

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, 2009

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 during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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

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

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

Yes No

As of July 31, 2009 the registrant had 49,456,134 shares of common stock outstanding.

MKS INSTRUMENTS, INC.
FORM 10-Q
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Sarbanes-Oxley Act of 2002

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS.

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

	June 30, 2009	December 31, 2008
ASSETS		
Current assets:		
Cash and cash equivalents	\$139,703	\$119,261
Short-term investments	118,838	159,608
Trade accounts receivable, net	55,738	85,350
Inventories	121,641	131,519
Income tax receivable	36,007	4,057
Deferred income taxes	19,576	19,058
Other current assets	10,921	9,875
Total current assets	502,424	528,728
Property, plant and equipment, net	72,733	82,017
Goodwill	144,511	337,765
Acquired intangible assets, net	6,706	21,069
Other assets	16,547	15,360
Total assets	<u>\$742,921</u>	<u>\$984,939</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term borrowings	\$ 8,822	\$ 17,808
Current portion of capital lease obligations	581	870
Accounts payable	21,133	19,320
Accrued compensation	7,597	13,768
Other accrued expenses	22,309	24,169
Total current liabilities	60,442	75,935
Long-term portion of capital lease obligations	177	396
Other liabilities	18,020	21,910
Commitments and contingencies (Note 15)		
Stockholders' equity:		
Preferred Stock, \$0.01 par value, 2,000,000 shares authorized; none issued and outstanding	—	—
Common Stock, no par value, 200,000,000 shares authorized; 49,457,067 and 49,275,975 shares issued and outstanding at June 30, 2009 and December 31, 2008, respectively	113	113
Additional paid-in capital	640,246	637,938
Retained earnings	17,795	241,428
Accumulated other comprehensive income	6,128	7,219
Total stockholders' equity	664,282	886,698
Total liabilities and stockholders' equity	<u>\$742,921</u>	<u>\$984,939</u>

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2009	2008	2009	2008
Net revenues				
Products	\$ 62,870	\$ 148,077	\$ 125,346	\$ 319,842
Services	16,285	22,925	30,528	44,608
Total net revenues	79,155	171,002	155,874	364,450
Cost of revenues				
Cost of products	43,846	85,250	99,965	182,873
Cost of services	9,781	15,264	20,032	29,182
Total cost of revenues	53,627	100,514	119,997	212,055
Gross profit	25,528	70,488	35,877	152,395
Research and development	12,285	20,694	27,748	40,035
Selling, general and administrative	25,909	34,905	54,131	66,522
Amortization of acquired intangible assets	1,011	1,984	2,664	5,089
Goodwill and asset impairment charges	208,497	—	208,497	—
Restructuring	68	—	5,688	—
Income (loss) from operations	(222,242)	12,905	(262,851)	40,749
Interest expense	(53)	(64)	(101)	(522)
Interest income	266	1,700	1,323	4,334
Impairment of investments	—	(251)	—	(1,412)
Income (loss) before income taxes	(222,029)	14,290	(261,629)	43,149
Provision (benefit) for income taxes	(14,895)	5,056	(37,996)	13,533
Net income (loss)	\$ (207,134)	\$ 9,234	\$ (223,633)	\$ 29,616
Net income (loss) per share:				
Basic	\$ (4.20)	\$ 0.19	\$ (4.55)	\$ 0.58
Diluted	\$ (4.20)	\$ 0.18	\$ (4.55)	\$ 0.57
Weighted average common shares outstanding:				
Basic	49,307	49,691	49,151	50,712
Diluted	49,307	50,866	49,151	51,718

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,	
	2009	2008
Cash flows from operating activities:		
Net income (loss)	\$ (223,633)	\$ 29,616
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:		
Depreciation and amortization	10,004	12,216
Stock-based compensation	4,173	7,595
Tax expense from stock-based compensation	(1,193)	(29)
Excess tax expense (benefit) from stock-based compensation	3,794	(1,330)
Deferred income taxes	2,118	(859)
Provision for excess or obsolete inventory	14,796	3,814
Impairment of goodwill	193,254	—
Impairment of intangibles and other long-lived assets	15,243	—
Impairment of investments	—	1,412
Other	1,120	165
Changes in operating assets and liabilities:		
Trade accounts receivable	26,536	(953)
Inventories	(1,261)	(4,605)
Income taxes receivable	(31,806)	(1,991)
Other current assets	(912)	(2,377)
Accrued expenses and other current liabilities	(13,369)	3,883
Accounts payable	(968)	(4,397)
Net cash provided by (used in) operating activities	(2,104)	42,160
Cash flows from investing activities:		
Purchases of short-term and long-term available for sale investments	(125,742)	(118,931)
Maturities, sales and settlements of short-term and long-term available for sale investments	162,054	128,116
Purchases of property, plant and equipment	(2,366)	(5,446)
Other	691	524
Net cash provided by investing activities	34,637	4,263
Cash flows from financing activities:		
Proceeds from short-term borrowings	86,014	63,882
Payments on short-term borrowings	(94,056)	(66,516)
Repurchases of common stock	—	(101,938)
Principal payments on capital lease obligations	(627)	(783)
Proceeds from (taxes paid for) exercise of stock options and employee stock purchase plan	(672)	6,538
Excess tax benefit (expense) from stock-based compensation	(3,794)	1,330
Net cash used in financing activities	(13,135)	(97,487)
Effect of exchange rate changes on cash and cash equivalents	1,044	(1,979)
Increase (decrease) in cash and cash equivalents	20,442	(53,043)
Cash and cash equivalents at beginning of period	119,261	223,968
Cash and cash equivalents at end of period	\$ 139,703	\$ 170,925

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

MKS INSTRUMENTS, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS
(Tables 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, 2009 and for the three and six months ended June 30, 2009 and 2008 is 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, 2008 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, 2008 filed with the Securities and Exchange Commission on February 27, 2009.

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, in-process research and development expenses, merger 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 April 2009, the Financial Accounting Standards Board (“FASB”) issued FASB Staff Position (“FSP”) FAS 107-1 and Accounting Pronouncement Board (“APB”) 28-1, “Interim Disclosures about Fair Value of Financial Instruments.” This FSP amends Statement of Financial Accounting Standard (“SFAS”) No. 107, “Disclosures About Fair Value of Financial Instruments,” to require disclosures about fair value of financial instruments for interim reporting periods of publicly traded companies as well as in annual financial statements. This FSP also amends APB Opinion No. 28, “Interim Financial Reporting,” to require those disclosures in summarized financial information at interim reporting periods. FSP 107-1 and APB 28-1 are effective for interim periods ending after June 15, 2009 and the Company adopted them in the second quarter of 2009. See Note 4.

In April 2009, the FASB issued FSP FAS 115-2 and FAS 124-2, “Recognition and Presentation of Other-Than-Temporary Impairments.” This FSP amends the other-than-temporary impairment guidance for debt securities to make the guidance more operational and to improve the presentation and disclosure of other-than-temporary impairments on debt and equity securities in the financial statements. This FSP does not amend existing recognition and measurement guidance related to other-than-temporary impairments of equity securities. FSP 115-2 is effective for interim periods ending after June 15, 2009. The Company adopted FSP 115-2 in the second quarter of 2009 and the adoption did not have an impact on the Company’s financial position, results of operations, or cash flows.

In April 2009, the FASB issued FSP FAS 157-4, “Determining Fair Value When the Volume and Level of Activity for the Asset or Liability Have Significantly Decreased and Identifying Transactions That Are Not Orderly.” This FSP provides additional guidance for estimating fair value in accordance with SFAS No. 157, “Fair Value Measurements,” (“SFAS 157”), when the volume and level of activity for the asset or liability have significantly decreased. This FSP also includes guidance on identifying circumstances that indicate a transaction is not orderly. FSP 157-4 is effective for interim periods ending after June 15, 2009. The Company adopted FSP 157-4 in the second quarter of 2009 and the adoption did not have an impact on the Company’s financial position, results of operations, or cash flows.

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

In April 2009, the FASB issued FSP No. 141R-1, “Accounting for Assets Acquired and Liabilities Assumed in a Business Combination That Arise from Contingencies,” (“FSP 141R-1”). FSP 141R-1 amends the provisions in SFAS No. 141(R), “Business Combinations,” (“SFAS 141R”) for the initial recognition and measurement, subsequent measurement and accounting, and disclosures for assets and liabilities arising from contingencies in business combinations. The FSP eliminates the distinction between contractual and non-contractual contingencies, including the initial recognition and measurement criteria in SFAS 141R and instead carries forward most of the provisions in SFAS No. 141, “Business Combinations,” (“SFAS 141”) for acquired contingencies. FSP 141R-1 is effective for contingent assets and contingent liabilities acquired in business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. The Company adopted FSP 141R-1 effective as of January 1, 2009 and the adoption did not have an impact on the Company’s financial position, results of operations, or cash flows.

In May 2009, the FASB issued statement No. 165, “Subsequent Events,” (“SFAS 165”). SFAS 165 modifies the definition of what qualifies as a subsequent event—those events or transactions that occur following the balance sheet date, but before the financial statements are issued, or are available to be issued—and requires companies to disclose the date through which it has evaluated subsequent events and the basis for determining that date. The Company adopted the provisions of SFAS 165 in the second quarter of 2009, in accordance with the effective date. See Note 16.

In June 2009, the FASB issued SFAS No. 168, “The FASB Accounting Standards Codification™ and the Hierarchy of Generally Accepted Accounting Principles—a replacement of FASB Statement No. 162,” (“SFAS 168”). The FASB Accounting Standards Codification (the Codification) will become the source of authoritative U.S. GAAP on July 1, 2009. The Codification, which changes the referencing of financial standards, is effective for interim or annual financial periods ending after September 15, 2009. The Codification is not intended to change or alter existing U.S. GAAP. The Company has evaluated this new statement, and has determined that it will not have a significant impact on the determination or reporting of its financial results.

3) Cash and Cash Equivalents and Investments

All highly liquid investments with a maturity date of three months or less at the date of purchase are considered to be cash equivalents. The appropriate classification of investments in securities is determined at the time of purchase. Debt securities that the Company does not have the intent and ability to hold to maturity are classified as “available-for-sale” and are carried at fair value. Unrealized gains and losses on securities classified as available-for-sale are included in accumulated other comprehensive income in consolidated stockholders’ equity.

The Company reviews its investment portfolio on a monthly basis to identify and evaluate individual investments that have indications of possible impairment. The factors considered in determining whether a loss is other-than-temporary include: the length of time and extent to which fair market value has been below the cost basis, the financial condition and near-term prospects of the issuer, credit quality, and the Company’s ability to hold the investment for a period of time sufficient to allow for any anticipated recovery in fair value. At December 31, 2007, the Company determined that declines in the fair value of two of its investments in certain commercial paper were other-than-temporary and as a result, recorded a \$1,457,000 impairment charge to earnings. This resulted in a new cost basis for the securities of \$4,275,000 at December 31, 2007.

During the Company’s review of its investment portfolio as of March 31, 2008, the Company determined that further declines in the value of these two investments were other-than-temporary and as a result, recorded an additional \$1,161,000 impairment charge to earnings. This resulted in a new cost basis for the securities of \$3,114,000 at March 31, 2008.

During the second quarter of 2008, the Company recorded additional impairment charges of \$251,000 on these two investments due to further declines in value. In addition, the Company received a \$490,000 principal payment from one of these investments during the second quarter of 2008. During the third quarter of 2008, the Company liquidated its position in these two impaired investments, one by sale and the other by a structured payment, for a combined total of \$2,879,000 and as a result, it recorded a gain from the liquidation of \$506,000. The Company did not have any other-than-temporary impaired investments at June 30, 2009.

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

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

	June 30, 2009	December 31, 2008
Federal Government and Government Agency Obligations	\$ 106,230	\$ 137,981
Commercial Paper and Corporate Obligations	12,608	21,627
	<u>\$ 118,838</u>	<u>\$ 159,608</u>

The fair value of long-term available-for-sale investments with maturities or estimated lives of one to five years consists of the following:

	June 30, 2009	December 31, 2008
Federal Government and Government Agency Obligations	\$ 4,094	\$ —

The following table shows the gross unrealized gains and losses aggregated by investment category:

	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
As of June 30, 2009:				
Federal Government and Government Agency Obligations	\$ 97,231	\$ 137	\$ (9)	\$ 97,359
Commercial Paper and Corporate Obligations	4,507	43	(739)	3,811
Total	<u>\$ 101,738</u>	<u>\$ 180</u>	<u>\$ (748)</u>	<u>\$ 101,170</u>
As of December 31, 2008:				
Federal Government and Government Agency Obligations	\$ 126,106	\$ 373	\$ (2)	\$ 126,477
Commercial Paper and Corporate Obligations	2,993	87	(783)	2,297
Total	<u>\$ 129,099</u>	<u>\$ 460</u>	<u>\$ (785)</u>	<u>\$ 128,774</u>

Interest income is accrued as earned. Dividend income is recognized as income on the date the stock trades “ex-dividend.” The cost of marketable securities sold is determined by the specific identification method and realized gains or losses are reflected in income and were not material for the three and six months ended June 30, 2009 and June 30, 2008, respectively.

4) Fair Value Measurements

The Company follows fair value measurements in accordance with U.S. GAAP. 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 rules 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 rule 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 and liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis. Level 1 assets and liabilities include debt and equity securities and derivative contracts that are traded in an active exchange market.
- 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

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

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 and derivative contracts whose value is determined using a pricing model with inputs that are observable in the market or can be derived principally from or corroborated by observable market data. This category generally includes certain U.S. Government and Agency mortgage-backed debt securities, corporate debt securities, and non-exchange traded derivative contracts.

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.

Assets and liabilities of the Company measured at fair value on a recurring basis as of June 30, 2009, are summarized as follows:

Description	June 30, 2009	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	\$ 10,212	\$ 10,212	\$ —	\$ —
Available-for-sale-securities	122,932	122,932	—	—
Derivatives – currency forward contracts	631	—	631	—
Total assets	\$133,775	\$ 133,144	\$ 631	\$ —

Assets and liabilities of the Company measured at fair value on a recurring basis as of December 31, 2008, are summarized as follows:

Description	December 31, 2008	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	\$ 13,550	\$ 13,550	\$ —	\$ —
Available-for-sale-securities	159,608	159,608	—	—
Derivatives – currency forward contracts	508	—	508	—
Total assets	\$173,666	\$ 173,158	\$ 508	\$ —

Cash Equivalents

As of June 30, 2009 and December 31, 2008, cash equivalents consisted of Federal Government and Government Agency Obligations, Commercial Paper, and Other Corporate Obligations, classified within Level 1 of the fair value hierarchy because they are valued using quoted market prices in active markets.

Available-For-Sale Securities

As of June 30, 2009 and December 31, 2008, available-for-sale securities consisted of Federal Government and Government Agency Obligations, Commercial Paper, and Other Corporate Obligations, classified within Level 1 of the fair value hierarchy because they are valued using quoted market prices in active markets.

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 forward

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

foreign currency exchange contracts are valued using broker quotations, or market transactions in either the listed or over-the-counter markets. As such, these derivative instruments are classified within Level 2.

Assets and liabilities of the Company measured at fair value on a non-recurring basis as of June 30, 2009 are summarized as follows:

Description	June 30, 2009	Fair Value Measurements at Reporting Date Using			Total Losses
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	
Assets					
Goodwill	\$ 144,511	\$ —	\$ —	\$ 144,511	\$ 193,254
Definite lived intangible assets	6,706	—	6,706	—	11,699
Long-lived assets held and used	1,297	1,297	—	—	3,544
Total assets	\$ 152,514	\$ 1,297	\$ 6,706	\$ 144,511	\$ 208,497

In accordance with the provisions of SFAS No. 142, "Goodwill and Other Intangible Assets," ("SFAS 142"), goodwill with a carrying amount of \$337,765,000 was written down to its implied fair value of \$144,511,000, resulting in an impairment charge of \$193,254,000, which was included in earnings in the second quarter of 2009. In accordance with the provisions of SFAS 144, "Accounting for the Impairment or Disposal of Long-Lived Assets," ("SFAS 144"), definite-lived intangible assets with a carrying amount as of April 30, 2009 of \$18,866,000, were written down to its fair value of \$7,167,000, resulting in an impairment charge of \$11,699,000, which was included in earnings in the second quarter of 2009. Refer to Note 7 for the information and description used to develop the inputs and the fair value determination of the goodwill and other intangible assets.

In accordance with the provisions of SFAS 144, the long-lived asset held and used with a carrying amount of \$4,841,000 was written down to its fair value of \$1,297,000, resulting in a loss of \$3,544,000, which was included in earnings in the second quarter of 2009.

5) Derivatives

In March of 2008, the FASB issued SFAS No. 161, "Disclosures about Derivative Instruments and Hedging Activities, an amendment of FASB Statement No. 133," (SFAS 161). SFAS 161 requires entities to provide enhanced disclosure about how and why the entity uses derivative instruments, how the instruments and related hedged items are accounted for under SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities," (SFAS 133) and how the instruments and related hedged items affect the financial position, results of operations, and cash flows of the entity. The Company adopted this new standard effective January 1, 2009.

The Company enters into derivative instruments for risk management purposes only, including derivatives designated as hedging instruments under SFAS 133 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 and other financial 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, Korean, British and European currencies. To the extent these derivatives are effective in offsetting the variability of the hedged cash flows, and otherwise meet the hedge accounting criteria of SFAS 133, changes in the derivatives' fair value are not included in current earnings but are included in Accumulated Other Comprehensive Income in Equity. These changes in fair value will

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

subsequently be reclassified into earnings as a component of product cost, 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 of SFAS 133 are not met, the foreign currency forward contracts are utilized as economic hedges and changes in the fair value of these contracts are recorded currently 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 of SFAS 133 were not met.

As of June 30, 2009, the Company had outstanding forward foreign exchange contracts with gross notional values of \$32,503,000, which is reflective of the amounts that are normally outstanding at any point during the year. The following table provides a summary of the primary hedging positions and corresponding fair values held as of June 30, 2009:

Currency Hedged (Buy/Sell)	Gross Notional Value	Fair Value Asset(1)
U.S. Dollar/Japanese Yen	\$25,186	\$ 939
U.S. Dollar/South Korean Won	3,993	(158)
U.S. Dollar/Euro	2,990	(120)
U.S. Dollar/U.K. Pound Sterling	334	(30)
Total	\$32,503	\$ 631

(1) Represents the net receivable (payable) amount included in the consolidated balance sheet as of June 30, 2009.

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

Derivatives Designated as Hedging Instruments under Statement 133	Balance Sheet Location	June 30, 2009	December 31, 2008
Derivative assets			
Forward exchange contracts — forwards	Other current assets	\$ 939	\$2,645
Derivative liabilities			
Forward exchange contracts — forwards	Other current assets	308	2,137
Total net derivative assets designated as hedging instruments under Statement 133		\$ 631	\$ 508

The following table provides a summary of the gains (losses) on derivatives designated as hedging instruments under Statement 133:

Derivatives in Statement 133 Cash Flow Hedging Relationships	Three Months Ended		Six Months Ended	
Forward exchange contracts - forwards	June 30, 2009	June 30, 2008	June 30, 2009	June 30, 2008
Net gain (loss) recognized in OCI (1)	\$ (1,790)	\$ 3,792	\$ (101)	\$ 839
Net gain (loss) reclassified from accumulated OCI into income (2)	1,028	(1,665)	1,585	(2,341)
Net gain recognized in income (3)	939	—	939	—

(1) Net change in the fair value of the effective portion classified in other comprehensive income ("OCI").

(2) Effective portion classified as Cost of products.

(3) Ineffective portion and amount excluded from effectiveness testing, classified in Selling, general and administrative.

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

The following table provides a summary of gains on derivatives not designated as hedging instruments under Statement 133:

Derivatives Not Designated as Hedging Instruments under Statement 133	Three Months Ended		Six Months Ended	
	June 30, 2009	June 30, 2008	June 30, 2009	June 30, 2008
Forward exchange contracts - forwards	\$ —	\$ —	\$ —	\$ 2,669
Net gain recognized in income (1)	\$ —	\$ —	\$ —	\$ 2,669

- (1) Classified in Selling, general and administrative.

The \$2,669,000 gain was primarily attributable to the settlement of cash and intercompany loans at different foreign exchange rates related to a legal entity consolidation between some of the Company's foreign subsidiaries.

- 6) Inventories

Inventories consist of the following:

	June 30, 2009	December 31, 2008
Raw material	\$ 54,293	\$ 58,542
Work in process	15,295	22,072
Finished goods	52,053	50,905
	<u>\$121,641</u>	<u>\$ 131,519</u>

During the six months ended June 30, 2009, the Company recorded charges of \$14,796,000 for excess and obsolete inventory. The excess and obsolete inventory related charges, of which \$14,373,000 were recorded in the three months ended March 31, 2009, were primarily a result of a lower future production plan in response to the continued weakness in the Company's markets.

- 7) Goodwill and Intangible Assets

Goodwill

In accordance with SFAS 142, the Company tests goodwill for impairment on an annual basis, which has been determined to be as of October 31 of each fiscal year. The Company also tests goodwill between annual tests if an event occurs or circumstances change that indicate that the fair value of a reporting unit may be below its carrying value. Due to various factors, including current market and economic conditions that have contributed to a decline in the Company's forecasted business levels, and the excess of the Company's consolidated net assets over its market capitalization for a sustained period of time, the Company concluded an interim assessment for impairment should be conducted for its goodwill as of April 30, 2009, the date of the triggering event.

Goodwill impairment is determined using a two-step process. The first step involves a comparison of the estimated fair value of a reporting unit to its carrying amount, including goodwill. In performing the first step, the Company determines the fair value of a reporting unit using a discounted cash flow ("DCF") analysis. Determining fair value requires the exercise of significant judgment, including judgments about appropriate discount rates, perpetual growth rates, and the amount and timing of expected future cash flows. Discount rates are based on a weighted average cost of capital ("WACC"), which represents the average rate a business must pay its providers of debt and equity. The WACC used to test goodwill is derived from a group of comparable companies. The cash flows employed in the DCF analysis are derived from internal earnings and forecasts and external market forecasts. If the estimated fair value of a reporting unit exceeds its carrying amount, goodwill of the reporting unit is not impaired and the second step of the impairment test is not necessary. If the carrying amount of a reporting unit exceeds its estimated fair value, then the second step of the goodwill impairment test must be performed. The second step of the goodwill impairment test compares the implied fair value of the reporting unit's goodwill with its carrying amount of goodwill to measure the amount of impairment loss, if any. The implied fair value of goodwill is determined in the same manner as the amount of goodwill recognized in a business combination, whereby the estimated fair value of the reporting unit is allocated to all of the assets and liabilities of that unit (including any unrecognized intangible assets) as if the reporting unit had been acquired in a business combination and the fair value of the reporting unit was the purchase price paid. If the carrying amount of the reporting unit's goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized in an amount equal to that excess.

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

The Company determined that for certain reporting units, the carrying amount of their net assets exceeded their respective fair values, indicating that a potential impairment existed. After completing the second step of the goodwill impairment test, the Company recorded a goodwill impairment charge in the second quarter of 2009 of \$193,254,000.

The changes in the carrying amount of goodwill during the six months ended June 30, 2009 were as follows:

	2009
Balance at December 31, 2008	\$ 337,765
Goodwill impairment	193,254
Balance as of June 30, 2009.	<u>\$ 144,511</u>

Intangible Assets

In accordance with the requirements of SFAS 144, the Company is required to test certain long-lived assets when indicators of impairment are present. For the purposes of the SFAS 144 test, long-lived assets are grouped with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. Due to various factors, including current market and economic conditions that have contributed to a decline in the Company's forecasted business levels, and the excess of the Company's consolidated net assets over market capitalization for a sustained period of time, the Company concluded an interim assessment for impairment should be conducted for its intangible assets as of April 30, 2009. The Company tested the long-lived assets in question for recoverability by comparing the sum of the undiscounted cash flows attributable to each respective asset group to their carrying amounts, and determined that the carrying amounts were not recoverable. Management then evaluated the fair values of each long-lived asset of the potentially impaired long-lived asset group to determine the amount of the impairment, if any. The fair value of each intangible asset was based primarily on an income approach, which is a present value technique used to measure the fair value of future cash flows produced by the asset. The Company estimated future cash flows over the remaining useful life of each intangible asset. As a result of this analysis, the Company determined that certain of its intangible assets related to completed technology, customer relationships, and patents and trademarks had carrying values that exceeded their estimated fair values. As a result, an impairment charge of \$11,699,000 was recorded in the second quarter of 2009.

During the fourth quarter of 2008, the adverse economic climate was a significant factor that indicated that the carrying amount of certain long-lived asset groups were not recoverable. A review of future cash flows identified asset groups within Yield Dynamics ("YDI") which had carrying values in excess of future cash flows. The Company reviewed the fair value of the long-lived assets for these asset groups and determined that intangible assets related to customer technologies, relationships, and patents and trademarks had carrying values that exceeded their estimated fair values. As a result, an impairment charge of \$6,069,000 was recorded in the fourth quarter of 2008.

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

As of June 30, 2009

	Gross	Impairment Charges	Accumulated Amortization	Net
Completed technology	\$ 88,855	\$ (3,812)	\$ (81,881)	\$ 3,162
Customer relationships	21,879	(7,113)	(12,986)	1,780
Patents, trademarks, trade names and other	29,672	(774)	(27,134)	1,764
	<u>\$ 140,406</u>	<u>\$ (11,699)</u>	<u>\$ (122,001)</u>	<u>\$ 6,706</u>

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

For the year ended December 31, 2008

	Gross	Impairment Charges	Accumulated Amortization	Net
Completed technology	\$ 93,204	\$ (4,349)	\$ (80,685)	\$ 8,170
Customer relationships	23,542	(1,663)	(12,152)	9,727
Patents, trademarks, trade names and other	29,729	(57)	(26,500)	3,172
	<u>\$ 146,475</u>	<u>\$ (6,069)</u>	<u>\$ (119,337)</u>	<u>\$ 21,069</u>

Aggregate amortization expense related to acquired intangibles for the three and six months ended June 30, 2009 was \$1,011,000 and \$2,664,000, respectively. Aggregate amortization expense related to acquired intangibles for the three and six months ended June 30, 2008 was \$1,984,000 and \$5,089,000, respectively. Estimated amortization expense for each of the five succeeding fiscal years is as follows:

Year	Amount
2009 (remaining)	\$ 1,740
2010	2,134
2011	1,588
2012	634
2013	610

Long-lived tangible assets

As a result of a facility consolidation in Asia, the Company recorded an asset impairment charge of \$3,544,000 in the second quarter of 2009 resulting from the write down of the value of a building to its estimated fair value.

Given current market and economic conditions and their potential future impact on the determination of the reporting unit's fair value, the estimates and assumptions used for purposes of the impairment tests conducted for the quarter ended June 30, 2009 could change, requiring impairment testing in future quarters. There can be no assurance that changes in future events or circumstances, including the Company's estimates and assumptions, will not result in a future impairment charge.

8) Debt

On March 18, 2009, the Company entered into a fifth amendment to the Optional Advance Demand Grid Note dated August 3, 2004. The unsecured short-term LIBOR based loan agreement with HSBC Bank USA is utilized primarily by the Company's Japanese subsidiary for short-term liquidity purposes. The credit line as amended (a) decreased the maximum amount of the note from \$35,000,000 to \$5,000,000, (b) decreased the limit for standby letters of credit under the note from \$750,000 to \$650,000, and (c) established an annual facility fee of 0.0375% of the maximum amount of the note. The Company believes the reduced amount of the note more accurately reflects its anticipated utilization of this line, and minimizes the cost of the new facility fee. The Company had outstanding borrowings under this line of credit of \$0 and \$1,101,000 at June 30, 2009 and December 31, 2008, respectively.

On June 2, 2009, the Company entered into a sixth amendment to the Optional Advance Demand Grid Note dated August 3, 2004, to extend its maturity date to June 30, 2009.

Additionally, the Company's Japanese subsidiary has credit and short term borrowing arrangements with two financial institutions. Total borrowings outstanding under these arrangements were \$8,822,000 and \$16,707,000 at June 30, 2009 and December 31, 2008, respectively.

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,

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

utilization levels, material usage, or supplier warranties on parts differ from the Company's estimates, revisions to the estimated warranty liability would be required.

Product warranty activities were as follows:

	Six Months Ended June 30,	
	2009	2008
Balance at January 1	\$ 8,334	\$ 9,497
Provision (benefit) for product warranties.	(93)	2,937
Direct charges to warranty liability	(1,829)	(2,979)
Balance at June 30	<u>\$ 6,412</u>	<u>\$ 9,455</u>

10) Restructuring

In light of the continued global financial crisis and its impact on the Company's semiconductor equipment OEM customers and the other markets it serves, the Company initiated a restructuring plan in the first quarter of 2009. The plan included a reduction in the Company's worldwide headcount of approximately 630 people, which represented approximately 24% of its global workforce.

The Company recorded restructuring charges of \$68,000 and \$5,688,000 during the three and six months ended June 30, 2009, respectively. The restructuring charges were primarily for severance and other charges associated with the reductions in workforce. As of June 30, 2009, the accrued restructuring costs totaled \$663,000 and were included in "Accrued compensation" in the consolidated balance sheets. These costs will be substantially paid by December 31, 2009.

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

	Six Months Ended	
	June 30, 2009	
Beginning balance	\$	—
Charged to expense.		5,688
Payments		(5,025)
Ending balance	<u>\$</u>	<u>663</u>

11) Income Taxes

The total amount of gross unrecognized tax benefits at June 30, 2009 was approximately \$8,904,000. At December 31, 2008, the total amount of gross unrecognized tax benefits, which excludes interest and penalties discussed below, was approximately \$14,678,000. If these benefits were recognized in a future period, the timing of which is not estimable, the net unrecognized tax benefit of approximately \$11,784,000 would impact the Company's effective tax rate. The net decrease from December 31, 2008 was primarily attributable to the release of reserves from the years 2003 to 2006 as a result of the close of the federal tax audit on the 2005 and 2006 tax years.

The Company and its subsidiaries are subject to U.S. federal income tax as well as the income tax of multiple state and foreign jurisdictions. With the close of the federal tax audit in the first quarter of 2009, the Company has concluded all U.S. federal income tax matters for years through 2006. As of June 30, 2009, there were ongoing audits in various other tax jurisdictions.

Within the next 12 months, it is reasonably possible that the Company may recognize \$2,300,000 to \$2,700,000 of previously unrecognized tax benefits related to various state and foreign tax positions as a result of the conclusion of various audits and the expiration of the statute of limitations. The following tax years, in the major tax jurisdictions noted, are open for assessment or refund: U.S. Federal: 2007 and 2008, Germany: 2001 to 2008, Korea: 2004 to 2008, Japan: 2004 to 2008, and the United Kingdom: 2007 and 2008.

The Company accrues interest expense and, if applicable, penalties, for any uncertain tax positions. This interest and penalty expense is a component of income tax expense. At June 30, 2009 and December 31, 2008, the Company had approximately \$508,000 and \$1,730,000, respectively, accrued for interest on unrecognized tax benefits.

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

The Company's effective tax rate for the three and six months ended June 30, 2009 was 6.7% and 14.5%, respectively. The effective tax rate for the six months ended June 30, 2009 and the related tax benefit are lower than the statutory tax rate. The decreased benefit is primarily due to the non-deductible goodwill impairment charge of \$190,705,000 during the second quarter. The Company's effective tax rate for the three and six months ended June 30, 2008 was 35.4% and 31.4%, respectively. The effective tax rate for the six months ended June 30, 2008 is less than the statutory tax rate primarily due to the profits of the Company's international subsidiaries being taxed at rates lower than the U.S. statutory tax rate.

12) Net Income (Loss) Per Share

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2009	2008	2009	2008
Numerator:				
Net income (loss)	\$(207,134)	\$ 9,234	\$(223,633)	\$ 29,616
Denominator:				
Shares used in net income (loss) per common share — basic	49,307	49,691	49,151	50,712
Effect of dilutive securities:				
Stock options, restricted stock and employee stock purchase plan	—	1,175	—	1,006
Shares used in net income (loss) per common share — diluted	49,307	50,866	49,151	51,718
Net income (loss) per common share:				
Basic	\$ (4.20)	\$ 0.19	\$ (4.55)	\$ 0.58
Diluted	\$ (4.20)	\$ 0.18	\$ (4.55)	\$ 0.57

Due to the Company's net loss for the three and six months ended June 30, 2009, the dilutive effect of stock options and awards were not included in the computation of diluted loss per share, as their inclusion would have been anti-dilutive. For the three and six months ended June 30, 2009, there were options outstanding to purchase 4,159,421 and 4,298,127 shares, respectively. For the three and six months ended June 30, 2008, there were options outstanding to purchase 3,133,941 and 3,200,458 shares, respectively.

13) Stockholders' Equity

Comprehensive Income (Loss)

Components of comprehensive income (loss) were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2009	2008	2009	2008
Net income (loss)	\$(207,134)	\$ 9,234	\$(223,633)	\$ 29,616
Other comprehensive income (loss):				
Changes in value of financial instruments designated as cash flow Hedges, net of tax	(1,575)	3,792	(590)	840
Foreign currency translation adjustment	5,083	(2,681)	(362)	(601)
Unrealized gain (loss) on investments, net of tax	139	(174)	(139)	(184)
Other comprehensive income (loss)	3,647	937	(1,091)	55
Total comprehensive income (loss)	\$(203,487)	\$ 10,171	\$(224,724)	\$ 29,671

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

Stock Repurchase Program

On February 12, 2007, the Company's Board of Directors approved a share repurchase program (the "Program") for the repurchase of up to \$300,000,000 of its outstanding stock over the subsequent two years. During the three months ended June 30, 2008, the Company repurchased 1,582,000 shares of its common stock for \$36,666,000 for an average price of \$23.18 per share and during the six months ended June 30, 2008, the Company repurchased 5,051,000 shares of its common stock for \$101,939,000 for an average price of \$20.18 per share. There were no shares repurchased in 2009 and the Program ended effective February 11, 2009.

14) Geographic, Product and Significant Customer Information

The Company operates in one segment for the development, manufacturing, sales and servicing of products that measure, control, power and monitor critical parameters of advanced manufacturing processes. The Company's chief decision-maker reviews consolidated operating results to make decisions about allocating resources and assessing performance for the entire Company.

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2009	2008	2009	2008
Geographic net revenues:				
United States	\$42,471	\$ 97,883	\$ 80,958	\$220,905
Japan	7,943	23,653	19,339	49,899
Europe	14,804	28,802	30,853	54,513
Asia (excluding Japan)	13,937	20,664	24,724	39,133
	<u>\$79,155</u>	<u>\$171,002</u>	<u>\$155,874</u>	<u>\$364,450</u>

	June 30, 2009	December 31, 2008
Long-lived assets:		
United States	\$55,816	\$60,942
Japan	6,406	11,527
Europe	4,009	3,353
Asia (excluding Japan)	8,423	8,812
	<u>\$74,654</u>	<u>\$84,634</u>

The Company groups its products into three product groups. Net product and service revenues for these product groups are as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2009	2008	2009	2008
Instruments and Control Systems	\$43,315	\$ 90,238	\$ 84,752	\$187,208
Power and Reactive Gas Products	27,681	64,736	55,655	140,786
Vacuum Products	8,159	16,028	15,467	36,456
	<u>\$79,155</u>	<u>\$171,002</u>	<u>\$155,874</u>	<u>\$364,450</u>

The Company had one customer comprising 13% and 11% of net revenues for the three and six months ended June 30, 2009, respectively. The Company had one customer comprising 20% of net revenues for both the three and six months ended June 30, 2008.

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

15) 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, 2009 and determined that there were no significant changes from the ones set forth in the notes to the financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2008.

16) Subsequent Event

The Company evaluated its events and transactions subsequent to its June 30, 2009 balance sheet date and in accordance with SFAS 165, determined that there were no significant subsequent events to report through August 7, 2009, which is the date the Company issued its financial statements.

MKS INSTRUMENTS, INC.

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

We believe that 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. 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, 2008 in the section entitled "Risk Factors" and Part II, Item 1A "Risk Factors" of this Quarterly Report on Form 10-Q.

Overview

We are a leading worldwide provider of instruments, subsystems and process control solutions that measure, control, power, monitor and analyze critical parameters to improve process performance and productivity of advanced manufacturing processes.

We are managed as one operating segment. We group our products into three product groups: Instruments and Control Systems, Power and Reactive Gas Products and Vacuum Products. Our products are derived from our core competencies in pressure measurement and control, materials delivery, gas composition analysis, electrostatic charge management, 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, data storage media and other advanced coatings. We also leverage our technology in 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, solar cells, data storage media, and other coating applications; and other industrial, medical and manufacturing companies; and university, government and industrial research laboratories. For the six months ended June 30, 2009 and the full year ended December 31, 2008, we estimate that approximately 41.3% and 56.6% 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 significant portion of our sales.

Recent reductions in demand for the products manufactured by semiconductor capital equipment manufacturers and semiconductor device manufacturers have adversely affected our business. The global economic uncertainty is prolonging a steep downturn in semiconductor capital equipment spending and adversely affecting our business, financial condition and results of operations. Product revenues have decreased 74.8% for the six months ended June 30, 2009 compared to the same period in 2008 for these customers. The semiconductor capital equipment industry is subject to rapid demand shifts, which are difficult to predict, and we are uncertain how long we will remain at our current sales levels or the timing or extent of further weakness or any future upturn in the semiconductor capital equipment industry. However, as a result of the current improvement in our order trend, we are estimating a modest increase in revenues for the quarter ended September 30, 2009 compared to June 30, 2009.

Our product revenues sold to our other markets, which exclude semiconductor capital equipment and semiconductor device product applications, decreased 39.7% for the six months ended June 30, 2009 compared to the same period in 2008. The decrease in 2009 reflects the continued weakness in the global economy and the impact from tightened credit markets on our customers' ability to invest in capital spending.

In light of the continued global financial crisis and its impact on our semiconductor original equipment manufacturer ("OEM") customers and the other markets we serve, we initiated a restructuring plan in the first quarter of 2009 and recorded a \$5.7 million charge for the six months ended June 30, 2009. The plan included a reduction in our worldwide headcount of approximately 24.0% in order to resize our overall cost structure. Also in the first quarter of 2009, we recorded a \$14.4 million charge related to excess and obsolete inventory primarily as a result of a lower future production plan in response to the continued weakness in the markets we serve. During the second quarter of 2009, we reviewed our goodwill and other long-lived assets for potential impairment as a result of current market and economic conditions that have contributed to a decline in our forecasted business levels, and the excess of our consolidated net assets over our market capitalization for a sustained period of time. As a result of this impairment assessment, we recorded non-cash goodwill and intangible asset impairment charges of \$193.3 million and \$11.7 million, respectively. There can be no assurance that changes in future events or circumstances, including our estimates and assumptions, will not result in future impairment charges.

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A significant portion of our net sales is to operations in international markets. International net sales include sales by our foreign subsidiaries, but exclude direct export sales. For the six months ended June 30, 2009 and full year ended December 31, 2008, international net sales accounted for approximately 48.1% and 43.5%, of net sales, respectively. A significant portion of our international net sales were sales in Japan. We expect that international net sales will continue to represent a significant percentage of our total net sales.

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, 2008. 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, 2008 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 data.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2009	2008	2009	2008
Net revenues				
Product	79.4%	86.6%	80.4%	87.8%
Services	20.6	13.4	19.6	12.2
Total net revenues	100.0	100.0	100.0	100.0
Cost of revenues				
Cost of product revenues	55.3	49.9	64.1	50.2
Cost of service revenues	12.4	8.9	12.9	8.0
Total cost of revenues	67.7	58.8	77.0	58.2
Gross profit	32.3	41.2	23.0	41.8
Research and development	15.5	12.1	17.8	11.0
Selling, general and administrative	32.7	20.4	34.7	18.2
Amortization of acquired intangible assets	1.3	1.2	1.7	1.4
Goodwill and asset impairment charges	263.5	—	133.8	—
Restructuring	0.1	—	3.6	—
Income (loss) from operations	(280.8)	7.5	(168.6)	11.2
Interest income, net	0.3	1.0	0.8	1.0
Impairment of investments	—	(0.1)	—	(0.4)
Income (loss) before income taxes	(280.5)	8.4	(167.8)	11.8
Provision (benefit) for income taxes	(18.8)	3.0	(24.4)	3.7
Net income (loss)	(261.7)%	5.4%	(143.4)%	8.1%

Net Revenue (dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2009	2008	%Change	2009	2008	%Change
Net Revenues						
Product	\$62.9	\$148.1	(57.5)%	\$125.4	\$319.8	(60.8)%
Service	16.3	22.9	(29.0)	30.5	44.6	(31.6)
Total net revenues	\$79.2	\$171.0	(53.7)%	\$155.9	\$364.4	(57.2)%

Product revenues decreased \$85.2 million during the three months ended June 30, 2009, compared to the same period in 2008, mainly due to a decrease in worldwide demand from our semiconductor capital equipment manufacturer and semiconductor device manufacturer customers due to the challenging economic environment. The decrease in demand from these customers is due to the challenging global economic conditions, which resulted in a decrease in revenues of \$54.5 million or 43.1% compared to the same period for the prior year. The product revenues related to other markets decreased by \$30.7 million or 51.6% compared to the same period for the prior

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year as a result of the continued weakness in the global economy and the impact from tightened credit markets on our customers' ability to invest in capital spending.

Product revenues decreased \$194.5 million during the six months ended June 30, 2009, compared to the same period in 2008, mainly due to a decrease in worldwide demand from our semiconductor capital equipment manufacturer and semiconductor device manufacturer customers due to the challenging economic environment, which resulted in a decrease in revenues of \$144.0 million or 74.8% from these customers compared to the same period for the prior year. The product revenues related to other markets decreased by \$50.5 million or 39.7% compared to the same period for the prior year.

Service revenues consist mainly of fees for services relating to the maintenance and repair of our products, software maintenance, installation services and training. Service revenue decreased \$6.6 million and \$14.1 million during the three and six months ended June 30, 2009, compared to the same period in 2008, respectively. The decrease is due to our customers delayed spending on these services due to the challenging global economic conditions.

Total international net revenues, including product and service, were \$36.7 million and \$74.9 million for the three and six months ended June 30, 2009, or 46.3% and 48.1% of net revenues, respectively, compared to \$73.1 million and \$143.5 million for the three and six months ended June 30, 2008, or 42.8% and 39.4% of net revenues, respectively. The decreases are mainly due to a decrease in worldwide demand from our semiconductor capital equipment manufacturer and semiconductor device manufacturer customers due to the challenging economic environment. The international net revenues related to other markets also decreased compared to the same periods for the prior year.

Gross Profit

	Three Months Ended June 30,			Six Months Ended June 30,		
	2009	2008	%Points Change	2009	2008	%Points Change
Gross profit as percentage of net revenues						
Product	30.3%	42.4%	(12.1)%	20.2%	42.8%	(22.6)%
Service	39.9	33.4	6.5	34.4	34.6	(0.2)
Total gross profit percentage	32.3%	41.2%	(8.9)%	23.0%	41.8%	(18.8)%

Gross profit on product revenues decreased 12.1 percentage points for the three months ended June 30, 2009, compared to the three months ended June 30, 2008. Our margin was negatively impacted by approximately 18.4 percentage points from lower revenue volumes since a portion of our overhead costs are fixed, 3.1 percentage points from unfavorable product mix, partially offset by increases of 8.1 percentage points from reduced warranty costs, lower excess and obsolete inventory related charges and favorable foreign currency fluctuations.

Gross profit on product revenues decreased by 22.6 percentage points during the six months ended June 30, 2009, compared to the six months ended June 30, 2008. Our margin was negatively impacted by approximately 18.9 percentage points from decreased revenue volumes since a portion of our overhead costs are fixed, 8.7 percentage points from excess and obsolete inventory related charges and 1.4 percentage points from unfavorable product mix. These decreases were partially offset by increases of 2.5 percentage points from lower overhead spending and 4.0 percentage points from reduced warranty costs and favorable foreign currency fluctuations. The excess and obsolete inventory related charges were primarily a result of a lower future production plan in response to the continued weakness in the markets we serve. The decrease in overhead costs is primarily related to decreases in compensation expense.

Cost of service revenues consists primarily of costs of providing services for repair and training which includes salaries and related expenses and other fixed costs. Service gross profit increased by 6.5 percentage points for the three months ended June 30, 2009, compared to the corresponding period in the prior year, primarily as a result of lower compensation expense which is partially due to the workforce reductions that occurred since the third quarter of 2008. Service gross margin for the six months ended June 20, 2009 was consistent with the corresponding period of the prior year.

Research and Development (dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2009	2008	%Change	2009	2008	%Change
Research and development expenses	\$12.3	\$20.7	(40.6)%	\$27.7	\$40.0	(30.7)%

Research and development expense decreased \$8.4 million during the three months ended June 30, 2009 compared to the three months ended June 30, 2008. The decrease includes a \$4.8 million decrease in compensation expense, a \$2.0 million decrease in consulting and other costs, a \$1.1 million reduction in spending on project materials and a \$0.5 million decrease in patent and other legal related costs. The decrease in compensation expense is mainly due to the workforce reductions implemented and in connection with cost cutting measures

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that started in the third quarter of 2008 and our restructuring program, which we initiated in the first quarter of 2009, as well as mandatory time off taken during 2009.

Research and development expense decreased \$12.3 million during the six months ended June 30, 2009 compared to the six months ended June 30, 2008. The decrease includes a \$6.8 million decrease in compensation expense, a \$3.2 million decrease in consulting and other costs, a \$1.9 million reduction in spending on project materials and a \$0.4 million decrease in patent and other legal related costs. The decrease in compensation expense is mainly due to the workforce reductions implemented and in connection with cost cutting measures that started in the third quarter of 2008 and our restructuring program, which we initiated in the first quarter of 2009, as well as mandatory time off taken during 2009.

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 hundreds of products and our research and development efforts primarily consist of a large number of projects focused on developing and improving our instruments, components, subsystems and process control solutions to improve process performance and productivity, none of which is individually material to us. Current projects typically have a duration of 12 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 larger wafer sizes and smaller integrated circuit geometries, which require more advanced process control technology. Research and development expenses consist primarily of salaries and related expenses for personnel engaged in research and development, fees paid to consultants, material costs for prototypes and other expenses related to the design, development, testing and enhancement of our products.

We believe that the continued investment in research and development and ongoing development of new products are essential to the expansion of our markets, and 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. 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,		
	2009	2008	%Change	2009	2008	%Change
Selling, general and administrative expenses	\$25.9	\$34.9	(25.8)%	\$54.1	\$66.5	(18.6)%

Selling, general and administrative expenses decreased \$9.0 million for the three months ended June 30, 2009 compared to the three months ended June 30, 2008. The decrease includes a \$4.6 million decrease in compensation expense, a \$1.9 million favorable impact from foreign exchange fluctuations and a decrease of \$1.5 million in consulting and professional fees in part related to lower IT infrastructure costs. The decrease in compensation expense is mainly due to the workforce reductions implemented and in connection with cost cutting measures that started in the third quarter of 2008 and our restructuring program, which we initiated in the first quarter of 2009, as well as mandatory time off taken during 2009.

Selling, general and administrative expenses decreased \$12.4 million for the six months ended June 30, 2009 compared to the six months ended June 30, 2008. The decrease includes an \$8.7 million decrease in compensation expense, a decrease of \$2.9 million in consulting and professional fees in part related to lower IT infrastructure costs and a decrease of \$1.7 million in other discretionary spending. The decrease in compensation expense is mainly due to the workforce reductions implemented and in connection with cost cutting measures that started in the third quarter of 2008 and our restructuring program, which we initiated in the first quarter of 2009, as well as mandatory time off taken during 2009.

Amortization of Acquired Intangible Assets (dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2009	2008	%Change	2009	2008	%Change
Amortization of acquired intangible assets	\$1.0	\$2.0	(49.0)%	\$2.7	\$5.1	(47.7)%

Amortization expense for the three and six months ended June 30, 2009 decreased \$1.0 million and \$2.4 million, respectively, as certain acquired intangible assets became fully amortized during 2008 as well as related to the write-down of certain intangibles of \$6.1 million recorded in the fourth quarter of 2008.

[Table of Contents](#)Goodwill and Asset Impairment Charges (dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2009	2008	%Change	2009	2008	%Change
Goodwill and asset impairment charges	\$208.5	\$—	100.0%	\$208.5	\$—	100.0%

During the second quarter of 2009, we reviewed our goodwill and long-lived assets for potential impairment as a result of current market and economic conditions that have contributed to a decline in our forecasted business levels, and the excess of our consolidated net assets over our market capitalization for a sustained period of time. As a result of this impairment assessment, we recorded non-cash goodwill and intangible asset impairment charges of \$193.3 million and \$11.7 million, respectively. In addition, as a result of a facility consolidation in Asia, we recorded a non-cash impairment charge of \$3.5 million resulting from the write-down of the value of a building to its estimated fair value.

Given current market and economic conditions and their potential future impact on the determination of our reporting unit's fair value, the estimates and assumptions used for purposes of the impairment tests conducted for the quarter ended June 30, 2009 could change, requiring impairment testing in future quarters. There can be no assurance that changes in future events or circumstances, including the Company's estimates and assumptions, will not result in a future impairment charge.

Restructuring (dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2009	2008	%Change	2009	2008	%Change
Restructuring	\$0.1	\$—	100%	\$5.7	\$—	100%

In light of the continued global financial crisis and its impact on our semiconductor equipment OEM customers and the other markets we serve, we initiated a restructuring plan in the first quarter of 2009. The plan included a reduction in our worldwide headcount of approximately 630 people, which represented approximately 24% of our global workforce.

In the first quarter of 2009, we recorded restructuring charges of \$5.6 million primarily for severance and other charges associated with the reductions in workforce. A total of \$5.7 million in restructuring charges has been recorded for the six months ended June 30, 2009. As of June 30, 2009, the accrued restructuring costs totaled \$0.7 million. These costs will be substantially paid by December 31, 2009. As a result of the workforce reductions, we expect annual compensation-related savings of approximately \$40.0 million. The savings will be reflected in costs of revenues, research and development expenses and selling, general and administrative expenses.

Interest Income, Net (dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2009	2008	%Change	2009	2008	%Change
Interest income, net	\$0.2	\$1.6	(87.0)%	\$1.2	\$3.8	(67.9)%

Interest income, net decreased \$1.4 million and \$2.6 million during the three and six months ended June 30, 2009, respectively, mainly related to lower interest rates on lower average cash and cash equivalent balances in 2009 compared to the 2008 periods.

Impairment of Investments (dollars in millions)

	Three Months Ended June 30,			Six Months Ended June 30,		
	2009	2008	%Change	2009	2008	%Change
Impairment of investments	\$—	\$0.3	(100.0)%	\$—	\$1.4	(100.0)%

We review our investment portfolio on a monthly basis to identify and evaluate individual investments that have indications of possible impairment. The factors considered in determining whether a loss is other-than-temporary include: the length of time and extent to which fair market value has been below the cost basis, the financial condition and near-term prospects of the issuer, credit quality, and the our ability to hold the investment for a period of time sufficient to allow for any anticipated recovery in fair value. At December 31, 2007, we determined that declines in the fair value of two of our investments in certain commercial paper were other-than-temporary and as a result, we recorded a \$1.5 million impairment charge to earnings. This resulted in a new cost basis for the securities of \$4.3 million at December 31, 2007.

During the review of our investment portfolio as of March 31, 2008, we determined that further declines in the value of these two investments were other-than-temporary and as a result, we recorded an additional \$1.2 million impairment charge to earnings. This resulted in a new cost basis for the securities of \$3.1 million at March 31, 2008.

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During the second quarter of 2008, we recorded additional impairment charges of \$0.3 million on these two investments due to further declines in value. In addition, we received a \$0.5 million principal payment from one of these investments during the second quarter of 2008. During the third quarter of 2008, we liquidated our position in these two impaired investments, one by sale and the other by a structured payment, for a combined total of \$2.9 million and as a result, we recorded a gain from the liquidation of \$0.5 million. We did not have any other-than-temporary impaired investments at June 30, 2009.

Provision (Benefit) for Income Taxes (dollars in millions)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2009	2008	2009	2008
Provision (benefit) for income taxes	\$(14.9)	\$ 5.1	\$(38.0)	\$ 13.5

Our effective tax rate for the three and six months ended June 30, 2009 was 6.7% and 14.5%, respectively. The effective tax rate for the six months ending June 30, 2009 and the related tax benefit are lower than the statutory tax rate. The decreased benefit is primarily due to the non-deductible goodwill impairment charge of \$190.7 million taken during the second quarter. Our effective tax rate for the three and six months ended June 30, 2008 was 35.4% and 31.4%, respectively. The effective tax rate for the six months ending June 30, 2008 is less than the statutory tax rate primarily due to the profits of our international subsidiaries being taxed at rates lower than the U.S. statutory tax rate.

At December 31, 2008, the total amount of gross unrecognized tax benefits, which excludes interest and penalties discussed below, was approximately \$14.7 million. If these benefits were recognized in a future period, the timing of which is not estimable, the net unrecognized tax benefit of approximately \$11.8 million would impact our effective tax rate. The total amount of gross unrecognized tax benefits at June 30, 2009 was approximately \$8.9 million. The net decrease from December 31, 2008 was primarily attributable to the release of reserves from the years 2003 to 2006 as a result of the close of the federal tax audit on the 2005 and 2006 tax years.

The Company and its subsidiaries are subject to U.S. federal income tax as well as the income tax of multiple state and foreign jurisdictions. As a result of the close of a federal tax audit in the first quarter 2009, we have concluded all U.S. federal income tax matters for years through 2006. As of June 30, 2009, there were ongoing audits in various other tax jurisdictions.

Within the next 12 months, it is reasonably possible that we may recognize \$2.3 million to \$2.7 million of previously unrecognized tax benefits related to various state and foreign tax positions as a result of the conclusion of various audits and the expiration of the statute of limitations. The following tax years, in the major tax jurisdictions noted, are open for assessment or refund: U.S. Federal: 2007 and 2008, Germany: 2001 to 2008, Korea: 2004 to 2008, Japan: 2004 to 2008, and the United Kingdom: 2007 and 2008.

We accrue interest expense and, if applicable, penalties, for any uncertain tax positions. This interest and penalty expense is a component of income tax expense. At June 30, 2009 and December 31, 2008, we had \$0.5 million and \$1.7 million, respectively, accrued for interest on unrecognized tax benefits.

Our effective tax rate in the future 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.

Liquidity and Capital Resources

Cash, cash equivalents and short-term investments totaled \$258.5 million at June 30, 2009 compared to \$278.9 million at December 31, 2008. This decrease was mainly attributable to our net loss and net cash used in financing activities for payments on short-term borrowings.

Net cash used in operating activities of \$2.1 million for the six months ended June 30, 2009, resulted mainly from a net loss of \$223.6 million, a \$14.3 million decrease in operating liabilities and a \$7.4 million increase in net operating assets, offset by a \$14.8 million provision for excess or obsolete inventory, non-cash charges of \$208.5 million for impairment of goodwill, intangibles and other long-lived assets, \$10.0 million for depreciation and amortization and \$6.8 million for stock-based compensation and related tax benefits. The net decrease in operating liabilities is mainly caused by a decrease of \$5.9 million in non-current income taxes payable and a decrease of \$4.2 million in accrued compensation. The decrease in accrued compensation is primarily as a result of the workforce reduction and mandatory time-off. The \$7.4 million increase in operating assets consisted primarily of a \$31.8 million increase in income taxes receivable as we expect to receive an income tax refund due to current operating losses, offset by a \$26.5 million decrease in accounts receivable as a result of lower revenue and improved collections.

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Net cash provided by operating activities of \$42.2 million for the six months ended June 30, 2008, resulted mainly from net income of \$29.6 million and non-cash charges of \$12.2 million for depreciation and amortization and \$6.2 million for stock-based compensation and related tax benefits, offset by an increase in net operating assets of \$4.1 million and a decrease in net operating liabilities of \$2.5 million. The \$4.1 million increase in operating assets consisted primarily of a \$2.4 million increase in other current assets, mainly due to increases in value added tax receivables at foreign locations and a \$1.0 million increase in accounts receivable. The net decrease in operating liabilities is mainly caused by a decrease of \$4.4 million in accounts payable and \$2.0 million in income taxes payable, offset by an increase of \$3.9 million in accrued expenses and other liabilities.

Net cash provided by investing activities of \$34.6 million for the six months ended June 30, 2009, resulted primarily from net sales of \$36.3 million of available for sale investments, offset by \$2.4 million in purchases of property, plant and equipment. Net cash provided by investing activities of \$4.3 million for the six months ended June 30, 2008, resulted primarily from net sales of \$9.2 million of available for sale investments, offset by \$5.5 million in purchases of property, plant and equipment.

Net cash used in financing activities was \$13.1 million for the six months ended June 30, 2009 and consisted primarily of \$8.0 million in net payments on short-term borrowings and \$4.4 million related to stock-based compensation. Net cash provided by financing activities of \$97.5 million for the six months ended June 30, 2008, consisted primarily of repurchases of common stock of \$101.9 million and \$2.6 million in net payments on short-term borrowings, offset by \$6.5 million in proceeds from the exercise of stock options and purchases under our employee stock purchase plan.

On February 12, 2007, our Board of Directors approved a share repurchase program (the "Program") for the repurchase of up to \$300.0 million of our outstanding stock over two years. During the six months ended June 30, 2008, we repurchased 5.1 million shares of common stock for \$101.9 million for an average price of \$20.18 per share. There were no shares repurchased in 2009 and the Program ended effective February 11, 2009.

On March 18, 2009, MKS Instruments, Inc., MKS Japan, Inc. and HSBC Bank USA, entered into a fifth amendment to the Optional Advance Demand Grid Note dated August 3, 2004 among such parties, as amended. This amendment (a) decreased the maximum amount of the note from \$35.0 million to \$5.0 million, (b) decreased the limit for standby letters of credit under the note from \$0.7 million to \$0.6 million, and (c) established an annual facility fee of 0.0375% of the maximum amount of the note. MKS believes the reduced amount of the note more accurately reflects MKS' anticipated utilization of this line, and minimizes the cost of the new facility fee. On June 2, 2009, the note was amended to extend the maturity date to June 30, 2009.

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 at least the next 12 months.

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 March of 2008, the FASB issued SFAS No. 161, "Disclosures about Derivative Instruments and Hedging Activities, an amendment of FASB Statement No. 133," (SFAS 161). SFAS 161 requires entities to provide enhanced disclosure about how and why the entity uses derivative instruments, how the instruments and related hedged items are accounted for under SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities," (SFAS 133) and how the instruments and related hedged items affect the financial position, results of operations, and cash flows of the entity. We adopted this new standard effective January 1, 2009.

In April 2009, the Financial Accounting Standards Board ("FASB") issued FASB Staff Position ("FSP") FAS 107-1 and Accounting Pronouncement Board ("APB") 28-1, "Interim Disclosures about Fair Value of Financial Instruments." This FSP amends Statement of Financial Accounting Standard ("SFAS") No. 107, "Disclosures About Fair Value of Financial Instruments," to require disclosures about fair value of financial instruments for interim reporting periods of publicly traded companies as well as in annual financial statements. This FSP also amends APB Opinion No. 28, "Interim Financial Reporting," to require those disclosures in summarized financial information at interim reporting periods. FSP 107-1 and APB 28-1 are effective for interim periods ending after June 15, 2009 and we adopted them in the second quarter of 2009. See Note 4.

In April 2009, the FASB issued FSP FAS 115-2 and FAS 124-2, "Recognition and Presentation of Other-Than-Temporary Impairments." This FSP amends the other-than-temporary impairment guidance for debt securities to make the guidance more operational

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and to improve the presentation and disclosure of other-than-temporary impairments on debt and equity securities in the financial statements. This FSP does not amend existing recognition and measurement guidance related to other-than-temporary impairments of equity securities. FSP 115-2 is effective for interim periods ending after June 15, 2009. We have adopted FSP 115-2 in the second quarter of 2009 and the adoption did not have an impact on our financial position, results of operations, or cash flows.

In April 2009, the FASB issued FSP FAS 157-4, “Determining Fair Value When the Volume and Level of Activity for the Asset or Liability Have Significantly Decreased and Identifying Transactions That Are Not Orderly.” This FSP provides additional guidance for estimating fair value in accordance with SFAS No. 157, “Fair Value Measurements,” (“SFAS 157”), when the volume and level of activity for the asset or liability have significantly decreased. This FSP also includes guidance on identifying circumstances that indicate a transaction is not orderly. FSP 157-4 is effective for interim periods ending after June 15, 2009. We have adopted FSP 115-4 in the second quarter of 2009 and the adoption did not have an impact on our financial position, results of operations, or cash flows.

In April 2009, the FASB issued FSP No. 141R-1, “Accounting for Assets Acquired and Liabilities Assumed in a Business Combination That Arise from Contingencies,” (“FSP 141R-1”). FSP 141R-1 amends the provisions in SFAS No. 141(R), “Business Combinations,” (“SFAS 141R”) for the initial recognition and measurement, subsequent measurement and accounting, and disclosures for assets and liabilities arising from contingencies in business combinations. The FSP eliminates the distinction between contractual and non-contractual contingencies, including the initial recognition and measurement criteria in SFAS 141R and instead carries forward most of the provisions in SFAS No. 141, “Business Combinations,” (“SFAS 141”) for acquired contingencies. FSP 141R-1 is effective for contingent assets and contingent liabilities acquired in business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. We adopted FSP 141R-1 effective as of January 1, 2009 and the adoption did not have a current impact on our financial position, results of operations, or cash flows.

In May 2009, the FASB issued statement No. 165, “Subsequent Events,” (“SFAS 165”). SFAS 165 modifies the definition of what qualifies as a subsequent event—those events or transactions that occur following the balance sheet date, but before the financial statements are issued, or are available to be issued—and requires companies to disclose the date through which it has evaluated subsequent events and the basis for determining that date. We adopted the provisions of SFAS 165 for the second quarter of 2009, in accordance with the effective date. See Note 16.

In June 2009, the FASB issued SFAS No. 168, “The FASB Accounting Standards Codification™ and the Hierarchy of Generally Accepted Accounting Principles—a replacement of FASB Statement No. 162,” (“SFAS 168”). The FASB Accounting Standards Codification (the Codification) will become the source of authoritative U.S. generally accepted accounting principles (U.S. GAAP) on July 1, 2009. The Codification, which changes the referencing of financial standards, is effective for interim or annual financial periods ending after September 15, 2009. The Codification is not intended to change or alter existing U.S. GAAP. We have evaluated this new statement, and have determined that it will not have a significant impact on the determination or reporting of our financial results.

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, 2008 filed with the Securities and Exchange Commission on February 27, 2009. There were no material changes in our exposure to market risk from December 31, 2008.

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, 2009. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), means controls and other procedures of an issuer that are designed to ensure that information required to be disclosed by the issuer in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Exchange Act is accumulated and communicated to the issuer’s management, including its principal executive and principal financial officers, 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, 2009, 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

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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, 2009 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, 2008 in the section entitled "Risk Factors." With the exception of the following additions to the risk factor entitled, "We have significant foreign operations, and outsource certain operations offshore, which pose significant risk," there have been no material changes from the risks disclosed therein.

We outsource a portion of our manufacturing to a contractor located in Nogales, Mexico. The contract-manufacturer may be at an increased risk of experiencing business interruption if affected by the H1N1 influenza (commonly known as swine flu) for an extended period of time. If the contract-manufacturer experiences a prolonged period of business interruption, it may harm our business.

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

None

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS.

At our Annual Meeting of Shareholders on May 4, 2009, the following proposals were voted upon as further specified below:

1. Election of Class I Directors for a term to expire at the 2012 annual meeting or until their successors are duly elected or qualified:

	<u>Votes For</u>	<u>Votes Withheld</u>
Leo Berlinghieri	43,642,544	785,766
Hans-Jochen Kahl	34,836,830	9,591,480
Louis P. Valente	34,837,429	9,590,881

In addition, Cristina H. Amon, Robert R. Anderson, Gregory R. Beecher, John R. Bertucci, Richard S. Chute and Peter R. Hanley continued their terms following the annual meeting.

2. Approve an amendment to our 2004 Stock Incentive Plan to allow for a one-time option exchange program.

<u>Votes For</u>	<u>Votes Against</u>	<u>Votes Abstaining</u>
31,455,107	10,664,302	13,411

3. Approve an amendment to our Third Restated 1999 Employee Stock Purchase Plan increasing the number of shares available thereunder from 1,250,000 to 1,950,000.

<u>Votes For</u>	<u>Votes Against</u>	<u>Votes Abstaining</u>
39,439,918	2,532,672	160,230

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4. Approve an amendment to our Second Amended and Restated International Employee Stock Purchase Plan increasing the number of shares available thereunder from 250,000 to 400,000 shares.

<u>Votes For</u>	<u>Votes Against</u>	<u>Votes Abstaining</u>
39,656,954	2,316,019	159,847

5. Ratify the selection of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2009.

<u>Votes For</u>	<u>Votes Against</u>	<u>Votes Abstaining</u>
44,339,693	67,207	21,310

ITEM 6. EXHIBITS.

<u>Exhibit No.</u>	<u>Exhibit Description</u>
3.1(1)	Restated Articles of Organization
3.2(2)	Articles of Amendment, as filed with the Secretary of State of Massachusetts on May 18, 2001
3.3(3)	Articles of Amendment, as filed with the Secretary of State of Massachusetts on May 16, 2002
3.4(4)	Amended and Restated By-Laws
31.1	Certification of Principal Executive Officer pursuant to Rule 13a-14(a)/Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended
31.2	Certification of Principal Financial Officer pursuant to Rule 13a-14(a)/Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended
32.1	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

- (1) Incorporated by reference to the Registration Statement on Form S-4 (File No. 333-49738) filed with the Securities and Exchange Commission on November 13, 2000.
- (2) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2001.
- (3) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2002.
- (4) Incorporated by reference to the 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 7, 2009

By: /s/ Ronald C. Weigner
Ronald C. Weigner
Vice President, Chief Financial Officer and Treasurer
(Principal Financial Officer)

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

I, Leo Berlinghieri, certify that:

1. I have reviewed this Quarterly report on Form 10-Q of MKS Instruments, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15(d)-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 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 and financial reporting.

Date: August 7, 2009

/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, Ronald C. Weigner, 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 15(d)-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 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 and financial reporting.

Date: August 7, 2009

/s/ Ronald C. Weigner

Ronald C. Weigner
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, 2009 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 Ronald C. Weigner, 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 7, 2009

/s/ Leo Berlinghieri

Leo Berlinghieri
Chief Executive Officer and President

Dated: August 7, 2009

/s/ Ronald C. Weigner

Ronald C. Weigner
Vice President, Chief Financial Officer and Treasurer