

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 September 30, 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 October 31, 2008: 49,140,353

MKS INSTRUMENTS, INC.
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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS.

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

	September 30, 2008 (unaudited)	December 31, 2007
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 145,432	\$ 223,968
Short-term investments	111,780	99,797
Trade accounts receivable, net	104,558	107,504
Inventories	142,680	150,731
Deferred income taxes	16,489	17,984
Other current assets	19,379	9,996
Total current assets	<u>540,318</u>	<u>609,980</u>
Property, plant and equipment, net	79,760	81,365
Goodwill	337,765	337,473
Acquired intangible assets, net	29,089	36,141
Other assets	9,768	11,301
Total assets	<u>\$ 996,700</u>	<u>\$ 1,076,260</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term borrowings	\$ 17,321	\$ 18,967
Current portion of capital lease obligations	989	1,236
Accounts payable	25,405	28,683
Accrued compensation	12,969	17,842
Other accrued expenses	29,764	29,017
Total current liabilities	<u>86,448</u>	<u>95,745</u>
Long-term debt	—	5,000
Long-term portion of capital lease obligations	540	871
Other liabilities	21,459	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; 49,130,826 and 54,261,947 shares issued and outstanding at September 30, 2008 and December 31, 2007, respectively	113	113
Additional paid-in capital	632,428	685,465
Retained earnings	247,718	255,244
Accumulated other comprehensive income	7,994	13,187
Total stockholders' equity	<u>888,253</u>	<u>954,009</u>
Total liabilities and stockholders' equity	<u>\$ 996,700</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 September 30,		Nine Months Ended September 30,	
	2008	2007	2008	2007
Net Revenues				
Products	\$ 135,890	\$ 164,694	\$ 455,732	\$ 544,170
Services	21,474	16,320	66,082	52,254
Total net revenues	<u>157,364</u>	<u>181,014</u>	<u>521,814</u>	<u>596,424</u>
Cost of revenues				
Cost of products	81,027	93,660	264,341	306,881
Cost of services	13,398	10,756	42,139	34,053
Total cost of revenues	<u>94,425</u>	<u>104,416</u>	<u>306,480</u>	<u>340,934</u>
Gross profit	62,939	76,598	215,334	255,490
Research and development	19,528	17,159	59,263	53,809
Selling, general and administrative	33,460	32,494	100,282	102,998
Amortization of acquired intangible assets	1,963	3,877	7,052	12,092
Income from operations	<u>7,988</u>	<u>23,068</u>	<u>48,737</u>	<u>86,591</u>
Interest expense	86	192	608	625
Interest income	1,412	4,202	5,746	11,521
Gain (net of impairment) of investments	506	—	(906)	—
Income before income taxes	<u>9,820</u>	<u>27,078</u>	<u>52,969</u>	<u>97,487</u>
Provision for income taxes	3,029	5,696	16,562	26,288
Net income	<u>\$ 6,791</u>	<u>\$ 21,382</u>	<u>\$ 36,407</u>	<u>\$ 71,199</u>
Net income per share:				
Basic	<u>\$ 0.14</u>	<u>\$ 0.38</u>	<u>\$ 0.73</u>	<u>\$ 1.26</u>
Diluted	<u>\$ 0.14</u>	<u>\$ 0.37</u>	<u>\$ 0.71</u>	<u>\$ 1.24</u>
Weighted average common shares outstanding:				
Basic	<u>48,730</u>	<u>56,809</u>	<u>50,051</u>	<u>56,661</u>
Diluted	<u>49,898</u>	<u>57,482</u>	<u>51,112</u>	<u>57,582</u>

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

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

	Nine Months Ended September 30,	
	2008	2007
Cash flows from operating activities:		
Net income	\$ 36,407	\$ 71,199
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	17,803	22,798
Stock-based compensation	11,758	9,294
Tax expense (benefit) from stock-based compensation	(12)	3,485
Excess tax benefit from stock-based compensation	(2,202)	(1,511)
Deferred income taxes	1,731	(5,092)
Gain (net of impairment) of investments	906	—
Other	211	(97)
Changes in operating assets and liabilities:		
Trade accounts receivable	1,022	9,970
Inventories	6,076	(7,668)
Other current assets	(6,408)	(5,220)
Accrued expenses and other current liabilities	268	(3,656)
Accounts payable	(2,985)	(9,486)
Income taxes payable	(3,236)	1,046
Net cash provided by operating activities	<u>61,339</u>	<u>85,062</u>
Cash flows from investing activities:		
Purchases of short-term and long-term available for sale investments	(221,361)	(159,916)
Maturities, sales and settlements of short-term and long-term available for sale investments	208,209	104,363
Purchases of property, plant and equipment	(8,413)	(11,519)
Other	(59)	987
Net cash used in investing activities	<u>(21,624)</u>	<u>(66,085)</u>
Cash flows from financing activities:		
Proceeds from short-term borrowings	106,094	98,733
Payments on short-term borrowings	(108,768)	(98,505)
Repurchases of common stock	(115,723)	(48,970)
Principal payments on long-term debt and capital lease obligations	(6,021)	(1,026)
Proceeds from exercise of stock options and employee stock purchase plan	7,020	43,301
Excess tax benefit from stock-based compensation	2,202	1,511
Net cash used in financing activities	<u>(115,196)</u>	<u>(4,956)</u>
Effect of exchange rate changes on cash and cash equivalents	(3,055)	1,039
Increase (decrease) in cash and cash equivalents	(78,536)	15,060
Cash and cash equivalents at beginning of period	223,968	215,208
Cash and cash equivalents at end of period	<u>\$ 145,432</u>	<u>\$ 230,268</u>

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 September 30, 2008 and for the three and nine months ended September 30, 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 September 30, 2008:

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Completed technology	\$ 93,204	\$ (79,701)	\$ 13,503
Customer relationships	23,542	(11,543)	11,999
Patents, trademarks, tradenames and other	29,729	(26,142)	3,587
	<u>\$ 146,475</u>	<u>\$ (117,386)</u>	<u>\$ 29,089</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 UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS — (continued)
(Tables in thousands, except share and per share data)

Aggregate amortization expense related to acquired intangibles for the three and nine months ended September 30, 2008 was \$1,963,000 and \$7,052,000, respectively. Aggregate amortization expense related to acquired intangibles for the three and nine months ended September 30, 2007 was \$3,877,000 and \$12,092,000, respectively. Estimated amortization expense for each of the five succeeding fiscal years is as follows:

Year	Amount
2008 (remaining)	\$1,949
2009	7,751
2010	6,309
2011	5,764
2012	3,488
2013	3,270

Goodwill

The changes in the carrying amount of goodwill during the three and nine months ended September 30, 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 September 30,		Nine Months Ended September 30,	
	2008	2007	2008	2007
Numerator:				
Net income	\$ 6,791	\$ 21,382	\$ 36,407	\$ 71,199
Denominator:				
Shares used in net income per common share — basic	48,730	56,809	50,051	56,661
Effect of dilutive securities:				
Stock options, restricted stock and employee stock purchase plan	1,168	673	1,061	921
Shares used in net income per common share — diluted	49,898	57,482	51,112	57,582
Net income per common share:				
Basic	\$ 0.14	\$ 0.38	\$ 0.73	\$ 1.26
Diluted	\$ 0.14	\$ 0.37	\$ 0.71	\$ 1.24

The computation of diluted net income per common share excludes the effect of the potential exercise of options to purchase approximately 3,117,040 and 3,172,652 shares for the three and nine months ended September 30, 2008 and approximately 4,447,436 and 3,312,073 shares for the three and nine months ended September 30, 2007, 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:

	September 30, 2008	December 31, 2007
Raw material	\$ 67,927	\$ 73,529
Work in process	24,761	26,171
Finished goods	49,992	51,031
	<u>\$ 142,680</u>	<u>\$ 150,731</u>

MKS INSTRUMENTS, INC.
NOTES TO UNAUDITED 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 September 30,		Nine Months Ended September 30,	
	2008	2007	2008	2007
Net income	\$ 6,791	\$ 21,382	\$ 36,407	\$ 71,199
Other comprehensive income (loss):				
Changes in value of financial instruments designated as cash flow hedges (net of tax)	1,137	(761)	1,911	(915)
Foreign currency translation adjustment	(6,350)	2,997	(6,951)	3,252
Unrealized gain (loss) on investments (net of tax)	(35)	21	(153)	92
Other comprehensive income (loss)	(5,248)	2,257	(5,193)	2,429
Total comprehensive income	<u>\$ 1,543</u>	<u>\$ 23,639</u>	<u>\$ 31,214</u>	<u>\$ 73,628</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 September 30, 2008, we repurchased 616,000 shares of common stock for \$13,785,000 for an average price of \$22.36 per share and during the nine months ended September 30, 2008, we repurchased 5,667,000 shares of common stock for \$115,723,000 for an average price of \$20.42 per share. During the three months ended September 30, 2007, we repurchased 748,000 shares of common stock for \$17,251,000 for an average price of \$23.06 per share and during the nine months ended September 30, 2007, we repurchased 1,949,000 shares of common stock for \$48,970,000 for an average price of \$25.13 per share. As of September 30, 2008, the Company has repurchased an aggregate of 10,446,000 shares of its common stock for \$216,880,000 for an average price of \$20.76 per share since the Program's inception on February 12, 2007.

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 September 30, 2008 was approximately \$15,400,000. The net decrease from January 1, 2008 was primarily attributable to the close of the statute of limitation on the 2004 tax year.

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. While the U.S. 2004 federal tax year is closed, the 2003 federal tax year remains open to the extent of the loss carryforward to 2005. Currently, the Company is under a federal audit for the 2005 tax year. As of September 30, 2008, there were ongoing audits in various other tax jurisdictions.

Within the next 12 months, it is reasonably possible that the Company may recognize \$4,500,000 to \$5,000,000 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, 2005 to 2007, Germany: 2001 to 2007, Korea: 2004 to 2007, Japan: 2001 to 2007, and the United Kingdom: 2006 and 2007.

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

The Company accrues interest and, if applicable, penalties, for any uncertain tax positions. This interest and penalty expense is a component of income tax expense. At September 30, 2008 and December 31, 2007, the Company had approximately \$1,600,000 and \$1,500,000, respectively, accrued for interest on unrecognized tax benefits.

The Company's effective tax rate for the three and nine months ended September 30, 2008 was 30.9% and 31.3%, respectively. The effective tax rate for the three and nine months ended September 30, 2008 is less than the statutory tax rate primarily due to the profits of the Company's international subsidiaries being taxed at rates lower than the U.S. statutory tax rate. SFAS No. 109, "Accounting for Income Taxes," requires that deferred tax assets be reduced by a valuation allowance if it is more likely than not that a portion of the deferred tax asset will not be realized. On a quarterly basis, the Company evaluates both the positive and negative evidence bearing upon the realizability of its deferred tax assets. The Company considers future taxable income, ongoing prudent and feasible tax planning strategies, and the ability to utilize tax losses and credits in assessing the need for a valuation allowance. A valuation allowance of \$2,700,000 related to certain state tax credit carryforwards has been recorded during the three months ended September 30, 2008 because management has concluded that it is more likely than not that these credits will not be utilized since it is expected that the annual amount of state credits generated will exceed the amount of credits that can be used. The Company recorded a benefit of \$1,800,000 on the closing of both a statute of limitation and an income tax audit.

The Company's effective tax rate for the three and nine month periods ended September 30, 2007 was 21.0% and 27.0%, respectively. The effective tax rate for the three and nine month periods ended September 30, 2007 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 and the benefit from U.S. research and development credits.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2008	2007	2008	2007
Geographic net revenues:				
United States	\$ 85,120	\$ 112,586	\$ 306,025	\$ 370,438
Japan	24,687	24,441	74,586	78,384
Europe	24,671	23,130	79,184	66,066
Asia (excluding Japan)	22,886	20,857	62,019	81,536
	<u>\$ 157,364</u>	<u>\$ 181,014</u>	<u>\$ 521,814</u>	<u>\$ 596,424</u>
			September 30,	December 31,
Long-lived assets:			2008	2007
United States			\$ 61,971	\$ 63,731
Japan			7,856	6,520
Europe			3,657	4,386
Asia (excluding Japan)			8,704	9,269
			<u>\$ 82,188</u>	<u>\$ 83,906</u>

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

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2008	2007	2008	2007
Instruments and Control Systems	\$ 80,061	\$ 88,937	\$ 267,269	\$ 287,466
Power and Reactive Gas Products	61,677	73,092	202,463	245,472
Vacuum Products	15,626	18,985	52,082	63,486
	<u>\$ 157,364</u>	<u>\$ 181,014</u>	<u>\$ 521,814</u>	<u>\$ 596,424</u>

The Company had one customer comprising 18% of net revenues for the three months ended September 30, 2008 and one customer comprising 19% of net revenues for the nine months ended September 30, 2008. The Company had one customer comprising 20% of net revenues for the three and nine months ended September 30, 2007, respectively.

8) Commitments and Contingencies

The Company filed suit against Celerity, Inc. in federal district court in Texas on September 8, 2008 for infringement of two of MKS' patents relating to the Company's PiMFC technology. The complaint was amended on September 9, 2008 to include a claim of infringement for one additional related MKS patent, which had issued earlier that day. The Company is seeking injunctive relief and damages for infringement. Celerity has not yet filed an answer to the complaint.

The Company is also subject to various other 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 September 30, 2008 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, 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 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 for the nine months ended September 30 were as follows:

	2008	2007
Balance at January 1	\$ 9,497	\$ 11,549
Provisions for product warranties	4,481	5,056
Direct charges to warranty liability	(4,970)	(6,463)
Balance at September 30	<u>\$ 9,008</u>	<u>\$ 10,142</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

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

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 six months ended June 30, 2008, the Company recorded additional impairment charges of \$1,412,000 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. This resulted in a new cost basis for these securities of \$2,373,000 at June 30, 2008.

During the three months ended September 30, 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, the Company recorded a gain from the liquidation of \$506,000. For the nine months ended September 30, 2008, the Company has recorded net impairment charges of \$906,000 related to these two investments. The liquidation of these two impaired investments leaves the remaining portfolio consisting of direct U.S. Government and Agency obligations and high quality, liquid, short term corporate debt obligations.

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.

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. This statement does not have a material impact, as the Company does not have any minority interests.

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.

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

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.

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.

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

Assets and liabilities of the Company measured at fair value on a recurring basis as of September 30, 2008, are summarized as follows:

Description	9/30/08	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	\$ 38,822	\$ 38,822	\$ —	\$ —
Available-for-sale-securities	111,780	111,780	—	—
Derivatives — currency forward contracts	3,209	—	3,209	—
Total assets	\$ 153,811	\$ 150,602	\$ 3,209	\$ —

Cash Equivalents

Cash equivalents of \$38,822,000, 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

Available-for-sale securities of \$111,780,000, 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.

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 within Level 3 for the period from January 1, 2008 to September 30, 2008. There were no Level 3 investments during the three months ended September 30, 2008.

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3) Available-for-sale-Securities
Beginning balance at January 1, 2008	\$ 4,275
Total losses (realized)	
Included in earnings (or changes in net assets)	(1,412)
Included in other comprehensive income	—
Settlements	(490)
Transfers out of Level 3	(2,373)
Ending balance at September 30, 2008	<u>\$ 0</u>
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	<u>\$ —</u>

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 the section of this Quarterly Report on Form 10-Q entitled "Risk Factors" and 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, 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 nine months ended September 30, 2008 and the full year ended December 31, 2007, we estimate that approximately 58% and 68% of our net revenues, respectively, were to semiconductor capital equipment manufacturers and semiconductor device manufacturers. We expect that revenues to the semiconductor capital equipment manufacturers and semiconductor device manufacturers will continue to account for a majority of our revenues.

During 2007 and 2008, quarterly revenues ranged from \$157.4 million to \$211.4 million. Net revenues have declined each quarter in 2008 as a result of both the semiconductor industry cyclical downturn as well as from the weakness in the overall economic environment. For the fourth quarter of 2008, we expect that our net revenues could be 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 revenue 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 revenues is to operations in international markets. For the nine months ended September 30, 2008 and full year ended December 31, 2007, international revenues accounted for approximately 41% and 39% of net revenues, 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 in the section captioned "Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Estimates."

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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 September 30,		Nine Months Ended September 30,	
	2008	2007	2008	2007
Net revenues				
Product	86.4%	91.0%	87.3%	91.2%
Services	13.6	9.0	12.7	8.8
Total net revenues	100.0	100.0	100.0	100.0
Cost of revenues				
Cost of product revenues	51.5	51.8	50.6	51.5
Cost of service revenues	8.5	5.9	8.1	5.7
Total cost of revenues	60.0	57.7	58.7	57.2
Gross profit	40.0	42.3	41.3	42.8
Research and development	12.4	9.5	11.4	9.0
Selling, general and administrative	21.3	18.0	19.2	17.3
Amortization of acquired intangible assets	1.2	2.1	1.4	2.0
Income from operations	5.1	12.7	9.3	14.5
Interest income, net	0.8	2.2	1.0	1.8
Gain (net impairment) of investments	0.3	—	(0.2)	—
Income before income taxes	6.2	14.9	10.1	16.3
Provision for income taxes	1.9	3.1	3.2	4.4
Net income	4.3%	11.8%	6.9%	11.9%

Net Revenue (dollars in millions)

	Three Months Ended September 30,			Nine Month Ended September 30,		
	2008	2007	% Change	2008	2007	% Change
Net revenues						
Product	\$ 135.9	\$ 164.7	(17.5)%	\$ 455.7	\$ 544.2	(16.3)%
Service	21.5	16.3	31.6%	66.1	52.2	26.5%
Total net revenues	\$ 157.4	\$ 181.0	(13.1)%	\$ 521.8	\$ 596.4	(12.5)%

Product revenues decreased \$28.8 million during the three months ended September 30, 2008 mainly due to a decrease in worldwide demand from our semiconductor capital equipment manufacturer and semiconductor device manufacturer customers, which resulted in a decrease in revenues of \$36.6 million or 30.4% compared to the same period for the prior year. This decrease was partially offset by a \$12.9 million or 21.2% increase in revenues related to other markets, mainly solar.

Product revenues decreased \$88.4 million during the nine months ended September 30, 2008 mainly due to a decrease in worldwide demand from our semiconductor capital equipment manufacturer and semiconductor device manufacturer customers, which resulted in a decrease in revenues of \$106.3 million or 25.9% compared to the same period for the prior year. This decrease was partially offset by a \$31.7 million or 17.1% increase in revenues related to other markets, mainly solar.

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 increased \$5.2 million and \$13.8 million during the three and nine month periods ended September 30, 2008, respectively, mainly due to a higher installed base of products and increased software maintenance fees.

Total international net revenues, including product and service, were \$72.2 million and \$215.8 million for the three and nine months ended September 30, 2008 or 46% and 41% of net revenues, respectively, compared to \$68.4 million and \$226.0 million for the three and nine months ended September 30, 2007 or 37.8% and 37.9% of net revenues, respectively.

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Gross Profit

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2008	2007	% Points Change	2008	2007	% Points Change
Gross profit as percentage of net revenues						
Product	40.4%	43.1%	(2.7)%	42.0%	43.6%	(1.6)%
Service	37.6%	34.1%	3.5%	36.2%	34.8%	1.4%
Total gross profit percentage	40.0%	42.3%	(2.3)%	41.3%	42.8%	(1.5)%

Gross profit on product revenues decreased 2.7 percentage points for the three months ended September 30, 2008 compared to the three months ended September 30, 2007. Our margin was negatively impacted by approximately 2.5 percentage points from lower revenue volumes since a portion of our overhead costs are fixed, 1.2 percentage points from unfavorable foreign currency fluctuations, 0.6 percentage points due to increased overhead costs, partially offset by 1.8 percentage points from favorable product mix.

Gross profit on product revenues decreased by 1.6 percentage points during the nine months ended September 30, 2008 consisting of approximately 2.3 lower percentage points from decreased revenue volumes, 0.6 percentage points from unfavorable foreign currency fluctuations, offset by 1.2 percentage points from lower overhead spending due to lower sales volumes.

Cost of service revenues consists primarily of costs of providing services for repair and training which includes salaries and related expenses and other fixed costs. Service gross profit increased by 3.5 and 1.4 percentage points for the three and nine month periods ended September 30, 2008, respectively, compared to the corresponding periods of the prior year, primarily as a result of increased revenue volumes partly related to our acquisition of Yield Dynamics, Inc. ("Yield acquisition") in the fourth quarter of 2007.

Research and Development (dollars in millions)

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2008	2007	% Change	2008	2007	% Change
Research and development expenses	\$19.5	\$17.2	13.8%	\$59.3	\$53.8	10.1%

Research and development expense increased \$2.3 million during the three months ended September 30, 2008. The increase includes \$0.9 million in expenses related to the Yield acquisition, increased compensation expense of \$0.5 million, as a result of higher staffing levels and \$0.9 million in other research and development costs, primarily consisting of patent and other legal related costs.

Research and development expense increased \$5.5 million during the nine months ended September 30, 2008 mainly due to \$3.0 million in expenses related to the Yield acquisition, \$1.0 million of higher consultant costs, and \$1.8 million in other research and development costs, primarily consisting of patent and other legal related costs.

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.

[Table of Contents](#)Selling, General and Administrative (dollars in millions)

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2008	2007	% Change	2008	2007	% Change
Selling, general and administrative expenses	\$33.5	\$32.5	3.0%	\$100.3	\$103.0	(2.6)%

Selling, general and administrative expenses increased \$1.0 million for the three months ended September 30, 2008. The increase includes a \$1.6 million increase in compensation expense, primarily due to increased fringe benefit costs, a \$1.1 million increase in foreign exchange costs and a \$0.9 million increase related to the Yield acquisition, partially offset by a \$2.3 million decrease in consulting and professional fees. Decreased consulting fees were due to lower IT infrastructure spending.

Selling, general and administrative expenses decreased \$2.7 million for the nine months ended September 30, 2008. The decrease includes a \$6.3 million decrease in consulting and professional fees, a \$1.1 million decrease in foreign exchange costs partially offset by a \$2.6 million increase related to the Yield acquisition, a \$1.1 million increase in compensation expense and a \$0.6 million increase in facilities costs related to the relocated corporate headquarters. Increased compensation expense is primarily due to higher salary and fringe benefit costs. The decrease in consulting and professional fees were primarily due to lower IT infrastructure spending. The foreign exchange gains in 2008 were primarily attributable to the settlement of cash and intercompany loans at different foreign exchange rates in connection with a legal entity consolidation in the first quarter of 2008 between some of our foreign subsidiaries.

Amortization of Acquired Intangible Assets (dollars in millions)

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2008	2007	% Change	2008	2007	% Change
Amortization of acquired intangible assets	\$2.0	\$3.9	(49.4)%	\$7.1	\$12.1	(41.7)%

Amortization expense for the three and nine months ended September 30, 2008 decreased \$1.9 million and \$5.0 million, respectively, as certain acquired intangible assets became fully amortized during 2007 and 2008.

Interest Income, Net (dollars in millions)

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2008	2007	% Change	2008	2007	% Change
Interest income, net	\$1.3	\$4.0	(66.9)%	\$5.1	\$10.9	(52.8)%

Interest income, net decreased \$2.7 million and \$5.8 million during the three and nine months ended September 30, 2008, respectively, mainly as a result of lower average cash and cash equivalent balances and lower interest rates in 2008. The lower outstanding cash balances are primarily a result of our stock repurchase program.

Gain (Impairment) of Investments (dollars in millions)

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2008	2007	% Change	2008	2007	% Change
Gain (net impairment) of investments	\$0.5	\$ —	—	\$(0.9)	\$ —	—

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 the 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.

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During the six months ended June 30, 2008, we recorded additional impairment charges of \$1.4 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. This resulted in a new cost basis for these securities of \$2.4 million at June 30, 2008.

During the three months ended September 30, 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. For the nine months ended September 30, 2008, we recorded net impairment charges of \$0.9 million related to these two investments. The liquidation of these two impaired investments leaves the remaining portfolio consisting of direct U.S. Government and Agency obligations and high quality, liquid, short term corporate debt obligations.

Provision for Income Taxes (dollars in millions)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2008	2007	2008	2007
Provision for income taxes	\$3.0	\$5.7	\$16.6	\$26.3

Our effective tax rate for the three and nine months ended September 30, 2008 was 30.9% and 31.3%, respectively. The effective tax rate for the three and nine months ended September 30, 2008, is less than the statutory tax rate primarily due to the profits of our international subsidiaries being taxed at rates lower than the U.S. statutory tax rate. SFAS No. 109, "Accounting for Income Taxes," requires that deferred tax assets be reduced by a valuation allowance if it is more likely than not that a portion of the deferred tax asset will not be realized. On a quarterly basis, we evaluate both the positive and negative evidence bearing upon the realizability of its deferred tax assets. We consider future taxable income, ongoing prudent and feasible tax planning strategies, and the ability to utilize tax losses and credits in assessing the need for a valuation allowance. A valuation allowance of \$2.7 million related to certain state tax credit carryforwards has been recorded during the three months ended September 30, 2008 because we have concluded that it is more likely than not that these credits will not be utilized since it is expected that the annual amount of state credits generated will exceed the amount of credits that can be used. We recorded a benefit of \$1.8 million on the closing of both a statute of limitation and an income tax audit.

Our effective tax rate for the three and nine months ended September 30, 2007 was 21.0% and 27.0%, 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 and the benefit from U.S. research and development credits.

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 our effective tax rate. The total amount of gross unrecognized tax benefits at September 30, 2008 was approximately \$15.4 million. The net decrease from January 1, 2008 was primarily attributable to the close of the statute of limitation on the 2004 tax year.

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. While the U.S. 2004 federal tax year is closed, the 2003 federal tax year remains open to the extent of the loss carryforward to 2005. Currently, we are under a federal audit for the 2005 tax year. As of September 30, 2008, there were ongoing audits in various other tax jurisdictions.

Within the next 12 months, it is reasonably possible that we may recognize \$4.5 million to \$5.0 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, 2005 to 2007, Germany: 2001 to 2007, Korea: 2004 to 2007, Japan: 2001 to 2007, and the United Kingdom: 2006 and 2007. We do not expect any material changes to the returns as filed to result from these open audits.

We accrue interest and, if applicable, penalties, for any uncertain tax positions. This interest and penalty expense is a component of income tax expense. At September 30, 2008 and December 31, 2007, we had \$1.6 million and \$1.5 million, respectively, accrued for interest on unrecognized tax benefits.

On October 3, 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, we estimated a tax benefit of approximately \$2.5 million for the year ended December 31, 2008. This fiscal year benefit will be recorded entirely in the fourth quarter of 2008. Therefore, we did not take any benefit for this credit in the three and nine month periods ending September 30, 2008. The benefits taken in the three and nine months ended September 30, 2007 for this credit were approximately \$0.9 million and \$1.7 million, respectively.

Liquidity and Capital Resources

Cash, cash equivalents and short-term investments totaled \$257.2 million at September 30, 2008 compared to \$323.8 million at December 31, 2007. This decrease was attributable to our share repurchase program through which we repurchased \$115.7 million of our common stock during the first nine months of fiscal 2008. The primary source of funds for the first nine months of fiscal 2008 was cash provided by operating activities of \$61.3 million.

Net cash provided by operating activities of \$61.3 million for the nine months ended September 30, 2008, resulted mainly from net income of \$36.4 million, non-cash charges of \$17.8 million for depreciation and amortization, \$9.5 million for stock-based compensation and related tax benefits, \$1.7 million for decreases in deferred income taxes and by an increase in net operating assets of \$0.7 million. The net increase in operating assets is primarily due to a \$6.1 million decrease in inventory and \$1.0 million in trade accounts receivable, offset by an increase in other current assets of \$6.4 million. The increase in other current assets of \$6.4 million related to the timing of value-added tax payments and the increase in our net receivable for unrealized gains and losses on foreign exchange forward contracts. These increases were offset by a decrease in net operating liabilities of \$6.0 million, mainly caused by a decrease of \$3.0 million in accounts payable and \$3.2 million in income taxes payable. Net cash provided by operating activities of \$85.1 million for the nine months ended September 30, 2007, resulted mainly from net income of \$71.2 million, non-cash charges of \$22.8 million for depreciation and amortization and \$11.3 million for stock-based compensation and related tax benefits, offset by an increase in net operating assets of \$2.9 million and a \$12.1 million decrease in net operating liabilities. The \$2.9 million increase in net operating assets consisted primarily of a \$7.7 million increase in inventory, to support our increased revenues and to support the increased inventory levels required for our planned China facility relocation in the second half of 2007, and a \$5.2 million increase in other current assets, primarily related to prepaid taxes, offset by a \$10.0 million decrease in accounts receivable. The decrease in net operating liabilities of \$12.1 million is mainly caused by a \$9.5 million decrease in accounts payable and a decrease of \$3.7 million in accrued expenses and other current liabilities.

Net cash used in investing activities of \$21.6 million for the nine months ended September 30, 2008, resulted primarily from net purchases of \$13.2 million of available for sale investments and \$8.4 million in purchases of property, plant and equipment. Net cash used in investing activities of \$66.1 million for the nine months ended September 30, 2007, resulted primarily from net purchases of \$55.6 million of available for sale investments and \$11.5 million in purchases of property, plant and equipment.

Net cash used in financing activities of \$115.2 million for the nine months ended September 30, 2008, consisted primarily of repurchases of common stock of \$115.7 million and \$2.7 million in net payments on short-term borrowings and \$6.0 million in principal payments on capital lease obligations and long-term debt primarily to retire a \$5.0 million industrial development revenue bond, offset by \$7.0 million in proceeds from the exercise of stock options and purchases under our employee stock purchase plan. Net cash used in financing activities of \$5.0 million for the nine months ended September 30, 2007, consisted primarily of \$49.0 million in repurchases of common stock, offset by \$43.3 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 nine months ended September 30, 2008, we repurchased 5.7 million shares of common stock for \$115.7 million for an average price of \$20.42 per share and during the nine months ended September 30, 2007, we repurchased 1.9 million shares of common stock for \$49.0 million for an average price of \$25.13 per share. We repurchased an aggregate of 10.4 million shares of our common stock for \$216.9 million for an average price of \$20.76 per share pursuant to the repurchase program that we publicly announced on February 12, 2007.

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 September 30, 2008.

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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 September 30, 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 incurred significant costs relating to these acquired liabilities. Accordingly, no liabilities have been recorded for these obligations as of September 30, 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 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 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.

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. This statement does not have a material impact, as we do not have any minority interests.

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 section entitled "Quantitative and Qualitative Disclosures About Market Risk" 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.

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 defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (“the Exchange Act”)) as of September 30, 2008. Disclosure controls and procedures are designed to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported on a timely basis and that such information is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, 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 this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that these disclosure controls and procedures are effective and designed to ensure that the information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the requisite time periods.

Limitations on Effectiveness of Controls

Our management has concluded that our disclosure controls and procedures and internal controls provide reasonable assurance that the objectives of our control system are met. However, our management (including our Chief Executive Officer and Chief Financial Officer) does not expect that the disclosure controls and procedures or internal controls will prevent all error and/or all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Due to the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues, errors and instances of fraud, if any, within the Company have been or will be detected. These inherent limitations include the realities that judgments in decision making can be faulty and that breakdowns can occur because of simple errors or mistakes. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system is also based in part upon certain assumptions about the likelihood of future events, and there can be no assurances that any design will succeed in achieving its stated goals under all potential future conditions. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended September 30, 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 filed suit against Celerity, Inc. in federal district court in Texas on September 8, 2008 for infringement of two of our patents relating to our PiMFC technology. The complaint was amended on September 9, 2008 to include a claim of infringement for one additional related MKS patent, which had issued earlier that day. We are seeking injunctive relief and damages for infringement. Celerity has not yet filed an answer to the complaint.

We are also subject to various other 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 September 30, 2008, there have been no material changes from the risks disclosed therein, other than the addition of the following item.

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Our business is impacted by worldwide economic cycles, which are difficult to predict.

The global financial markets have been experiencing extreme disruption in recent months, including, among other things, extreme volatility in security prices, severely diminished liquidity and credit availability, rating downgrades of certain investments and declining valuations of others. These economic developments affect not only our customers' ability to make capital equipment investments, which directly affects our revenue potential, but also affect the credit and liquidity of our customers and our suppliers, which could have an adverse affect on our business. Although we are taking actions to address the effects of the current economic crisis, including implementing cost control and reduction measures, we cannot predict whether these will be sufficient to offset certain of the negative trends that might affect our business. We are unable to predict the likely duration and severity of the current disruption in financial markets, credit availability and adverse economic conditions throughout the world.

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

The following table provides information about purchases by MKS during the quarter ended September 30, 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
7/1/08 — 7/31/08	536,000	\$22.45	10,366,000	\$84,868,000
8/1/08 — 8/31/08	80,000	\$21.80	10,446,000	\$83,120,000
9/1/08 — 9/30/08	—	\$ —	10,446,000	\$83,120,000

- 1) We repurchased an aggregate of 10,446,000 shares of our common stock pursuant to the repurchase program that we publicly announced on February 12, 2007 (the "Program"). During the nine months ended September 30, 2008, we repurchased a total of 5,667,000 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
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.

November 7, 2008

By: /s/ Ronald C. Weigner
Ronald C. Weigner
Vice President and Chief Financial Officer
(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: November 7, 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: November 7, 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 September 30, 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: November 7, 2008

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

Dated: November 7, 2008

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