



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

June 12, 2013

Via E-mail

Mr. Seth H. Bagshaw
Vice President, Chief Financial Officer and Treasurer
MKS Instruments, Inc.
2 Tech Drive, Suite 201
Andover, Massachusetts 01810

RE: **MKS Instruments, Inc.**
Form 10-K for the fiscal year ended December 31, 2012
Filed February 26, 2013
File No. 000-23621

Dear Mr. Bagshaw:

We have reviewed your filing and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

MKS Instruments, Inc. Form 10-K for the fiscal year ended December 31, 2012

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 25

Results of Operations, page 30

1. We see you indicated that the decrease in product revenues during 2012 is primarily due to lower electronics demand, rising chip inventories and a slowing

of investments in production capacity by your customers. When individual line items disclosed in your income statements significantly fluctuate in comparison to the comparable prior period, management should quantify and disclose the nature of each item that caused the significant change. Please revise future filings to specifically quantify each material factor, i.e. such as price changes and / or volume changes, causing the aggregate change in your revenues between periods and disclose the nature of or reason for each factor causing the aggregate change. Your revised future disclosures should discuss the underlying material causes of the factors described as well as the known or expected future impact of any referenced factors on operating results. For further guidance, please refer to Item 303 and the related instructions in Regulation S-K as well as SEC Interpretive Release No. 34-48960.

Liquidity and Capital Resources, page 37

2. We note from page 68 that at December 31, 2012 you had \$421.7 million of undistributed earnings in your foreign subsidiaries that you have not provided deferred income taxes on because such earnings are intended to be permanently reinvested outside the U.S.. We also note that cash and cash equivalents and short-term marketable investments totaled \$615.2 million at that date. Please tell us and revise future filings to disclose the amount of cash and cash equivalents as well as liquid investments held by your foreign subsidiaries at December 31, 2012 and to quantify the amount that would not be available for use in the U.S. without incurring U.S taxes. In a related matter, please also revise future filings to discuss the known or expected impact on your liquidity and capital positions if cash and cash equivalents as well as liquid investments held by your foreign subsidiaries were not available for use in the U.S. Refer to Item 303 (a) of Regulation S-K.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and

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- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Dennis Hult, Staff Accountant, at (202) 551-3618 or Jay Webb, Reviewing Accountant, at (202) 551-3603 if you have questions regarding comments on the financial statements and related matters. Please contact me at (202) 551-3643 with any other questions.

Sincerely,

/s/ Jay Webb “for”

Kevin L. Vaughn
Accounting Branch Chief