employee shall devote his full time to, and use his best efforts in the furtherance of, the business of the Corporation and shall not perform similar duties in any other capacity for any other person or engage in any other business activity which interferes in any way with the Employee performance of his duties to the Corporation, whether or not such business activity is pursued for gain or any other pecuniary advantage, without the prior written consent of the Corporation. Employee agrees and understands that Employee owes the Corporation fidelity and loyalty during his term of employment with the Corporation.

(4) Compensation: In consideration of the services to be rendered by the Employee under this Employment Agreement, the Corporation agrees to pay, and the Employee agrees to accept, the following compensation:

(a) Base Salary: A base salary at the rate of three hundred twenty five thousand dollars and zero cents (\$325,000.00) per year for the term of employment of the Employee under this Employment Agreement. The base salary shall be payable in equal biweekly installments subject to usual withholding requirements. This salary will be reviewed regularly according to the practices of the Corporation and will be subject to any changes in pay policies implemented by the Corporation from time to time. As an exempt employee, the Employee shall not be entitled to receive any overtime pay from the Corporation.

(b) MKS Instruments, Inc. Profit Sharing and 401-K Plan: The Employee shall be eligible to become a participant under the profit sharing plan of the Corporation on fulfilling the conditions set forth in the MKS Instruments, Inc. Profit Sharing and 401-K Plan, subject to any changes thereto that may be implemented from time to time.

(c) Vacation: The Employee shall be entitled to an annual vacation leave of 18 days at full pay during each year of this Employment Agreement, subject to the

Employee arranging such vacation so as not to affect adversely the ability of the Corporation to transact its business. Such vacation leave shall accrue and be administered according to the policies and practices of the Corporation.

(d) Life Insurance: The Corporation shall provide and pay such premiums for such term life insurance for the Employee during the term of employment of the Employee under this Employment Agreement as may be applicable to the Employee, subject to any changes in the term life insurance policies that may be implemented by the Corporation from time to time.

(e) Medical/Dental Insurance: The Corporation shall provide and pay such premiums for such group medical/dental insurance for the Employee during the term of employment of the Employee under this Employment Agreement as may be applicable to the Employee, subject to any changes in the medical/dental insurance policies that may be implemented by the Corporation from time to time.

(f) Other Benefits: The Corporation shall provide other benefits for the employee under the Plans of the Corporation applicable to the Employee during the term of employment of the Employee under this Employment Agreement.

(5) Termination: The employment of the Employee under this Employment Agreement shall terminate:

(a) On the expiration of the period of employment as provided in Section (1).

(b) Upon the death of the Employee, or the disability of the Employee as defined in Section (6) (e) below.

(c) Upon Corporation's delivery of notice of the existence of Cause. "Cause" shall mean: (i) Employee's refusal to follow directions from the CEO & President of the Corporation or his designee that are not inconsistent with Employee's position, (ii) Employee's failure to perform his duties other than as a result of Disability or death, (iii) Employee's disregard of or failure to comply with the Corporation's directives, policies or procedures other than as a result of Disability or death, (iv) Employee's engaging in negligent, reckless or intentional conduct injurious to the Corporation, any of its subsidiaries or affiliates or any of its directors or officers, (v) Employee's conviction of a felony or a serious misdemeanor or plea of other than "not guilty" to any felony or serious misdemeanor charge, (vi) Employee's engaging in conduct that is injurious to the Corporation's name or reputation or (vii) Employee's breach of this Employment Agreement or the Confidential Information Agreement.

(6) Payment Upon Termination:

(a) If the employment of the Employee is terminated by the Corporation other than pursuant to Section 5 (c) the Corporation shall continue to pay Employee the Base Salary in effect immediately prior to the time of such termination (but

without any bonus, commission or other similar amounts except as may have been earned and due prior to such termination) for six (6) months after the last full day employee works under this Agreement at its normal payroll payment dates.

(b) If the employment of the Employee is terminated by death, the Corporation shall pay to the estate of the Employee the compensation which would otherwise be payable to the Employee at the end of the month in which his death occurs and other unpaid amounts to which Employee would have been at that time entitled as an Employee under any applicable compensation or benefit plan or program.

(c) In the event the employment of the Employee is terminated by the Corporation for Cause pursuant to Section (5) (c) hereof, the Corporation shall have no obligation to pay the Employee any amounts, except for Base Salary through the last full day of actual work for the Corporation.

(d) In the event the Employee voluntarily resigns, the Corporation shall have no obligation to pay the Employee any amounts, except for Base Salary through the last full day of actual work for the Corporation, or, if applicable, amounts payable in accordance with Section (1.c), and other unpaid amounts to which Employee is at that time entitled under any applicable compensation or benefit plan or program.

(e) If Employee is incapacitated by a physical or mental condition, illness, or injury that prevents Employee from being able to perform his duties under this Employment Agreement in a satisfactory manner for substantially all of a twelve (12) consecutive week period (or such longer period as may be required by law or that the CEO & President of the Corporation or his designee may, in his discretion, determine) with any reasonable accommodation that may be required by law, then Employee shall be deemed to be unable to perform his job (any such physical or mental condition, illness, or injury, a "Disability"). In such event, the Corporation may terminate Employee's employment, in which case Employee shall receive (i) any accrued but unpaid Base Salary and other unpaid amounts to which Employee is at that time entitled under any applicable compensation or benefit plan or program and (ii) all applicable disability benefits consistent with any applicable benefits program. The Corporation shall have no further obligations to Employee. Nothing in this paragraph is intended to or shall operate to excuse the Corporation from any legal obligations it may have under applicable laws.

(f) The Corporation shall deduct from the amounts payable to Employee pursuant to this Agreement all required withholding amounts and deductions, including but not limited to federal, state and local withholding amounts in accordance all applicable laws and regulations and deductions authorized by Employee. Employee shall be solely responsible for and shall pay all taxes associated with the amounts payable under this Agreement

(7) **Noncompetition Agreement:** Employee shall not, without the written consent of the Corporation, during the term of employment with the Corporation and for the period of one year thereafter (the "Non-Compete Period"), engage in or otherwise carry on, directly or indirectly

anywhere in the world (either as principal, agent, employee, employer, investor, shareholder (except for holdings of no greater than 1% of the total outstanding shares in a publicly-traded company), consultant, partner, member, financier or in any other individual or representative capacity of any kind whatsoever), any business or activity competitive with the Corporation but solely to the extent such business or activity is related to, similar to or competitive with the activities of the business unit(s), division(s), laborator(y)(ies), facilit(y)(ies) and other operational unit(s) in or for which Employee performed work for the Corporation or about which Employee acquired Proprietary Information (as defined in the Confidential Information Agreement). The Non-Compete Period shall be extended for any period during which Employee is in breach of this Agreement or the Confidential Information Agreement.

(8) Notice: Any and all notices under this Employment Agreement shall be in writing and, if to the Corporation, shall be duly given if sent to the Corporation by registered or certified mail, postage prepaid, return receipt requested, at the address of the Corporation set forth under its name below or at such other address as the Corporation may hereafter designate to the Employee in writing for the purpose, and if to the Employee, shall be duly given if delivered to the Employee by hand or if sent to the Employee by registered or certified mail, postage prepaid, return receipt requested, at the address of the Employee set forth under his name below or at such other address as the Employee may hereafter designate to the Corporation in writing for the purpose.

(9) Assignment: The rights and obligations of the Corporation under this Employment Agreement shall inure to the benefit of, and shall be binding upon, the successors and assigns of the Corporation. The rights and obligations of the Employee under this Employment Agreement shall inure to the benefit of, and shall be binding upon, the heirs, executors and legal representatives of the Employee.

(10) Entire Agreement and Severability:

(a) This Employment Agreement and the Confidential Information Agreement supersede any and all other agreements, either oral or in writing, between the parties hereto with respect to the employment of the Employee by the Corporation and contains all of the covenants and agreements between the parties with respect to such employment. Each party to this Employment Agreement acknowledges that no representations, inducements, promises or agreements, oral or otherwise, have been made by any party, or any one acting on behalf of any party, which are not embodied herein, and that no other agreement, statement or promise not contained in this Employment Agreement shall be valid and binding. Any modification of this Employment Agreement will be effective only if it is in writing signed by both parties to this Employment Agreement.

(b) If any provision in this Employment Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions shall nevertheless continue in full force and effect without being impaired or invalidated in any way.

(c) All pronouns used herein shall include the masculine, feminine, and neuter gender as the context requires.

(11) Miscellaneous: This Agreement and the rights and obligations of the parties hereunder shall be governed by, and construed in accordance with, the laws of the Commonwealth of Massachusetts, excluding (but only to the extent permitted by law) its conflict of laws and choice of law rules, and jurisdiction over any action to enforce this Agreement, or any dispute arising from or relating to this Agreement shall subsist solely in the state and/or federal courts located within the Commonwealth of Massachusetts. The parties hereto further agree that service of any process, summons, notice or document by U.S. certified mail or overnight delivery by a generally recognized commercial courier service to Employee's last known address (or any mode of service recognized to be effective by applicable law) will be effective service of process for any action, suit or proceeding brought against Employee in any such court. This Agreement may be executed in any number of counterparts, each of which, when executed by both parties to this Agreement shall be deemed to be an original, and all of which counterparts together shall constitute one and the same instrument. The failure of either party hereto to enforce any right under this Agreement shall not be construed to be a waiver of that right, or of damages caused thereby, or of any other rights under this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed, in the Commonwealth of Massachusetts, this Employment Agreement as a sealed instrument, all as of the day, month and year first written above.

MKS INSTRUMENTS, INC.

By: /s/ Leo Berlinghieri
Leo Berlinghieri
CEO & President
2 Tech Drive
Andover, MA 01810

/s/ Seth H. Bagshaw Legal Signature
Seth H. Bagshaw
5 Bayns Hill Road
Boxford, MA 01921

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: August 3, 2012

/s/ Leo Berlinghieri

Leo Berlinghieri
Chief Executive Officer and President
(Principal Executive Officer)

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

I, Seth H. Bagshaw, certify that:

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

Date: August 3, 2012

/s/ Seth H. Bagshaw

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 June 30, 2012, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Leo Berlinghieri, Chief Executive Officer and President of the Company, and Seth H. Bagshaw, Vice President, Chief Financial Officer and Treasurer of the Company, each hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, based on his knowledge:

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

Dated: August 3, 2012

/s/ Leo BerlinghieriLeo Berlinghieri
Chief Executive Officer and President

Dated: August 3, 2012

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