

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, 2008

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

04-2277512

(State or other jurisdiction
of incorporation or organization)

(I.R.S. Employer
Identification No.)

2 Tech Drive, Suite 201, Andover, Massachusetts

01810

(Address of principal executive offices)

(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 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

Number of shares outstanding of the issuer's common stock as of April 30, 2008: 49,824,468

MKS INSTRUMENTS, INC.
FORM 10-Q
INDEX

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS.

Consolidated Balance Sheets - March 31, 2008 and December 31, 2007 3

Consolidated Statements of Operations - Three months ended March 31, 2008 and 2007 4

Consolidated Statements of Cash Flows - Three months ended March 31, 2008 and 2007 5

Notes to Consolidated Financial Statements 6

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS. 14

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK. 19

ITEM 4. CONTROLS AND PROCEDURES. 19

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS. 19

ITEM 1A. RISK FACTORS. 19

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS. 20

ITEM 6. EXHIBITS. 20

SIGNATURES

EXHIBIT INDEX

Ex-10.1 2008 Management Incentive Bonus Plan

Ex-10.2 Summary of Compensation for Lead Director

Ex-31.1 Section 302 Certification of CEO

Ex-31.2 Section 302 Certification of CFO

Ex-32.1 Section 906 Certification of CEO and CFO

[Table of Contents](#)

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS.

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

	March 31, 2008 (unaudited)	December 31, 2007
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 132,308	\$ 223,968
Short-term investments	144,310	99,797
Trade accounts receivable, net	121,574	107,504
Inventories	154,938	150,731
Deferred income taxes	17,982	17,984
Other current assets	11,464	9,996
Total current assets	<u>582,576</u>	<u>609,980</u>
Property, plant and equipment, net	81,801	81,365
Goodwill	337,622	337,473
Acquired intangible assets, net	33,035	36,141
Other assets	11,688	11,301
Total assets	<u>\$ 1,046,722</u>	<u>\$ 1,076,260</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term borrowings	\$ 17,526	\$ 18,967
Current portion of capital lease obligations	1,110	1,236
Accounts payable	33,497	28,683
Accrued compensation	14,398	17,842
Income taxes payable	9,649	3,649
Other accrued expenses	31,258	25,368
Total current liabilities	<u>107,438</u>	<u>95,745</u>
Long-term debt	5,000	5,000
Long-term portion of capital lease obligations	694	871
Other liabilities	21,662	20,635
Commitments and contingencies (Note 8)		
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; 50,872,220 and 54,261,947 shares issued and outstanding at March 31, 2008 and December 31, 2007, respectively	113	113
Additional paid-in capital	645,332	685,465
Retained earnings	254,178	255,244
Accumulated other comprehensive income	12,305	13,187
Total stockholders' equity	<u>911,928</u>	<u>954,009</u>
Total liabilities and stockholders' equity	<u>\$ 1,046,722</u>	<u>\$ 1,076,260</u>

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

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

	Three Months Ended March 31,	
	2008	2007
Net sales	\$ 193,448	\$ 211,432
Cost of sales	111,541	118,570
Gross profit	81,907	92,862
Research and development	19,249	18,299
Selling, general and administrative	31,709	34,576
Amortization of acquired intangible assets	3,105	4,107
Income from operations	27,844	35,880
Interest expense	(458)	(217)
Interest income	2,634	3,522
Impairment of investments	(1,161)	—
Income before income taxes	28,859	39,185
Provision for income taxes	8,477	11,895
Net income	<u>\$ 20,382</u>	<u>\$ 27,290</u>
Net income per share:		
Basic	<u>\$ 0.39</u>	<u>\$ 0.48</u>
Diluted	<u>\$ 0.39</u>	<u>\$ 0.48</u>
Weighted average common shares outstanding:		
Basic	<u>51,733</u>	<u>56,354</u>
Diluted	<u>52,571</u>	<u>57,326</u>

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,	
	2008	2007
Cash flows from operating activities:		
Net income	\$ 20,382	\$ 27,290
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	6,681	7,650
Stock-based compensation	3,191	3,033
Tax benefit from stock-based compensation	(86)	1,254
Excess tax benefit from stock-based compensation	(597)	(145)
Impairment of investments	1,161	—
Other	(172)	1,166
Changes in operating assets and liabilities, net of businesses acquired:		
Trade accounts receivable	(10,886)	(7,783)
Inventories	(1,969)	(7,311)
Other current assets	(4,238)	(3,655)
Accrued expenses and other current liabilities	2,894	5,855
Accounts payable	716	4,928
Income taxes payable	5,782	(4,637)
Net cash provided by operating activities	<u>22,859</u>	<u>27,645</u>
Cash flows from investing activities:		
Purchases of short-term and long-term available for sale investments	(91,897)	(32,310)
Maturities and sales of short-term and long-term available for sale investments	46,221	40,402
Purchases of property, plant and equipment	(3,156)	(2,317)
Other	289	(863)
Net cash provided by (used in) investing activities	<u>(48,543)</u>	<u>4,912</u>
Cash flows from financing activities:		
Proceeds from short-term borrowings	30,771	25,576
Payments on short-term borrowings	(34,262)	(26,895)
Repurchases of common stock	(65,272)	(12,875)
Principal payments on long-term debt and capital lease obligations	(431)	(292)
Proceeds from exercise of stock options and employee stock purchase plan	679	12,700
Excess tax benefit from stock-based compensation	597	145
Net cash provided by (used in) financing activities	<u>(67,918)</u>	<u>(1,641)</u>
Effect of exchange rate changes on cash and cash equivalents	1,942	91
Increase (decrease) in cash and cash equivalents	(91,660)	31,007
Cash and cash equivalents at beginning of period	223,968	215,208
Cash and cash equivalents at end of period	<u>\$ 132,308</u>	<u>\$ 246,215</u>

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

MKS INSTRUMENTS, INC.
NOTES TO 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, 2008 and for the three months ended March 31, 2008 and 2007 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 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, 2007 filed with the Securities and Exchange Commission on February 28, 2008.

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) Goodwill and Intangible Assets

Intangible Assets

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

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Completed technology	\$ 93,204	\$ (77,779)	\$ 15,425
Customer relationships	23,542	(10,253)	13,288
Patents, trademarks, tradenames and other	29,729	(25,407)	4,322
	<u>\$ 146,475</u>	<u>\$ (113,439)</u>	<u>\$ 33,035</u>

Acquired amortizable intangible assets consisted of the following as of December 31, 2007:

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Completed technology	\$ 93,204	\$ (75,681)	\$ 17,523
Customer relationships	23,542	(9,644)	13,898
Patents, trademarks, tradenames and other	29,729	(25,009)	4,720
	<u>\$ 146,475</u>	<u>\$ (110,334)</u>	<u>\$ 36,141</u>

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

Aggregate amortization expense related to acquired intangibles for the three months ended March 31, 2008 and 2007 was \$3,105,000 and \$4,107,000, respectively. Estimated amortization expense related to acquired intangibles for the remainder of 2008 and in total for the year is \$5,896,000 and \$9,001,000, respectively. Estimated amortization expense for 2009 and for each of the three succeeding fiscal years is as follows:

Year	Amount
2009	\$7,751
2010	6,309
2011	5,764
2012	3,488
2013 and beyond	3,827

Goodwill

The changes in the carrying amount of goodwill during the three months ended March 31, 2008 were not material.

3) Net Income Per Share

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

	Three Months Ended March 31,	
	2008	2007
Numerator:		
Net income	\$ 20,382	\$ 27,290
Denominator:		
Shares used in net income per common share — basic	51,733	56,354
Effect of dilutive securities:		
Stock options, restricted stock and employee stock purchase plan	838	972
Shares used in net income per common share — diluted	52,571	57,326
Net income per common share:		
Basic	\$ 0.39	\$ 0.48
Diluted	\$ 0.39	\$ 0.48

The computation of diluted net income per common share for the three months ended March 31, 2008 and 2007, excludes the effect of the potential exercise of options to purchase approximately 3,266,975 and 3,491,593 shares, respectively, because the option exercise price was greater than the average market price of our common shares and the effect of including these options would have been anti-dilutive.

4) Inventories

Inventories consist of the following:

	March 31, 2008	December 31, 2007
Raw material	\$ 74,529	\$ 73,529
Work in process	27,524	26,171
Finished goods	52,885	51,031
	<u>\$ 154,938</u>	<u>\$ 150,731</u>

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

5) Stockholders' EquityComprehensive Income

Components of comprehensive income were as follows:

	Three Months Ended	
	March 31,	
	2008	2007
Net income	\$ 20,382	\$ 27,290
Other comprehensive income (loss):		
Changes in value of financial instruments designated as cash flow hedges (net of tax of \$(0) and \$(181), respectively)	(2,952)	(302)
Foreign currency translation adjustment	2,080	350
Unrealized gain (loss) on investments (net of tax of \$0 and \$16, respectively)	(10)	27
Other comprehensive income (loss)	(882)	75
Total comprehensive income	<u>\$ 19,500</u>	<u>\$ 27,365</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 \$300.0 million of its outstanding stock over the subsequent two years. The repurchases may be made from time to time on the open market or through privately negotiated transactions. The timing and amount of any shares repurchased under the Program will depend on a variety of factors, including the price of our common stock, corporate and regulatory requirements, capital availability, and other market conditions. The Program may be discontinued at any time at the discretion of the Company and its Board of Directors. During the three months ended March 31, 2008, we repurchased 3,469,000 shares of common stock for \$65,272,000 for an average price of \$18.81 and during the three months ended March 31, 2007, we repurchased 510,000 shares of common stock for \$12,875,000 for an average price of \$25.24.

6) Income Taxes

The Company adopted FASB Interpretation 48, Accounting for Uncertainty in Income Taxes ("FIN 48") in 2007. At December 31, 2007, the total amount of gross unrecognized tax benefits, which excludes interest and penalties discussed below, was approximately \$16,100,000. If these benefits were recognized in a future period, the timing of which is not estimable, the net unrecognized tax benefit of approximately \$13,200,000 would impact the Company's effective tax rate. The total amount of gross unrecognized tax benefits at March 31, 2008 was approximately \$16,500,000. The increase from January 1, 2008 was primarily attributable to tax positions taken by the Company in the current quarter.

MKS and its subsidiaries are subject to U.S. federal income tax as well as the income tax of multiple state and foreign jurisdictions. The Company has concluded all U.S. federal income tax matters for years through 2002. The 2003 federal tax year remains open to the extent of the loss carryforward to 2004 and 2005. As of March 31, 2008, there were ongoing audits in various other tax jurisdictions.

Within the next 12 months, it is reasonably possible that the Company may recognize \$4,300,000 to \$4,800,000 of previously unrecognized tax benefits related to various federal, 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: 2003 to 2007, Germany: 2001 to 2007, Korea: 2005 to 2007, Japan: 2001 to 2007, and the United Kingdom: 2006 and 2007.

The Company will accrue interest and, if applicable, penalties, for any uncertain tax positions. This interest and penalty expense will be a component of income tax expense. At March 31, 2008 and December 31, 2007, the Company had approximately \$1,700,000 and \$1,500,000, respectively, accrued for interest on unrecognized tax benefits.

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

The Company's effective tax rate for the three months ended March 31, 2008 and 2007 were 29.4% and 30.4%, respectively. The effective tax rate 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.

7) 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 sales to unaffiliated customers are based on the location in which the sale originated. Transfers between geographic areas are at negotiated transfer prices and have been eliminated from consolidated net sales.

	Three Months Ended March 31,	
	2008	2007
Geographic net sales:		
United States	\$ 123,022	\$ 130,347
Japan	26,246	26,046
Europe	25,711	20,927
Asia	18,469	34,112
	<u>\$ 193,448</u>	<u>\$ 211,432</u>
	March 31,	December 31,
	2008	2007
Long-lived assets:		
United States	\$ 63,180	\$ 63,731
Japan	7,403	6,520
Europe	4,492	4,386
Asia	9,245	9,269
	<u>\$ 84,320</u>	<u>\$ 83,906</u>

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

	Three Months Ended March 31,	
	2008	2007
Instruments and Control Systems	\$ 96,970	\$ 101,191
Power and Reactive Gas Products	76,050	85,567
Vacuum Products	20,428	24,674
	<u>\$ 193,448</u>	<u>\$ 211,432</u>

The Company had one customer comprising 20% and 18% of net sales for the three months ended March 31, 2008 and 2007, respectively.

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

8) 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, 2008 and determined that there were no significant changes from the ones set forth in the Company's Annual Report on Form 10-K for the year ended December 31, 2007.

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 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 for the three months ended March 31 were as follows:

	<u>2008</u>	<u>2007</u>
Balance at January 1	\$ 9,497	\$ 11,549
Provisions for product warranties during the three month period ended March 31	1,514	1,959
Direct charges to warranty liability during the three month period ended March 31	<u>(1,409)</u>	<u>(2,177)</u>
Balance at March 31	<u>\$ 9,602</u>	<u>\$ 11,331</u>

10) 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 are still not currently trading on active markets, and therefore, have 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

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

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, are 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.

11) Recently Issued Accounting Pronouncements

In December 2007, the Financial Accounting Standards Board (the “FASB”) issued SFAS No. 141(R), “Business Combinations,” which replaces SFAS No. 141. This revised standard requires assets, liabilities and non-controlling interests acquired to be measured at fair value and requires that costs incurred to effect the acquisition be recognized separately from the business combination. In addition, this statement expands the scope to include all transactions and other events in which one entity obtains control over one or more businesses. This statement is effective for all 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 is in the process of evaluating whether the adoption of this standard will have a material effect on its consolidated financial statements.

In December 2007, the FASB issued SFAS No. 160, “Noncontrolling Interests in Consolidated Financial Statements, an Amendment of ARB No. 51.” This statement establishes accounting and reporting standards for the non-controlling interest in a subsidiary and for the deconsolidation of a subsidiary. This statement is effective for fiscal years beginning on or after December 15, 2008. The Company is in the process of evaluating whether the adoption of this standard will have a material effect on its financial position, results of operations or cash flows.

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 is intended to improve 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). Entities with instruments subject to SFAS 161 must provide more robust qualitative disclosures and expanded quantitative disclosures. SFAS 161 is effective prospectively for financial statements issued for fiscal years and interim periods beginning after November 15, 2008, with early application permitted. The Company is currently evaluating the disclosure implications of this statement.

12) Fair Value Measurements

In February 2007, the FASB issued SFAS No. 159, “The Fair Value Option for Financial Assets and Financial Liabilities — Including an amendment of FASB Statement No. 115,” (SFAS 159) which is effective for fiscal years beginning after November 15, 2007. This statement permits entities to choose to measure many financial instruments and certain other items at fair value. This statement also establishes presentation and disclosure requirements designed to facilitate comparisons between entities that choose different measurement attributes for similar types of assets and liabilities. Unrealized gains and losses on items for which the fair value option is elected would be reported in earnings. On January 1, 2008, the Company adopted SFAS 159 and has elected not to measure any additional financial instruments and other items at fair value.

In September 2006, the FASB issued SFAS No. 157, “Fair Value Measurements,” (SFAS 157), which is effective for fiscal years beginning after November 15, 2007 and for interim periods within those years. This statement defines fair value, establishes a framework for measuring fair value and expands the related disclosure requirements. This statement applies under other accounting pronouncements that require or permit fair 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.

Relative to SFAS 157, the FASB issued FASB Staff Positions (FSP) 157-1 and 157-2. FSP 157-1 amends SFAS 157 to exclude SFAS No. 13, “Accounting for Leases,” (SFAS 13) and its related interpretive accounting pronouncements that address leasing transactions, while FSP 157-2 delays the effective date of the application of SFAS 157 to fiscal years beginning after November 15, 2008 for all nonfinancial assets and nonfinancial liabilities that are recognized or disclosed at fair value in the financial statements on a nonrecurring basis.

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

The Company adopted SFAS 157 as of January 1, 2008, with the exception of the application of the statement to non-recurring nonfinancial assets and nonfinancial liabilities. Non-recurring nonfinancial assets and nonfinancial liabilities for which we have not applied the provisions of SFAS 157 include those measured at fair value in goodwill impairment testing, indefinite lived intangible assets measured at fair value for impairment testing, asset retirement obligations initially measured at fair value, and those initially measured at fair value in a business combination.

SFAS 157 also 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 are summarized as follows:

Description	3/31/08	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				
Available-for-sale-securities	\$ 144,310	\$ 141,196	\$ —	\$ 3,114
Liabilities				
Derivatives — Currency Forward Contracts	\$ 2,909	\$ —	\$ 2,909	\$ —

Available-For-Sale Securities

Available-for-sale securities of \$141.2 million, consisting 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 of \$3.1 million, consisting of two structured investment vehicles (SIVs) that entered into receivership during the fourth quarter of 2007 and failed to make payment at maturity, are classified within Level 3 of the fair value hierarchy due to the investments are not currently trading on active markets, and therefore, have no readily determinable market value.

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

Derivatives

As a result of the Company's global operating activities, the Company is exposed to market risks from changes in foreign currency exchange rates, which may adversely affect its operating results and financial position. When deemed appropriate, the Company minimizes its risks from foreign currency exchange rate fluctuations through the use of derivative financial instruments. The 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.

The table below presents a reconciliation for all assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) for the period from January 1, 2008 to March 31, 2008.

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3) Available-for-sale Securities
Beginning balance at January 1, 2008	\$ 4,275
Total gains or losses (realized/unrealized)	
Included in earnings (or changes in net assets)	(1,161)
Included in other comprehensive income	—
Purchases, issuances, and settlements	—
Transfers in and/or out of Level 3	—
Ending balance at March 31, 2008	\$ 3,114
The amount of total gains or losses for the period included in earnings (or changes in net assets) attributable to the change in unrealized gains or losses relating to assets still held at the reporting date	\$(1,161)

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, 2007 in the section entitled "Risk Factors."

Overview

We are a leading worldwide provider of instruments, components, subsystems and process control solutions that measure, control, power, monitor and analyze critical parameters of semiconductor and other advanced manufacturing processes.

We are managed as one operating segment which is organized around 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, and energy generation and environmental monitoring.

Our customers include 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; other industrial, medical and manufacturing companies; and university, government and industrial research laboratories. For the three months ended March 31, 2008 and the full year ended December 31, 2007, we estimate that approximately 66% and 68% of our net sales, respectively, were to semiconductor capital equipment manufacturers and semiconductor device manufacturers. We expect that sales to the semiconductor capital equipment manufacturers and semiconductor device manufacturers will continue to account for a substantial majority of our sales.

During 2007, quarterly sales ranged from \$181.0 million to \$211.4 million. Orders and net sales during our first quarter of 2008 continued within this range resulting in net sales of \$193.4 million. We expect that our net sales for the second quarter of 2008 could be slightly below this range. However, the semiconductor capital equipment industry is subject to rapid demand shifts, which are difficult to predict, and we are uncertain how long sales levels may be maintained or the timing or extent of any future downturn or upturn in the semiconductor capital equipment industry.

A portion of our net sales is to operations in international markets. For the three months ended March 31, 2008 and full year ended December 31, 2007, international sales accounted for approximately 36% and 39% of net sales, respectively.

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, 2007. 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, 2007.

[Table of Contents](#)**Results of Operations**

The following table sets forth, for the periods indicated, the percentage of total net sales of certain line items included in MKS' consolidated statements of operations data.

	Three Months Ended March 31,	
	2008	2007
Net sales	100.0%	100.0%
Cost of sales	57.7	56.1
Gross profit	42.3	43.9
Research and development	9.9	8.7
Selling, general and administrative	16.4	16.4
Amortization of acquired intangible assets	1.6	1.9
Income from operations	14.4	16.9
Interest income, net	1.1	1.6
Impairment of investments	(0.6)	—
Income before income taxes	14.9	18.5
Provision for income taxes	4.4	5.6
Net income	\$ 10.5%	12.9%

Net Sales (dollars in millions)

	Three Months Ended March 31,		
	2008	2007	% Change
Net sales	\$193.4	\$211.4	(8.5)

Net sales decreased \$18.0 million mainly due to a decrease in worldwide demand from our semiconductor capital equipment manufacturer and semiconductor device manufacturer customers, which decreased \$25.4 million or 17% compared to the same period for the prior year partially offset by an increase in sales to solar, flat panel and other markets of \$7.4 million. International net sales were approximately \$70.4 million for the three months ended March 31, 2008 or 36.4% of net sales and \$81.1 million for the three months ended March 31, 2007 or 38.4% of net sales.

Gross Profit

	Three Months Ended March 31,		
	2008	2007	Percentage Points Change
Gross profit as percentage of net sales	42.3%	43.9%	(1.6)

Gross profit decreased by approximately 1.6 percentage points primarily due to a decrease of 1.0 percentage point from lower sales volume and an additional decrease of 0.6 percentage points from a combination of less favorable product mix partially offset by a reduction in fixed overhead spending.

Research and Development (dollars in millions)

	Three Months Ended March 31,		
	2008	2007	% Change
Research and development expenses	\$19.2	\$18.3	5.2

Research and development expense increased \$0.9 million mainly due to increased consulting costs of \$0.5 million related to new product development projects and higher compensation expense of \$0.2 million.

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

Table of Contents

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 sales may be reduced during the lifespan of those products.

Selling, General and Administrative (dollars in millions)

	Three Months Ended March 31,		
	2008	2007	% Change
Selling, general and administrative expenses	\$31.7	\$34.6	(8.3)

Selling, general and administrative expenses decreased \$2.9 million for the three months ended March 31, 2008 mainly due to a \$2.9 million change in foreign exchange as a result of foreign exchange gains of \$2.5 million in the first quarter of 2008 compared to foreign exchange losses of \$0.4 million in the first quarter of 2007. 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,		
	2008	2007	% Change
Amortization of acquired intangible assets	\$3.1	\$4.1	(24.4)

Amortization expense for the three months ended March 31, 2008 decreased \$1.0 million as certain acquired intangible assets became fully amortized during 2007 and 2008.

Interest Income, Net (dollars in millions)

	Three Months Ended March 31,		
	2008	2007	% Change
Interest income, net	\$2.2	\$3.3	(34.2)

Interest income decreased \$1.1 million mainly related to lower interest rates on lower average cash and cash equivalent balances in 2008 as compared to the same period in 2007.

Impairment of Investments (dollars in millions)

	Three Months Ended March 31,		
	2008	2007	% 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 they 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 currently trading on active markets, and therefore, had no readily determinable market value. As a result of our assessment as of December 31, 2007, we recorded a \$1.5 million impairment charge to earnings, based upon the Company receiving contemporaneous quotes from established third-party pricing services.

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 currently 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.

[Table of Contents](#)

Provision for Income Taxes (dollars in millions)

	Three Months Ended March 31,		
	2008	2007	% Change
Provision for income taxes	\$8.5	\$11.9	(28.7)

Our effective tax rate for the periods ending March 31, 2008 and March 31, 2007 was 29.4% and 30.4%, respectively. The effective tax rate 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.

We adopted FASB Interpretation 48, Accounting for Uncertainty in Income Taxes ("FIN 48") in 2007. At December 31, 2007, the total amount of gross unrecognized tax benefits, which excludes interest and penalties discussed below, was approximately \$16.1 million. If these benefits were recognized in a future period, the timing of which is not estimable, the net unrecognized tax benefit of approximately \$13.2 million would impact the Company's effective tax rate. The total amount of gross unrecognized tax benefits at March 31, 2008 was approximately \$16.5 million. The increase from January 1, 2008 was primarily attributable to tax positions taken by the Company in the current quarter.

MKS and its subsidiaries are subject to U.S. federal income tax as well as the income tax of multiple state and foreign jurisdictions. We have concluded all U.S. federal income tax matters for years through 2002. The 2003 federal tax year remains open to the extent of the loss carryforward to 2004 and 2005. As of March 31, 2008, there were ongoing audits in various other tax jurisdictions. We do not expect any material changes to the returns as filed from these open audits.

Within the next 12 months, it is reasonably possible that the Company may recognize \$4.3 million to \$4.8 million of previously unrecognized tax benefits related to various federal, 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: 2003 to 2007, Germany: 2001 to 2007, Korea: 2005 to 2007, Japan: 2001 to 2007, and the United Kingdom: 2006 and 2007.

We will accrue interest and, if applicable, penalties, for any uncertain tax positions. This interest and penalty expense will be a component of income tax expense. At December 31, 2007 and at March 31, 2008, we had \$1.5 million and \$1.7 million, respectively, accrued for interest on unrecognized tax benefits.

The U.S. Research and Development Tax Credit expired at the end of 2007 and to date has not been reinstated. As a result, we did not take any benefit for this credit in the period ending March 31, 2008. The benefit taken in the period ending March 31, 2007 for this credit was approximately \$0.4 million.

Liquidity and Capital Resources

Cash, cash equivalents and short-term investments totaled \$276.6 million at March 31, 2008 compared to \$323.8 million at December 31, 2007. This decrease was attributable to our share repurchase program through which we repurchased \$65.3 million of our common stock during the first quarter of 2008. The primary source of funds for the first three months of fiscal 2008 was cash provided by operating activities of \$22.9 million.

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 provided by operating activities of \$27.6 million for the three months ended March 31, 2007, resulted mainly from net income of \$27.3 million, a \$6.1 million increase in operating liabilities and non-cash charges of \$7.6 million for depreciation and amortization and \$4.1 million for stock-based compensation and related tax benefits, offset by an increase in net operating assets of \$18.7 million. The net increase in operating liabilities was mainly caused by an increase of \$4.9 million in accounts payable, primarily as a result of inventory procurement activities, an increase of \$5.9 million in accrued expenses and other current liabilities, offset by a decrease of \$4.6 million in income taxes payable. The \$18.7 million increase in operating assets consisted primarily of a \$7.8 million increase in accounts receivable as a result of higher revenue and a \$7.3 million increase in inventory.

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 provided by investing activities of \$4.9 million for the three months ended March 31, 2007, resulted primarily from net maturities of \$8.1 million of available for sale investments.

Table of Contents

Net cash used in financing activities of \$67.9 million for the three months ended March 31, 2008, consisted primarily of repurchases of common stock of \$65.3 million and \$3.5 million in net payments on short-term borrowings. Net cash used in financing activities of \$1.6 million for the three months ended March 31, 2007, consisted primarily of repurchases of common stock of \$12.9 million offset by \$12.7 million in proceeds from the exercise of stock options and purchases under our employee stock purchase plan.

On February 12, 2007, our Board of Directors approved a share repurchase program (the "Program") for the repurchase of up to \$300.0 million of our outstanding stock over two years. The repurchases may be made from time to time on the open market or through privately negotiated transactions. The timing and amount of any shares repurchased under the Program will depend on a variety of factors, including the price of our common stock, corporate and regulatory requirements, capital availability, and other market conditions. The Program may be discontinued at any time at the discretion of the Company and our Board of Directors. 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 and during the three months ended March 31, 2007, we repurchased 0.5 million shares of common stock for \$12.9 million for an average price of \$25.24.

We believe that our working capital, together with the cash anticipated to be generated from operations, will be sufficient to satisfy our estimated working capital, stock repurchase program activity 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, 2008.

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, 2008.

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 made significant payments for these indemnifications. Accordingly, no liabilities have been recorded for these obligations as of March 31, 2008.

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 indemnifications.

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 December 2007, the FASB issued SFAS No. 141(R), "Business Combinations," which replaces SFAS No. 141. This revised standard requires assets, liabilities and non-controlling interests acquired to be measured at fair value and requires that costs incurred to effect the acquisition be recognized separately from the business combination. In addition, this statement expands the scope to include all transactions and other events in which one entity obtains control over one or more businesses. This statement is effective for all 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 are in the process of evaluating whether the adoption of this standard will have a material effect on our consolidated financial results.

Table of Contents

In December 2007, the FASB issued SFAS No. 160, “Noncontrolling Interests in Consolidated Financial Statements, an Amendment of ARB No. 51” (“SFAS No. 160”). This statement establishes accounting and reporting standards for the non-controlling interest in a subsidiary and for the deconsolidation of a subsidiary. This statement is effective for fiscal years beginning on or after December 15, 2008. We are in the process of evaluating whether the adoption of this standard will have a material effect on our consolidated financial statements.

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 is intended to improve 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). Entities with instruments subject to SFAS 161 must provide more robust qualitative disclosures and expanded quantitative disclosures. SFAS 161 is effective prospectively for financial statements issued for fiscal years and interim periods beginning after November 15, 2008, with early application permitted. We are currently evaluating the disclosure implications of this statement.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Information concerning market risk is contained in the Management’s Discussion and Analysis of Financial Condition and Results of Operations contained in our Annual Report on Form 10-K for the year ended December 31, 2007 filed with the Securities and Exchange Commission on February 28, 2008. There were no material changes in our exposure to market risk from December 31, 2007.

ITEM 4. CONTROLS AND PROCEDURES.

a) Effectiveness of disclosure controls and procedures.

MKS’ 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, 2008. 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 the 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, 2008, our chief executive officer and chief financial officer concluded that, as of such date, MKS’ disclosure controls and procedures were effective at the reasonable assurance level.

b) 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) that occurred during the quarter ended March 31, 2008 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, 2007 in the section entitled “Risk Factors.” As of March 31, 2008, there have been no material changes from the risks disclosed therein.

Table of Contents

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

The following table provides information about purchases by MKS during the quarter ended March 31, 2008, of equity securities that are registered by MKS pursuant to Section 12 of the Exchange Act:

ISSUER PURCHASES OF EQUITY SECURITIES

Period	Total Number of Shares (or Units) Purchased ¹	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs ²	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs ²
1/1/08 — 1/31/08	1,592,905	\$17.53	6,371,537	\$170,915,000
2/1/08 — 2/28/08	1,108,026	\$19.56	7,479,563	\$149,237,000
3/1/08 — 3/31/08	768,295	\$20.39	8,247,858	\$133,570,000

- 1) We repurchased an aggregate of 8,247,858 shares of our common stock pursuant to the repurchase program that we publicly announced on February 12, 2007 (the "Program"). During the three months ended March 31, 2008, we repurchased a total of approximately 3,469,000 shares of our common stock pursuant to the Program.
- 2) Our board of directors approved the repurchase by us of up to an aggregate of \$300.0 million of our common stock pursuant to the Program. The expiration date of this Program is February 11, 2009, unless terminated earlier by resolution of our board of directors.

ITEM 6. EXHIBITS.

Exhibit No.	Exhibit Description
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*	2008 Management Incentive Bonus Plan
10.2	Summary of Compensation for Lead Director
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.
- * Confidential treatment requested as to certain portions, which portions have been filed separately with the Securities and Exchange Commission.

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 8, 2008

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

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

**Summary of MKS Instruments, Inc.'s
2008 Management Incentive Bonus**

The 2008 Management Incentive Bonus Plan consists of a Corporate Bonus, which is based on a 2008 corporate pro-forma pre-tax operating income target, and, for some participants, a Product Group Bonus, which is based on the 2008 earnings targets of certain respective product groups. With respect to Leo Berlinghieri, Jerry Colella, John Smith and Ron Weigner, the 2008 Management Incentive Plan consists solely of the Corporate Bonus. With respect to John Lee, Frank Schneider and William Stewart, the 2008 Management Incentive Plan consists of the Corporate Bonus and the Product Group Bonus.

The following chart summarizes the individual target bonuses for each of the Company's executive officers, plus Frank Schneider, who was an executive officer during the year ended December 31, 2007 and constitutes a "named executive officer" under the rules of the Securities and Exchange Commission. Mr. Schneider is no longer an executive officer of the Company.

Participant	Individual Incentive Target (% of annual base earnings)
Leo Berlinghieri	100%
Jerry Colella	65%
John Smith	50%
Ron Weigner	50%
John Lee	55% (of which 70% is Corporate Bonus and 30% is Product Group Bonus)
Frank Schneider	35% (of which 70% is Corporate Bonus and 30% is Product Group Bonus)
William Stewart	50% (of which 70% is Corporate Bonus and 30% is Product Group Bonus)

The corporate element of the bonus plan formula is calculated as follows:

$$\text{Base Salary} \times \text{Individual Incentive Target} \times \text{Corporate Performance Multiplier}$$

The product group element of the bonus plan formula is calculated as follows:

$$\text{Base Salary} \times \text{Individual Incentive Target} \times \text{Product Group Performance Multiplier}$$

Each of the "Corporate Performance Multiplier" and "Product Group Performance Multiplier" ranges from 0% for achievement below a specified minimum corporate or product group goal, respectively, up to 200% for achievement of a maximum corporate or product group goal. Accordingly, the maximum payout possible for each of the above participants is 200% of his Individual Incentive Target and the minimum payout is zero, with incremental payouts for performance between these levels.

The MKS 2008 Management Incentive Bonus Plan is set forth as follows:

PERSONAL & MKS CONFIDENTIAL MEMORANDUM

[FORM OF] 2008 Corporate Bonus Plan

Operating Income after Bonus & Before Tax
(January 1 — December 31)

The payout of your corporate bonus will be achieved according to the schedule shown in the chart below. For example, you will receive 50% of your target corporate bonus if our Operating Income after Bonus & Before Tax reaches \$** million and 100% of your target corporate bonus if Operating Income after Bonus & Before Tax reaches \$** million. At an Operating Income after Bonus & Before Tax of \$** million or more, you would receive 200% of your target corporate bonus.

<i>Operating Income after Bonus & Before Tax</i>	<i>% of Target Bonus Earned</i>
<\$**	0.0%
\$**	10.0%
\$**	20.0%
\$**	30.0%
\$**	40.0%
\$**	50.0%
\$**	60.0%
\$**	70.0%
\$**	80.0%
\$**	90.0%
\$**	100.0%
\$**	125.0%
\$**	150.0%
\$**	175.0%
>=\$**	200.0%

This information is extremely confidential and should be treated as such. You should not divulge this information inside or outside of MKS Instruments, Inc.



2 Tech Drive, Suite 201, Andover, MA 01810
Telephone (978)645-5500 Fax (978) 645-5110

PERSONAL & MKS CONFIDENTIAL MEMORANDUM

The MKS Bonus Plan (The Plan) is based on fiscal year performance (January through December). Performance measurements are set at the beginning of the fiscal year.

Corporate plan participants have 100% of their bonus tied to achievement of corporate goals.

Product Group plan participants (PFMC&A, CIT, HPS, ENI, and ASTeX) have 70% of their bonus based on performance against corporate goals, and 30% of their award based on performance against product group goals.

Target Payout:

Bonus target guidelines are established as a percentage of pay. The bonus payout amount is a percentage of eligible W-2 earnings received during the plan year, i.e. "base salary" including regular, holiday, vacation, sick, and retro pay. Bonus payments made in calendar year 2007, but accrued from the prior year, are excluded from this calculation.

Administration:

Bonus payout is made as soon as possible after the end of the fiscal year and the performance assessment has been completed, but in no event later than March 15th of the subsequent year.

Note: In order to receive a bonus payment the plan participant must be actively employed as of the payout date of The Plan.

MKS reserves the right to change the plan at any time, subject to senior management discretion. In no way does this plan create a contract of employment.



2 Tech Drive, Suite 201, Andover, MA 01810
Telephone (978)645-5500 Fax (978) 645-5110

PERSONAL & MKS CONFIDENTIAL MEMORANDUM

2008 CIT Product Group Bonus Plan¹

The payout of your product group bonus will be calculated based upon actual CIT Product Group earnings for 2008. The chart below shows the correlation between actual CIT Product Group earnings and your bonus payout. For example, you will receive 50% of your target product group bonus if the CIT Product Group earns \$** million in 2008 and 100% of your target product group bonus if the group earns \$** million. If the group earns \$** million or more you would receive 200% of your target product group bonus.

<i>CIT Product Group Earnings (\$mm)</i>	<i>% of CIT Product Group Bonus Paid</i>
< \$**	0.0%
\$**	10.0%
\$**	20.0%
\$**	30.0%
\$**	40.0%
\$**	50.0%
\$**	60.0%
\$**	70.0%
\$**	80.0%
\$**	90.0%
\$**	100.0%
\$**	125.0%
\$**	150.0%
\$**	175.0%
>=\$**	200.0%

This information is extremely confidential and should be treated as such. You should not divulge this information inside or outside of MKS Instruments, Inc.

¹ The CIT Product Group Bonus Plan applies only to Mr. Lee and Mr. Schneider, and represents 30% of their overall bonuses.



2 Tech Drive, Suite 201, Andover, MA 01810
Telephone (978)645-5500 Fax (978) 645-5110

PERSONAL & MKS CONFIDENTIAL MEMORANDUM

2008 HPS Product Group Bonus Plan²

The payout of your Product Group bonus will be calculated based upon actual HPS Product Group earnings for 2008. The chart below shows the correlation between actual HPS Product Group earnings and your bonus payout. For example, you will receive 50% of your target Product Group bonus if the HPS Product Group earns \$** million in 2008 and 100% of your target product group bonus if the group earns \$** million. If the group earns \$** million or more you would receive 200% of your target Product Group bonus.

HPS Product Group Earnings (\$mm)	% of HPS Product Group Bonus Paid
< \$**	0.0%
\$**	10.0%
\$**	20.0%
\$**	30.0%
\$**	40.0%
\$**	50.0%
\$**	60.0%
\$**	70.0%
\$**	80.0%
\$**	90.0%
\$**	100.0%
\$**	125.0%
\$**	150.0%
\$**	175.0%
>=\$**	200.0%

This information is extremely confidential and should be treated as such. You should not divulge this information inside or outside of MKS Instruments, Inc.

² The HPS Product Group Bonus Plan applies only to Mr. Stewart, and represents 30% of his overall bonus.



2 Tech Drive, Suite 201, Andover, MA 01810
Telephone (978)645-5500 Fax (978) 645-5110

Summary of Compensation for Lead Director

As determined by the Board of Directors on May 5, 2008, the Lead Director of the MKS Board of Directors shall be entitled to an annual retainer of \$16,000 per year. Such amount shall be in addition to any other compensation otherwise payable for services as a director.

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 8, 2008

/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 8, 2008

/s/ Ronald C. Weigner

Ronald C. Weigner
Vice President and Chief Financial Officer (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, 2008 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 and Chief Financial Officer 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 8, 2008

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

Dated: May 8, 2008

/s/ Ronald C. Weigner
Ronald C. Weigner
Vice President and Chief Financial Officer