

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 March 31, 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 April 30, 2009, the registrant had 49,283,937 shares of common stock outstanding.

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS.

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

	March 31, 2009	December 31, 2008
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 97,405	\$ 119,261
Short-term investments	157,999	159,608
Trade accounts receivable, net	56,990	85,350
Inventories	126,512	131,519
Income tax receivable	28,578	4,057
Deferred income taxes	18,652	19,058
Other current assets	12,187	9,875
Total current assets	498,323	528,728
Property, plant and equipment, net	78,552	82,017
Goodwill	337,765	337,765
Acquired intangible assets, net	19,416	21,069
Other assets	12,008	15,360
Total assets	\$946,064	\$984,939
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term borrowings	\$ 9,098	\$ 17,808
Current portion of capital lease obligations	729	870
Accounts payable	21,226	19,320
Accrued compensation	10,105	13,768
Other accrued expenses	23,894	24,169
Total current liabilities	65,052	75,935
Long-term portion of capital lease obligations	262	396
Other liabilities	16,600	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; 49,233,043 and 49,275,975 shares issued and outstanding at March 31, 2009 and December 31, 2008, respectively	113	113
Additional paid-in capital	636,627	637,938
Retained earnings	224,929	241,428
Accumulated other comprehensive income	2,481	7,219
Total stockholders' equity	864,150	886,698
Total liabilities and stockholders' equity	\$946,064	\$984,939

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 March 31,	
	2009	2008
Net revenues		
Products	\$ 62,476	\$171,765
Services	14,243	21,683
Total net revenues	76,719	193,448
Cost of revenues		
Cost of products	55,877	97,623
Cost of services	10,251	13,918
Total cost of revenues	66,128	111,541
Gross profit	10,591	81,907
Research and development	15,463	19,341
Selling, general and administrative	28,464	31,617
Amortization of acquired intangible assets	1,653	3,105
Restructuring	5,620	—
Income (loss) from operations	(40,609)	27,844
Interest expense	(48)	(458)
Interest income	1,057	2,634
Impairment of investments	—	(1,161)
Income (loss) before income taxes	(39,600)	28,859
Provision (benefit) for income taxes	(23,101)	8,477
Net income (loss)	\$(16,499)	\$ 20,382
Net income (loss) per share:		
Basic	\$ (0.34)	\$ 0.39
Diluted	\$ (0.34)	\$ 0.39
Weighted average common shares outstanding:		
Basic	48,994	51,733
Diluted	48,994	52,571

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

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

	Three Months Ended March 31,	
	2009	2008
Cash flows from operating activities:		
Net income (loss)	\$ (16,499)	\$ 20,382
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:		
Depreciation and amortization	5,350	6,681
Stock-based compensation	1,864	3,191
Tax expense from stock-based compensation	(1,048)	(86)
Excess tax benefit from stock-based compensation	4,007	(597)
Deferred income taxes	3,848	—
Provision for excess or obsolete inventory	14,373	1,863
Impairment of investments	—	1,161
Other	933	(172)
Changes in operating assets and liabilities:		
Trade accounts receivable	24,703	(10,886)
Inventories	(6,675)	(3,832)
Income taxes (receivable) payable	(24,287)	5,782
Other current assets	(618)	(4,238)
Accrued expenses and other current liabilities	(10,771)	2,894
Accounts payable	(933)	716
Net cash provided by (used in) operating activities	(5,753)	22,859
Cash flows from investing activities:		
Purchases of short-term and long-term available for sale investments	(86,083)	(91,897)
Maturities, sales and settlements of short-term and long-term available for sale investments	85,647	46,221
Purchases of property, plant and equipment	(1,310)	(3,156)
Other	728	289
Net cash used in investing activities	(1,018)	(48,543)
Cash flows from financing activities:		
Proceeds from short-term borrowings	45,594	30,771
Payments on short-term borrowings	(53,195)	(34,262)
Repurchases of common stock	—	(65,272)
Principal payments on capital lease obligations	(325)	(431)
Proceeds from (taxes paid for) exercise of stock options and employee stock purchase plan	(2,127)	679
Excess tax benefit from stock-based compensation	(4,007)	597
Net cash used in financing activities	(14,060)	(67,918)
Effect of exchange rate changes on cash and cash equivalents	(1,025)	1,942
Decrease in cash and cash equivalents	(21,856)	(91,660)
Cash and cash equivalents at beginning of period	119,261	223,968
Cash and cash equivalents at end of period	\$ 97,405	\$132,308

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 March 31, 2009 and for the three months ended March 31, 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. 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. This FSP is effective for interim reporting periods ending after June 15, 2009, with early adoption permitted for periods ending after March 15, 2009. The FSP does not require disclosures for earlier periods presented for comparative purposes at initial adoption. In periods after initial adoption, this FSP requires comparative disclosures only for periods ending after initial adoption. The Company is currently evaluating the disclosure implications of this statement.

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. This FSP is effective for interim and annual reporting periods ending after June 15, 2009, with early adoption permitted for periods ending after March 15, 2009. The FSP does not require disclosures for earlier periods presented for comparative purposes at initial adoption. In periods after initial adoption, this FSP requires comparative disclosures only for periods ending after initial adoption. The Company is currently evaluating the disclosure implications of this statement but does not believe that it will have a significant impact on the determination or reporting of its financial results.

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. This FSP is effective for interim and annual reporting periods ending after June 15, 2009, with early adoption permitted for periods ending after March 15, 2009. The FSP does not require disclosures for earlier periods presented for comparative purposes at initial adoption. In periods after initial adoption, this FSP requires comparative disclosures only for periods ending after initial adoption. The Company is evaluating the potential impact of the implementation of this FSP statement but does not believe that it will have a significant impact on the determination or reporting of its financial results.

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 expects FSP 141R-1 may have an impact on its consolidated financial statements, but the nature and magnitude of the specific effects will depend upon the nature, term and size of any future acquired contingencies.

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. This commercial paper was issued by two structured investment vehicles (SIVs) that entered into receivership during the fourth quarter of 2007 and failed to make payment at maturity. Due to the mortgage-related assets held by these issuers, they were exposed to adverse market conditions that affected the value of their collateral and their ability to access short-term funding. These investments were not trading on active markets, and therefore, had no readily determinable market value. Therefore, as of December 31, 2007, the Company recorded a \$1,457,000 impairment charge to earnings based upon it receiving contemporaneous quotes from established third-party pricing services. 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. These investments were still not currently trading on active markets, and therefore, had no readily determinable market value. As a result of the Company’s evaluation as of March 31, 2008, it recorded an additional \$1,161,000 impairment charge to earnings based upon the Company receiving contemporaneous quotes from established third-party pricing services. The Company evaluated the methodology used to arrive at the quotes, and through the assessment of quantitative and qualitative factors affecting the credit markets and the specific investments, were in agreement with the methods used and the assessed fair values of these investments. 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 SIV 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 March 31, 2009.

4) Fair Value Measurements

The Company adopted SFAS 157 at the beginning of fiscal year 2008 with the exception of the guidance relating to nonfinancial assets and nonfinancial liabilities. The Company adopted SFAS 157 in its entirety on January 1, 2009 and the adoption of this statement did not impact its consolidated financial position or results of operations. SFAS 157 defines fair value, establishes a framework for measuring fair value in accordance with generally accepted accounting principles, and expands disclosures about fair

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

value measurements. The statement indicates, among other things, that 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. SFAS 157 defines fair value based upon an exit price model.

The Company did not have any fair value adjustments for assets and liabilities measured at fair value on a nonrecurring basis during the three months ended March 31, 2009.

SFAS 157 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 standard 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 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 March 31, 2009, are summarized as follows:

Description	3/31/09	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	\$ 5,498	\$ 5,498	\$ —	\$—
Available-for-sale-securities	159,559	159,559	—	—
Derivatives — currency forward contracts	2,420	—	2,420	—
Total assets	\$167,477	\$165,057	\$2,420	\$—

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

Description	12/31/08	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	\$—

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

Cash Equivalents

As of March 31, 2009 and December 31, 2008, cash equivalents consisted of Federal Government and Government Agency Obligations, Commercial Paper, and Other Corporate Obligations, are 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 March 31, 2009 and December 31, 2008, available-for-sale securities consisted of Federal Government and Government Agency Obligations, Commercial Paper, and Other Corporate Obligations, are 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 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.

5) Derivatives

In March 2008, the FASB issued SFAS No. 161, "Disclosures about Derivative Instruments and Hedging Activities, an amendment of FASB Statement No. 133," ("SFAS 161"). This statement improves transparency in financial reporting by requiring enhanced disclosures of an entity's derivative instruments and hedging activities and their effects on the entity's financial position, financial performance, and cash flows. SFAS 161 applies to all derivative instruments within the scope of SFAS 133, "Accounting for Derivative Instruments and Hedging Activities," ("SFAS 133"). 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. 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 fifteen months, using forward foreign exchange contracts primarily related to Japanese, Korean, British and European currencies. These derivatives are designated as cash-flow hedges and because such contracts are directly associated with the identified transactions, they are an effective hedge against fluctuations in the value of the foreign currency underlying the transaction. The changes in fair value of derivatives that are designated as cash-flow hedges are deferred in accumulated other comprehensive income (loss) and are recognized in cost of products as the underlying hedged 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 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 and all of its derivatives were highly effective throughout the periods reported.

The Company also utilizes economic hedges for certain intercompany and other payables with forward foreign exchange contracts. Since these derivatives hedge existing amounts that are denominated in foreign currencies, they do not qualify for hedge accounting under SFAS 133. Changes in the fair value of these forward foreign exchange contracts are recognized in earnings as an offset to the change in the fair values of the underlying exposures being hedged.

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

As of March 31, 2009, the Company had outstanding forward foreign exchange contracts with gross notional values of \$33,025,000, which is reflective of the amounts that are normally outstanding at any point during the year. The following tables provide a summary of the primary hedging positions and corresponding fair values held as of March 31, 2009:

Currency Hedged (Buy/Sell)	Gross Notional Value	Fair Value Asset (1)
U.S. Dollar/Japanese Yen	\$22,746	\$1,162
U.S. Dollar/South Korean Won	5,240	856
U.S. Dollar/Euro	4,179	224
U.S. Dollar/U.K. Pound Sterling	860	178
Total	\$33,025	\$2,420

(1) Represents the net receivable (payable) amount included in the consolidated balance sheet as of March 31, 2009.

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

Derivatives Qualified as Hedging Instruments under Statement 133	Balance Sheet Location	March 31, 2009	December 31, 2008
Derivative assets			
Forward exchange contracts — forwards	Other current assets	\$2,715	\$2,645
Derivative liabilities			
Forward exchange contracts — forwards	Other current assets	295	2,137
Total net derivative assets		\$2,420	\$ 508

The following table provides a summary of the gain (losses) on derivative instruments:

Derivatives in Statement 133 Cash Flow Hedging Relationships	Derivative Gain (Loss) Recognized in OCI (Effective Portion) Three Months Ended		Location of Derivative Gain (Loss) Reclassified from AOCI into Income (Effective Portion)	Gain (Loss) Reclassified from AOCI to Income (Effective Portion) Three Months Ended	
	March 31, 2009	March 31, 2008		March 31, 2009	March 31, 2008
Forward exchange contracts — forwards	\$1,689	\$(2,952)	Cost of products	\$557	\$(675)

The following table provides a summary of gain (losses) on non-qualified derivative instruments:

Derivatives Not Qualified as Hedging Instruments under Statement 133	Location of Derivative Gain (Loss) Recognized in Income	Amount of Derivative Gain (Loss) Recognized in Income Three Months Ended	
		March 31, 2009	March 31, 2008
Forward exchange contracts — forwards	Selling, general and administrative	\$ —	\$ 2,669

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.

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

6) Inventories

Inventories consist of the following:

	March 31, 2009	December 31, 2008
Raw material	\$ 57,764	\$ 58,542
Work in process	16,926	22,072
Finished goods	51,822	50,905
	<u>\$126,512</u>	<u>\$131,519</u>

During the three month period ended March 31, 2009, the Company recorded a \$14,373,000 charge for excess and obsolete inventory. The excess and obsolete inventory related charge was 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

Intangible Assets

Acquired amortizable intangible assets consisted of the following as of March 31, 2009:

	Gross	Impairment Charges	Accumulated Amortization	Net Carrying Amount
Completed technology	\$ 88,855	\$—	\$ (81,436)	\$ 7,419
Customer relationships	21,879	—	(12,701)	9,178
Patents, trademarks, tradenames and other	29,672	—	(26,853)	2,819
	<u>\$140,406</u>	<u>\$—</u>	<u>\$(120,990)</u>	<u>\$19,416</u>

Acquired amortizable intangible assets consisted of the following as of December 31, 2008:

	Gross	Impairment Charges	Accumulated Amortization	Net Carrying Amount
Completed technology	\$ 93,204	\$(4,349)	\$ (80,685)	\$ 8,170
Customer relationships	23,542	(1,663)	(12,152)	9,727
Patents, trademarks, tradenames 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>

The Company determined that the adverse economic and business climate experienced during the end of the fiscal year ended December 31, 2008 was a significant event 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. The fair value was based on the income approach, whereby the Company used the projected undiscounted cash flow method to determine whether impairment exists, and then measured the impairment using discounted cash flows.

Aggregate amortization expense related to acquired intangibles for the three months ended March 31, 2009 and 2008 was \$1,653,000 and \$3,105,000, respectively. Estimated amortization expense for each of the five succeeding fiscal years is as follows:

Year	Amount
2009 (remaining)	\$4,940
2010	5,153
2011	4,607
2012	2,403
2013	2,236
2014	44

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

Goodwill

There were no changes in the carrying amount of goodwill during the three months ended March 31, 2009.

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, National Association 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 million to \$5 million, (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. At March 31, 2009, the Company did not have any outstanding borrowings with this line of credit.

9) Product Warranties

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

Product warranty activities were as follows:

	Three Months Ended March 31,	
	2009	2008
Balance at January 1	\$8,334	\$ 9,497
Provisions for product warranties	115	1,514
Direct charges to warranty liability	(774)	(1,409)
Balance at March 31	\$7,675	\$ 9,602

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.

In the first quarter of 2009, the Company recorded restructuring charges of \$5,620,000 primarily for severance and other charges associated with the reductions in workforce. As of March 31, 2009, the accrued restructuring costs totaled \$2,032,000 and were included in "Accrued compensation" in the consolidated balance sheets. These costs will be substantially paid by the end of the fourth quarter 2009.

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

	Three Months Ended	
	March 31, 2009	
Beginning balance	\$	—
Charged to expense		5,620
Payments		(3,588)
Ending balance	\$	2,032

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

11) Income Taxes

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 total amount of gross unrecognized tax benefits at March 31, 2009 was approximately \$8,775,000. 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.

MKS 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 March 31, 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 March 31, 2009 and December 31, 2008, the Company had approximately \$487,000 and \$1,730,000, respectively, accrued for interest on unrecognized tax benefits.

The Company's effective tax rate for the three months ended March 31, 2009 and 2008 was (58.3)% and 29.4%, respectively. The first quarter 2009 effective tax rate and the related tax benefit are higher than the statutory tax rate. The increased benefit is primarily due to a \$6,437,000 release of tax reserves as a result of the close of a federal tax audit on the tax years 2005 and 2006. The first quarter 2008 effective tax rate, and the related income tax provision, 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.

During the quarter ended December 31, 2008, the U.S. Research and Development Tax Credit was extended retroactively to amounts paid or incurred in 2008 and through December 31, 2009. As a result, the Company estimated a tax benefit of approximately \$750,000 for the quarter ended March 31, 2009. Because the law was not enacted at the time, the Company did not record a benefit for this credit in the three month period ending March 31, 2008.

12) Net Income Per Share

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

	Three Months Ended March 31,	
	2009	2008
Numerator:		
Net income (loss)	\$(16,499)	\$20,382
Denominator:		
Shares used in net income (loss) per common share — basic	48,994	51,733
Effect of dilutive securities:		
Stock options, restricted stock and employee stock purchase plan	—	838
Shares used in net income (loss) per common share — diluted	48,994	52,571
Net income (loss) per common share:		
Basic	\$ (0.34)	\$ 0.39
Diluted	\$ (0.34)	\$ 0.39

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

Due to the Company's net loss for the three months ended March 31, 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 months ended March 31, 2009 and 2008, there were options outstanding to purchase approximately 4,436,832 and 3,266,975 shares of the Company's common stock, respectively, which could potentially dilute basic earnings (loss) per share in the future, but were not included in diluted earnings (loss) per share as their effect would have been anti-dilutive.

13) Stockholders' Equity

Comprehensive Income (Loss)

Components of comprehensive income (loss) were as follows:

	Three Months Ended March 31,	
	2009	2008
Net income (loss)	\$(16,499)	\$20,382
Other comprehensive income (loss):		
Changes in value of financial instruments designated as cash flow hedges (net of tax)	992	(2,952)
Foreign currency translation adjustment	(5,445)	2,080
Unrealized (loss) on investments (net of tax)	(285)	(10)
Other comprehensive (loss)	(4,738)	(882)
Total comprehensive income (loss)	<u>\$ (21,237)</u>	<u>\$ 19,500</u>

Stock Repurchase Program

On February 12, 2007, MKS' 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 March 31, 2008, the Company repurchased 3,469,000 shares of common stock for \$65,272,000 for an average price of \$18.81. 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 March 31,	
	2009	2008
Geographic net revenues:		
United States	\$38,487	\$123,022
Japan	11,396	26,246
Europe	16,049	25,711
Asia (excluding Japan)	10,787	18,469
	<u>\$76,719</u>	<u>\$193,448</u>

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

	March 31, 2009	December 31, 2008
Long-lived assets:		
United States	\$58,329	\$60,942
Japan	9,908	11,527
Europe	3,642	3,353
Asia (excluding Japan)	8,507	8,812
	<u>\$80,386</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 March 31,	
	2009	2008
Instruments and Control Systems	\$41,437	\$ 96,970
Power and Reactive Gas Products	27,974	76,050
Vacuum Products	7,308	20,428
	<u>\$76,719</u>	<u>\$193,448</u>

There were no customers comprising greater than 10% of net revenues for the three months ended March 31, 2009. The Company had one customer comprising 20% of net revenues for the three months ended March 31, 2008.

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 March 31, 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.

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."

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 three months ended March 31, 2009 and the full year ended December 31, 2008, we estimate that approximately 41% and 57% 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. Our product revenues to these customers have decreased sequentially since the first quarter of 2008. Product revenues have decreased 79% for the three months ended March 31, 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. Although we cannot predict when demand from our customers will rebound, we currently estimate we will see further decreases in demand from these customers during 2009 and as a result we are estimating lower sequential revenues for the quarter ended June 30, 2009 compared to March 31, 2009.

Our product revenues sold to our other markets, which exclude semiconductor capital equipment and semiconductor device product applications, decreased 35% for the three months ended March 31, 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 equipment OEM customers and the other markets we serve, we initiated a restructuring plan in the first quarter of 2009 and recorded a \$5.6 million charge. The plan included a reduction in our worldwide headcount of approximately 24% 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. We continuously monitor our costs and evaluate the carrying values of goodwill and intangible assets. If current market and economic conditions persist, it would increase the likelihood of incurring future impairment and/or restructuring 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 three months ended March 31, 2009 and full year ended December 31, 2008, international net sales accounted for approximately 50% and 43%, 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 March 31,	
	2009	2008
Net revenues		
Product	81.4%	88.8%
Services	18.6	11.2
Total net revenues	100.0	100.0
Cost of revenues		
Cost of product revenues	72.8	50.5
Cost of service revenues	13.4	7.2
Total cost of revenues	86.2	57.7
Gross profit	13.8	42.3
Research and development	20.2	10.0
Selling, general and administrative	37.1	16.3
Amortization of acquired intangible assets	2.1	1.6
Restructuring	7.3	—
Income (loss) from operations	(52.9)	14.4
Interest income, net	1.3	1.1
Impairment of investments	—	(0.6)
Income (loss) before income taxes	(51.6)	14.9
Provision (benefit) for income taxes	(30.1)	4.4
Net income (loss)	(21.5)%	10.5%

Net Revenue (dollars in millions)

	Three Months Ended March 31,		
	2009	2008	% Change
Net revenues			
Product	\$62.5	\$171.7	(63.6)%
Service	14.2	21.7	(34.3)
Total net revenues	\$76.7	\$193.4	(60.3)%

Product revenues decreased \$109.2 million during the three months ended March 31, 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. The decrease in demand from these customers is due to the challenging global economic conditions, which resulted in a decrease in revenues of \$88.9 million or 78.7% for the three months ended March 31, 2009 compared to the same period for the prior year. Revenues related to other markets decreased by \$20.3 million or 34.7% primarily due to the continued global economic crisis.

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 \$7.5 million during the three months ended March 31, 2009 compared to the same period for the prior year as customers delayed spending on these services due to the challenging global economic conditions.

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Total international net revenues, including product and service, were \$38.2 million for the three months ended March 31, 2009 or 49.8% of net revenues, compared to \$70.4 million for the three months ended March 31, 2008 or 36.4% of net revenues, respectively. Although net revenues decreased across all geographies, net revenues from Europe decreased to a lesser extent due to a higher percentage of net revenues to non-semiconductor equipment and device manufacturer customers.

Gross Profit

	Three Months Ended March 31,		
	2009	2008	% Points Change
Gross profit as percentage of net revenues			
Product	10.6%	43.2%	(32.6)%
Service	28.0	35.8	(7.8)
Total gross profit percentage	13.8%	42.3%	(28.5)%

Gross profit on product revenues decreased 32.6 percentage points for the three months ended March 31, 2009 compared to the three months ended March 31, 2008. Our margin was negatively impacted by approximately 19.3 percentage points from lower revenue volumes since a portion of our overhead costs are fixed, 20.0 percentage points from excess and obsolete inventory related charges, partially offset by 4.1 percentage points due to decreased overhead spending and 2.2 percentage points from lower warranty charges. The excess and obsolete inventory related charge was 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 decreased by 7.8 percentage points for the three months ended March 31, 2009 compared to the corresponding period of the prior year. The decrease relates to lower revenue volumes since a portion of our overhead costs are fixed.

Research and Development (dollars in millions)

	Three Months Ended March 31,		
	2009	2008	% Change
Research and development expenses	\$15.5	\$19.3	(20.1)%

Research and development expense decreased \$3.8 million during the three months ended March 31, 2009 compared to the three months ended March 31, 2008. The decrease includes a \$2.4 million decrease in compensation expense, a \$0.6 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 partially due to the workforce reductions which were part of cost cutting measures that occurred in the third and fourth quarters of 2008. We initiated a restructuring program in the first quarter of 2009 which also decreased compensation expense.

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.

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Selling, General and Administrative (dollars in millions)

	Three Months Ended March 31,		
	2009	2008	% Change
Selling, general and administrative expenses	\$28.5	\$31.6	(10.0)%

Selling, general and administrative expenses decreased \$3.1 million for the three months ended March 31, 2009 compared to the three months ended March 31, 2008. The decrease includes a \$4.0 million decrease in compensation expense and a \$2.0 million decrease in consulting and professional fees in part related to lower IT infrastructure spending. These decreases were partially offset by a \$2.7 million decrease in foreign exchange gains. The decrease in compensation expense is partially due to the workforce reductions which were part of cost cutting measures that occurred in the third and fourth quarters of 2008. We initiated a restructuring program in the first quarter of 2009 which also decreased compensation expense. The \$2.7 million decrease in foreign exchange gains is a result of a \$2.5 million foreign exchange gain in the first quarter of 2008 compared to foreign exchange losses of \$0.2 million in the first quarter of 2009. The foreign exchange gains in 2008 were primarily attributable to the settlement of cash and intercompany loans at different foreign exchange rates related to a legal entity consolidation between some of our foreign subsidiaries.

Amortization of Acquired Intangible Assets (dollars in millions)

	Three Months Ended March 31,		
	2009	2008	% Change
Amortization of acquired intangible assets	\$1.7	\$3.1	(46.8)%

Amortization expense for the three months ended March 31, 2009 decreased \$1.4 million compared to the three months ended March 31, 2008 as certain acquired intangible assets became fully amortized during 2008.

Restructuring (dollars in millions)

	Three Months Ended March 31,		
	2009	2008	% Change
Restructuring	\$5.6	\$—	100.0%

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. As of March 31, 2009, the accrued restructuring costs totaled \$2.0 million. These costs will be substantially paid by the end of the fourth quarter 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 March 31,		
	2009	2008	% Change
Interest income, net	\$1.0	\$2.2	(53.6)%

Interest income, net decreased \$1.2 million mainly related to lower interest rates on lower average cash and cash equivalent balances for the three months ended March 31, 2009 as compared to the three months ended March 31, 2008.

Impairment of Investments (dollars in millions)

	Three Months Ended March 31,		
	2009	2008	% Change
Impairment of investments	\$—	\$1.2	(100.0)%

During the fourth quarter of 2007, we determined that declines in the fair value of our investments in certain commercial paper were other-than-temporary. This commercial paper was issued by two structured investment vehicles (SIVs) that entered into receivership during the fourth quarter of 2007 and failed to make payments at maturity. Due to the mortgage-related assets these issuers held, they were exposed to adverse market conditions that affected the value of their collateral and their ability to access short-term funding. These investments were not trading on active markets, and therefore, had no readily determinable market value. As a result of our evaluation as of December 31, 2007, we recorded a \$1.5 million impairment charge to earnings.

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During the first quarter of 2008, we determined that further declines in the value of these two investments were other-than-temporary. These investments were still not trading on active markets, and therefore, had no readily determinable market value. As a result of our evaluation as of March 31, 2008, we recorded an additional \$1.2 million impairment charge to earnings based upon receiving contemporaneous quotes from established third-party pricing services. This resulted in a new cost basis for these securities of \$3.1 million at March 31, 2008.

During the second quarter of 2008, we recorded additional impairment charges of \$0.3 million on these two SIV 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 March 31, 2009.

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

	Three Months Ended March 31,	
	2009	2008
Provision (benefit) for income taxes	\$(23.1)	\$8.5

Our effective tax rate for the three months ended March 31, 2009 and 2008 was (58.3)% and 29.4%, respectively. The first quarter 2009 effective tax rate and the related tax benefit is higher than the statutory tax rate. The increased benefit is primarily due to a \$6.4 million release of tax reserves as a result of the close of a federal tax audit on the tax years 2005 and 2006. Our effective tax rate for the three months ended March 31, 2008, and the related income tax provision, 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 March 31, 2009 was approximately \$8.8 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.

MKS 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 March 31, 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 March 31, 2009 and December 31, 2008, we had \$0.5 million and \$1.7 million, respectively, accrued for interest on unrecognized tax benefits.

During the quarter ended December 31, 2008, the U.S. Research and Development Tax Credit was extended retroactively to amounts paid or incurred in 2008 through December 31, 2009. As a result, we estimated a tax benefit of approximately \$0.8 million for the three months ended March 31, 2009. Because the law was not enacted at the time, we did not record a benefit for this credit in the three months ended March 31, 2008.

Liquidity and Capital Resources

Cash, cash equivalents and short-term investments totaled \$255.4 million at March 31, 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 \$5.8 million for the three months ended March 31, 2009, resulted mainly from a net loss of \$16.5 million, an \$11.7 million decrease in operating liabilities and a \$6.9 million increase in net operating assets, partially offset by a \$14.4 million provision for excess or obsolete inventory, non-cash charges of \$5.4 million for depreciation and amortization and \$4.8 million for stock-based compensation and related tax benefits. The net decrease in operating liabilities is mainly caused by a decrease of \$6.0 million in non-current income taxes payable and a decrease of \$2.9 million in accrued compensation. The decrease in accrued compensation is primarily as a result of the workforce reduction and mandatory time-off. The \$6.9 million increase in operating assets consisted primarily of a \$24.3

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million increase in income taxes receivable as we expect to receive an income tax refund due to current operating losses and a \$6.7 million increase in inventory, offset by a \$24.7 million decrease in accounts receivable as a result of lower revenue.

Net cash provided by operating activities of \$22.9 million for the three months ended March 31, 2008, resulted mainly from net income of \$20.4 million, a \$9.4 million increase in operating liabilities and non-cash charges of \$6.7 million for depreciation and amortization and \$2.5 million for stock-based compensation and related tax benefits, offset by an increase in net operating assets of \$17.1 million. The net increase in operating liabilities is mainly caused by an increase of \$5.8 million in income taxes payable and \$2.9 million in accounts payable, primarily as a result of inventory procurement activities. The \$17.1 million increase in operating assets consisted primarily of a \$10.9 million increase in accounts receivable as a result of higher revenue and a \$4.2 million increase in other current assets, mainly due to increases in value added tax, or VAT, receivables at foreign locations.

Net cash used in investing activities of \$1.0 million for the three months ended March 31, 2009, resulted primarily from purchases of \$1.3 million of property, plant and equipment. Net cash used in investing activities of \$48.5 million for the three months ended March 31, 2008, resulted primarily from net purchases of \$45.7 million of available for sale investments.

Net cash used in financing activities was \$14.1 million for the three months ended March 31, 2009 and consisted primarily of \$7.6 million in net payments on short-term borrowings and \$6.1 million related to stock-based compensation. Net cash used in financing activities was \$67.9 million for the three months ended March 31, 2008 and consisted primarily of repurchases of common stock of \$65.3 million and \$3.5 million in net payments on short-term borrowings.

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 three months ended March 31, 2008, we repurchased 3.5 million shares of common stock for \$65.3 million for an average price of \$18.81 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, National Association 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 million to \$5 million, (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. 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.

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.

To the extent permitted by Massachusetts law, our Restated Articles of Organization, as amended, require us to indemnify any of our current or former officers or directors or any person who has served or is serving in any capacity with respect to any of our employee benefit plans. Because no claim for indemnification has been pursued by any person covered by the relevant provisions of our Restated Articles of Organization, we believe that the estimated exposure for these indemnification obligations is currently minimal. Accordingly, we have no liabilities recorded for these requirements as of March 31, 2009.

We also enter into agreements in the ordinary course of business which include indemnification provisions. Pursuant to these agreements, we indemnify, hold harmless and agree to reimburse the indemnified party, generally our customers, for losses suffered or incurred by the indemnified party in connection with certain patent or other intellectual property infringement claims, and, in some instances, other claims, by any third party with respect to our products. The terms of these indemnification obligations are generally perpetual after execution of the agreements. The maximum potential amount of future payments we could be required to make under these indemnification agreements is, in some instances, not contractually limited. We have never incurred costs to defend lawsuits or settle claims related to these indemnification obligations. As a result, we believe the estimated fair value of these obligations is minimal. Accordingly, we have no liabilities recorded for these obligations as of March 31, 2009.

When, as part of an acquisition, we acquire all of the stock or all of the assets and liabilities of another company, we assume liability for certain events or occurrences that took place prior to the date of acquisition. The maximum potential amount of future payments we could be required to make for such obligations is undeterminable at this time. Other than obligations recorded as liabilities at the time of the acquisitions, historically we have not incurred significant costs relating to these acquired liabilities. Accordingly, no liabilities have been recorded for these obligations as of March 31, 2009.

In conjunction with certain asset sales, we may provide routine indemnifications whose terms range in duration and often are not explicitly defined. Where appropriate, an obligation for such indemnifications is recorded as a liability. Because the amounts of liability under these types of indemnifications are not explicitly stated, the overall maximum amount of the obligation under such indemnifications cannot be reasonably estimated. Other than obligations recorded as liabilities at the time of the asset sale, historically we have not made significant payments for these obligations.

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 are not exposed to any financing, liquidity, market or credit risk that could arise if we had such relationships.

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. This FSP is effective for interim reporting periods ending after June 15, 2009, with early adoption permitted for periods ending after March 15, 2009. The FSP does not require disclosures for earlier periods presented for comparative purposes at initial adoption. In periods after initial adoption, this FSP requires comparative disclosures only for periods ending after initial adoption. We are currently evaluating the disclosure implications of this statement.

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. This FSP is effective for interim and annual reporting periods ending after June 15, 2009, with early adoption permitted for periods ending after March 15, 2009. The FSP does not require disclosures for earlier periods presented for comparative purposes at initial adoption. In periods after initial adoption, this FSP requires comparative disclosures only for periods ending after initial adoption. We are currently evaluating the disclosure implications of this statement but do not believe that it will have a significant impact on the determination or reporting of our financial results.

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. This FSP is effective for interim and annual reporting periods ending after June 15, 2009, with early adoption permitted for periods ending after March 15, 2009. The FSP does not require disclosures for earlier periods presented for comparative purposes at initial adoption. In periods after initial adoption, this FSP requires comparative disclosures only for periods ending after initial adoption. We are evaluating the potential impact of the implementation of this FSP but do not believe that it will have a significant impact on the determination or reporting of our financial results.

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 expect FSP 141R-1 may have an impact on our consolidated financial statements, but the nature and magnitude of the specific effects will depend upon the nature, term and size of any future acquired contingencies.

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, 2008. 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 March 31, 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 a company that are designed to ensure that information required to be disclosed by a company 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 a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company’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 March 31, 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 communicated to our management, including our Chief Executive Officer and Chief Financial Officer as appropriate to allow timely decisions regarding required disclosure.

Management’s Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Securities Exchange Act as a process designed by, or under the supervision of, the Company’s Chief Executive Officer and Chief Financial Officer and effected by the Company’s Board of Directors, management and other personnel, 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 and includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of March 31, 2009. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control—Integrated Framework*.

Based on our assessment, management concluded that, as of March 31, 2009, our internal control over financial reporting was effective based on those criteria.

Our internal controls over financial reporting as of December 31, 2008 have been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their attestation report which appeared on page 31 in the Company’s Annual Report on Form 10-K for the year ended December 31, 2008.

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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 March 31, 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 update 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 (commonly known as swine flu) influenza 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 6. EXHIBITS.

<u>Exhibit No.</u>	<u>Exhibit Description</u>
3.1(1)	Restated Articles of Organization
3.2(2)	Articles of Amendment, as filed with the Secretary of State of Massachusetts on May 18, 2001
3.3(3)	Articles of Amendment, as filed with the Secretary of State of Massachusetts on May 16, 2002
3.4(4)	Amended and Restated By-Laws
10.1	Fifth Amendment, dated March 18, 2009 to Optional Advance Demand Grid Note, dated August 3, 2004 (the "Note") along with the Fourth Amendment to the Note dated July 1, 2008 and the Third Amendment to the Note dated July 31, 2007 (incorporated by reference to the Current Report on Form 8-K filed on March 23, 2009)
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.

May 7, 2009

By: /s/ Ronald C. Weigner
Ronald C. Weigner
Vice President, Chief Financial Officer & 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 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 changes 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: May 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 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 changes 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: May 7, 2009

/s/ Ronald C. Weigner

Ronald C. Weigner
Vice President, Chief Financial Officer & 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 March 31, 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 & 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: May 7, 2009

/s/ Leo Berlinghieri
Leo Berlinghieri
Chief Executive Officer and President

Dated: May 7, 2009

/s/ Ronald C. Weigner
Ronald C. Weigner
Vice President, Chief Financial Officer & Treasurer