

MKS INSTRUMENTS INC

Form DEF 14A

March 23, 2009

Table of Contents

SCHEDULE 14A INFORMATION

**Proxy Statement Pursuant to Section 14(a) of the Securities
Exchange Act of 1934 (Amendment No.)**

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material Pursuant to §240.14a-11(c) or §240.14a-12
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))

MKS Instruments, Inc.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

1) Title of each class of securities to which transaction applies:

2) Aggregate number of securities to which transaction applies:

3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (Set forth the amount on which the filing fee is calculated and state how it was determined):

4) Proposed maximum aggregate value of transaction:

5) Total fee paid:

Fee paid previously with preliminary materials.

Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

1) Amount Previously Paid:

2) Form, Schedule or Registration Statement No.:

3) Filing Party:

4) Date Filed:

TABLE OF CONTENTS

NOTICE OF 2009 ANNUAL MEETING OF SHAREHOLDERS AND INTERNET AVAILABILITY OF PROXY MATERIALS TO BE HELD ON MAY 4, 2009

IMPORTANT

PROXY STATEMENT

VOTING SECURITIES AND VOTES REQUIRED

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

PROPOSAL ONE ELECTION OF DIRECTORS

BOARD RECOMMENDATION

DIRECTORS

CORPORATE GOVERNANCE

EXECUTIVE OFFICERS

EXECUTIVE COMPENSATION

COMPENSATION COMMITTEE REPORT

PENSION BENEFITS

NONQUALIFIED DEFERRED COMPENSATION

DIRECTOR COMPENSATION

REPORT OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

PROPOSAL TWO

PROPOSAL THREE

APPROVAL OF AMENDMENT TO THE THIRD RESTATED EMPLOYEE STOCK PURCHASE PLAN TO INCREASE THE NUMBER OF SHARES AVAILABLE THEREUNDER FROM 1,250,000 TO 1,950,000

BOARD RECOMMENDATION

PROPOSAL FOUR

APPROVAL OF AMENDMENT TO THE SECOND AMENDED AND RESTATED INTERNATIONAL EMPLOYEE STOCK PURCHASE PLAN TO INCREASE THE NUMBER OF SHARES AVAILABLE THEREUNDER FROM 250,000 TO 400,000

BOARD RECOMMENDATION

PROPOSAL FIVE RATIFICATION OF APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

OTHER MATTERS

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

DEADLINE FOR SUBMISSION OF SHAREHOLDER PROPOSALS FOR THE 2010 ANNUAL MEETING

IMPORTANT NOTICE REGARDING DELIVERY OF SECURITY HOLDER DOCUMENTS

Table of Contents

**MKS INSTRUMENTS, INC.
2 TECH DRIVE, SUITE 201
ANDOVER, MASSACHUSETTS 01810**

March 23, 2009

Dear shareholder:

You are cordially invited to attend the 2009 Annual Meeting of Shareholders of MKS Instruments, Inc. to be held on Monday, May 4, 2009, at 10:00 a.m. at the Wyndham Boston Andover Hotel, 123 Old River Road, Andover, Massachusetts 01810.

The enclosed notice of Annual Meeting and proxy statement describe the business to be transacted at the Annual Meeting and provide additional information about us that you should know when voting your shares. The principal business at the Annual Meeting will be to elect Class I Directors, amend the 2004 Stock Incentive Plan to allow for a one-time option exchange program, amend the Employee Stock Purchase Plan and the International Employee Stock Purchase Plan to increase the number of shares available thereunder, and to ratify the selection of the independent registered public accounting firm for fiscal 2009.

Whether or not you plan to attend the Annual Meeting, please complete, date, sign and return your Proxy Card promptly in the enclosed envelope, which requires no postage if mailed in the United States. If you attend the Annual Meeting, you may vote in person if you wish, even if you have previously returned your Proxy Card.

On behalf of MKS, I would like to express our appreciation for your continued interest in our company.

Sincerely,

LEO BERLINGHIERI
Chief Executive Officer and President

Table of Contents

**MKS INSTRUMENTS, INC.
2 TECH DRIVE, SUITE 201
ANDOVER, MASSACHUSETTS 01810**

**NOTICE OF 2009 ANNUAL MEETING OF SHAREHOLDERS
AND INTERNET AVAILABILITY OF PROXY MATERIALS
TO BE HELD ON MAY 4, 2009**

To the shareholders:

NOTICE IS HEREBY GIVEN that the 2009 Annual Meeting of Shareholders of MKS INSTRUMENTS, INC., a Massachusetts corporation (the Company), will be held on Monday, May 4, 2009 at 10:00 a.m. at the Wyndham Boston Andover Hotel, 123 Old River Road, Andover, Massachusetts 01810. At the meeting, shareholders will consider and vote on the following matters:

1. To elect three Class I Directors, each for a three-year term;
2. To approve an amendment to the Company's 2004 Stock Incentive Plan to allow for a one-time option exchange program;
3. To approve an amendment to the Company's Third Restated 1999 Employee Stock Purchase Plan increasing the number of shares available thereunder from 1,250,000 to 1,950,000 shares;
4. To approve an amendment to the Company's Second Amended and Restated International Employee Stock Purchase Plan increasing the number of shares available thereunder from 250,000 to 400,000 shares; and
5. To ratify the selection of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2009.

The shareholders will also act on any other business as may properly come before the meeting.

The Board of Directors has fixed the close of business on March 6, 2009 as the record date for the determination of shareholders entitled to notice of, and to vote at, the Annual Meeting and any adjournment or adjournments thereof. Our stock transfer books will remain open for the purchase and sale of our Common Stock.

A copy of our Annual Report to Shareholders for the year ended December 31, 2008, which contains consolidated financial statements and other information of interest to shareholders, accompanies this Notice and the enclosed Proxy Statement. **These materials may also be accessed on our website at www.mksinstruments.com/AnnualMeetingMaterials or by calling (800) 227-8766 ext. 5576.**

If you would like to attend the Annual Meeting and your shares are held by a broker, bank or other nominee, you must bring to the Annual Meeting a letter from the nominee confirming your beneficial ownership of such shares. In order to vote your shares at the Annual Meeting, you must obtain from the nominee a proxy issued in your name. You must also bring a form of personal identification.

By Order of the Board of Directors,

RICHARD S. CHUTE
Secretary

Andover, Massachusetts
March 23, 2009

Table of Contents

IMPORTANT

WHETHER OR NOT YOU EXPECT TO ATTEND THE ANNUAL MEETING IN PERSON, PLEASE PROMPTLY SIGN, DATE, AND RETURN THE ENCLOSED PROXY. PROMPTLY SIGNING, DATING, AND RETURNING THE PROXY WILL SAVE US THE EXPENSE AND EXTRA WORK OF ADDITIONAL SOLICITATION. AN ADDRESSED ENVELOPE FOR WHICH NO POSTAGE IS REQUIRED IF MAILED IN THE UNITED STATES IS ENCLOSED FOR THAT PURPOSE. SENDING IN YOUR PROXY WILL NOT PREVENT YOU FROM VOTING YOUR STOCK AT THE ANNUAL MEETING IF YOU DESIRE TO DO SO, AS YOUR PROXY IS REVOCABLE AT YOUR OPTION.

Table of Contents

**MKS INSTRUMENTS, INC.
2 TECH DRIVE, SUITE 201
ANDOVER, MASSACHUSETTS 01810**

PROXY STATEMENT

This Proxy Statement is furnished in connection with the solicitation of proxies by the Board of Directors of MKS Instruments, Inc., a Massachusetts corporation, for use at the 2009 Annual Meeting of Shareholders to be held on May 4, 2009, at 10:00 a.m. at the Wyndham Boston Andover Hotel, 123 Old River Road, Andover, Massachusetts 01810, and at any adjournment or postponement thereof (the Annual Meeting). References in this proxy statement to we, us, the Company or MKS refer to MKS Instruments, Inc. and its consolidated subsidiaries.

All proxies will be voted in accordance with the shareholders' instructions. If no choice is specified in the proxy, the shares will be voted in favor of the matters set forth in the accompanying Notice of 2009 Annual Meeting of Shareholders. Any proxy may be revoked by a shareholder at any time before its exercise by delivery of written revocation to the Secretary of MKS. Attendance at the Annual Meeting will not in itself be deemed to revoke a proxy unless the shareholder gives affirmative notice at the Annual Meeting that the shareholder intends to revoke the proxy and vote in person.

VOTING SECURITIES AND VOTES REQUIRED

At the close of business on March 6, 2009, the record date for the determination of shareholders entitled to notice of and to vote at the Annual Meeting, there were issued and outstanding and entitled to vote 49,602,890 shares of our common stock, no par value per share (the Common Stock). Each outstanding share entitles the record holder to one vote on each matter submitted at the Annual Meeting.

In order to transact business at the Annual Meeting, we must have a quorum. Under our Amended and Restated By-Laws (the By-Laws), the holders of a majority of the shares of Common Stock issued and outstanding and entitled to vote at the Annual Meeting shall constitute a quorum for the transaction of business at the Annual Meeting. Shares of Common Stock present in person or represented by proxy (including broker non-votes and shares that abstain or do not vote with respect to a particular proposal to be voted upon) will be counted for purposes of determining whether a quorum exists at the Annual Meeting.

The affirmative vote of the holders of a plurality of the shares of Common Stock voting on the matter is required for the election of Directors. The amendments to the 2004 Stock Incentive Plan, Third Restated 1999 Employee Stock Purchase Plan and Second Amended and Restated International Employee Stock Purchase Plan and the ratification of PricewaterhouseCoopers LLP, or PwC, require the approval of the holders of a majority of the shares of Common Stock present or represented by proxy at the Annual Meeting and voting on the matter.

Shares held by shareholders who abstain from voting as to a particular matter, and broker non-votes, which are shares held in street name by banks, brokers or nominees, who indicate on their proxies that they do not have discretionary authority to vote such shares as to a particular matter, will not be counted as votes in favor of such matter, and also will not be counted as shares voting on such matter. Accordingly, abstentions and broker non-votes will have no effect on the voting on a matter that requires the affirmative vote of a certain percentage of the shares voting on the matter. If the shares you own are held in street name by a bank or brokerage firm, your bank or brokerage firm, as the record holder of your shares, is required to vote your shares according to your instructions. In order to vote your shares, you will need to follow the directions your bank or brokerage firm provides you.

THE NOTICE OF ANNUAL MEETING, THIS PROXY STATEMENT AND OUR ANNUAL REPORT TO SHAREHOLDERS FOR THE YEAR ENDED DECEMBER 31, 2008 ARE BEING MAILED TO SHAREHOLDERS ON OR ABOUT MARCH 27, 2009. A COPY OF OUR ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2008 AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION (THE SEC), EXCLUDING EXHIBITS, WILL BE FURNISHED WITHOUT CHARGE TO ANY SHAREHOLDER UPON WRITTEN REQUEST TO: INVESTOR RELATIONS DEPARTMENT, MKS INSTRUMENTS, INC., 2 TECH DRIVE, SUITE 201, ANDOVER, MA 01810. EXHIBITS WILL BE PROVIDED UPON WRITTEN REQUEST AND PAYMENT OF AN APPROPRIATE PROCESSING FEE.

Table of Contents**SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The following table sets forth certain information with respect to the beneficial ownership of Common Stock by (i) each of our current directors; (ii) the executive officers named in the Summary Compensation Table below; (iii) each shareholder known to us to be the beneficial owner of more than 5% of the outstanding shares of Common Stock; and (iv) all of our directors and executive officers as a group. Unless otherwise indicated in the footnotes to the table, (i) all information set forth in the table is as of January 31, 2009; and (ii) the address for each of our directors and executive officers is: c/o MKS Instruments, Inc., 2 Tech Drive, Suite 201, Andover, Massachusetts 01810.

Name of Beneficial Owners	Number of Shares Beneficially Owned(1)	Percentage of Common Stock Beneficially Owned
<i>Named Executive Officers</i>		
Leo Berlinghieri	460,999(2)	*
Ronald C. Weigner	306,361(3)	*
Gerald G. Colella	257,263(4)	*
John A. Smith	111,637(5)	
William D. Stewart	62,661(6)	*
<i>Directors Not Included Above</i>		
Cristina H. Amon	3,888(7)	
Robert R. Anderson	82,819(8)	*
Gregory R. Beecher	19,066(9)	*
John R. Bertucci	3,463,654(10)	7.0%
Richard S. Chute	76,500(11)	*
Peter R. Hanley	556(12)	
Hans-Jochen Kahl	14,819(13)	*
Louis P. Valente	82,500(14)	*
<i>Other 5% shareholders</i>		
Barclay's Global Investors, NA and affiliates 400 Howard Street San Francisco, CA 94105	3,469,011(15)	7.0%
Dimensional Fund Advisors LP Palisades West, Building One 6300 Bee Cave Road Austin, TX 78756	4,245,736(16)	8.6%
Kornitzer Capital Management, Inc. 5240 West 61st Place Shawnee Mission, KS 66205	3,110,337(17)	6.3%
Royce & Associates, LLC 1414 Avenue of the Americas New York, NY 10019	7,550,530(18)	15.3%
All directors and officers as a group (14 persons)	4,951,512(19)	9.8%

* Represents less than 1% of the outstanding Common Stock.

- (1) We believe that each shareholder has sole voting and investment power with respect to the shares listed, except as otherwise noted. The number of shares beneficially owned by each shareholder is determined under rules of the SEC, and the information is not necessarily indicative of ownership for any other purpose. Under such rules, beneficial ownership includes any shares as to which the person has sole or shared voting power or investment power and also any shares that the individual has the right to acquire within 60 days after January 31, 2009 through the vesting of restricted stock units (RSUs) or the exercise of any stock option or

Table of Contents

other right. The inclusion herein of any shares of Common Stock deemed beneficially owned does not constitute an admission by such shareholder of beneficial ownership of those shares of Common Stock. Shares of Common Stock which an individual or entity has a right to acquire within the 60-day period following January 31, 2009 pursuant to the exercise of options or warrants are deemed to be outstanding for the purpose of computing the percentage ownership of such individual or entity, but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person or entity shown in the table.

- (2) Consists of 54,353 shares held directly by Mr. Berlinghieri and 406,646 shares subject to options exercisable or restricted stock units, or RSUs, that are vested or will vest within 60 days of January 31, 2009.
- (3) Consists of 10,525 shares held directly by Mr. Weigner and 295,836 shares subject to options exercisable or RSUs that are vested or will vest within 60 days of January 31, 2009.
- (4) Consists of 14,706 shares held directly by Mr. Colella and 242,557 shares subject to options exercisable or RSUs that are vested or will vest within 60 days of January 31, 2009.
- (5) Consists of 10,000 shares held directly by Mr. Smith and 101,637 shares subject to options exercisable or RSUs that are vested or will vest within 60 days of January 31, 2009.
- (6) Consists of 12,000 shares held directly by Mr. Stewart and 50,661 shares subject to options exercisable or RSUs that are vested or will vest within 60 days of January 31, 2009.
- (7) Consists of 3,333 shares directly held by Ms. Amon and 555 shares subject to options exercisable or RSUs that are vested or will vest within 60 days of January 31, 2009.
- (8) Consists of 20,000 shares held directly by Mr. Anderson and 62,819 shares subject to options exercisable or RSUs that are vested or will vest within 60 days of January 31, 2009.
- (9) Consists of 2,400 shares held directly by Mr. Beecher and 16,666 shares subject to options exercisable or RSUs that are vested or will vest within 60 days of January 31, 2009.
- (10) Consists of 1,655,074 shares held directly by Mr. Bertucci, 1,799,761 shares held directly by Mr. Bertucci's wife and 8,819 shares subject to options exercisable within 60 days of January 31, 2009.
- (11) Consists solely of options exercisable or RSUs that are vested or will vest within 60 days of January 31, 2009.
- (12) Consists solely of options exercisable or RSUs that are vested or will vest within 60 days of January 31, 2009.
- (13) Consists solely of options exercisable or RSUs that are vested or will vest within 60 days of January 31, 2009.
- (14) Consists solely of options exercisable or RSUs that are vested or will vest within 60 days of January 31, 2009.
- (15) Based on information set forth in Schedule 13G/A filed by Barclays Global Investors, NA (which reported ownership of 1,282,049 shares), Barclays Global Fund Advisors (which reported ownership of 2,153,925 shares), and Barclays Global Investors, Ltd (which reported ownership of 33,037 shares) located at Murray House, 1 Royal Mint Court, London, England EC3N 4HH, filed on February 5, 2009 reporting stock ownership at December 31, 2008.
- (16)

Edgar Filing: MKS INSTRUMENTS INC - Form DEF 14A

Based on information set forth in Schedule 13G/A filed by Dimensional Fund Advisors LP on February 9, 2009, reporting stock ownership as of December 31, 2008, in which Dimensional Fund Advisors, Inc. disclaims beneficial ownership of such securities.

- (17) Based on information set forth in Schedule 13G filed by Kornitzer Capital Management, Inc. on February 5, 2009, reporting stock ownership as of December 31, 2008.
- (18) Based on information set forth in Schedule 13G filed by Royce & Associates, LLC on behalf of itself and its affiliates, on January 26, 2009, reporting stock ownership as of December 31, 2008.
- (19) Consists of 3,583,025 shares held by such persons and 1,368,487 shares subject to options exercisable or RSUs that are vested or will vest within 60 days of January 31, 2009.

To our knowledge, there are no voting trusts or similar arrangements among any of the foregoing persons or entities with respect to the voting of shares of Common Stock.

Table of Contents

PROPOSAL ONE

ELECTION OF DIRECTORS

Our By-Laws provide for a Board of Directors that is divided into three classes. The term of the Class I Directors expires at the 2009 Annual Meeting, the term of the Class II Directors expires at the 2010 Annual Meeting and the term of the Class III Directors expires at the 2011 Annual Meeting. Leo Berlinghieri, Hans-Jochen Kahl and Louis P. Valente are currently proposed for election to serve as Class I Directors for a term to expire at the 2012 Annual Meeting. Each nominee has consented to being named herein, and, if elected, to serve as a director until his successor is duly elected and qualified.

Shares represented by all proxies received by the Board of Directors and not so marked as to withhold authority to vote for an individual director will be voted (unless one or more nominees are unable or unwilling to serve) for the election of the nominees named below. The Board of Directors expects that each of the nominees named below will be available for election, but if any of them is not a candidate at the time the election occurs, it is intended that such proxies will be voted for the election of a substitute nominee to be designated by the Board of Directors.

BOARD RECOMMENDATION

THE BOARD OF DIRECTORS BELIEVES THAT APPROVAL OF THE ELECTION OF LEO BERLINGHIERI, HANS-JOCHEN KAHL AND LOUIS P. VALENTE TO SERVE AS CLASS I DIRECTORS IS IN THE BEST INTERESTS OF MKS AND OUR SHAREHOLDERS AND THEREFORE RECOMMENDS A VOTE FOR THIS PROPOSAL.

Table of Contents**DIRECTORS**

Set forth below are the names and ages of each member of our Board of Directors (including those who are nominees for election as Class I Directors) and the positions and offices held, principal occupation and business experience during the past five years, the names of other publicly held companies of which the individual serves as a director and the year of commencement of the term as our director. Information with respect to the number of shares of Common Stock beneficially owned by each director, directly or indirectly, as of January 31, 2009, appears in this proxy statement under the heading Security Ownership of Certain Beneficial Owners and Management.

Name	Age	Position	Class to Which Director Belongs
John R. Bertucci	68	Director, Chairman	III
Cristina H. Amon(2)	52	Director	II
Robert R. Anderson(1)(3)	71	Director	III
Gregory R. Beecher(1)	51	Director	III
*Leo Berlinghieri	55	Director, Chief Executive Officer and President	I
Richard S. Chute(2)	70	Director, Secretary	II
Peter R. Hanley(3)	69	Director	II
*Hans-Jochen Kahl(2)(3)	69	Director	I
*Louis P. Valente(1)(3)	78	Director	I

(1) Member of Audit Committee

(2) Member of Nominating and Corporate Governance Committee

(3) Member of Compensation Committee

* Nominee for election at this meeting

John R. Bertucci

Mr. Bertucci has served as our director since 1974, and has been Chairman of the Board of Directors since November 1995. Mr. Bertucci served as Executive Chairman from July 2005 until December 2006. In connection with his retirement as Executive Chairman, Mr. Bertucci was available for consultation with us for up to ten hours per month until December 2007. Mr. Bertucci served as our Chief Executive Officer from November 1995 to July 2005 and served as President from 1974 to May 1999 and again from November 2001 to April 2004. From 1970 to 1974, he was our Vice President and General Manager. Mr. Bertucci holds an M.S. in Industrial Administration and a B.S. in Metallurgical Engineering from Carnegie Mellon University. Mr. Bertucci is a member of the Board of Trustees of Carnegie Mellon University, past Chairman and a member of the Executive Board of The Massachusetts High Technology Council, and a member of the Board of Trustees of several other non-profit organizations.

Cristina H. Amon

Ms. Amon has served as our director since 2007. She has served as the Dean, faculty of Applied Science and Engineering, Alumni Chair Professor of Bioengineering and a member of the Department of Mechanical and Industrial Engineering at the University of Toronto since July 2006. Prior to that, Ms. Amon served at Carnegie Mellon University, as Director of the Institute for Complex Engineered Systems from September 1999 until July 2006, and was a Raymond Lane Distinguished Professor, Mechanical Engineering and Biomedical Engineering from September 2001 until July 2006. Ms. Amon is the Nominating Committee Chair for the American Association for the Advancement of Science (AAAS) and Executive Board Member of the American Society of Mechanical Engineers (ASME), Electronic and Photonic Packaging division. She also serves as Executive Board Member of the American Society Engineering Education (ASEE), Engineering Deans Council, serves on the External Advisory Board for the Department of Mechanical and Aerospace Engineering at the University of Texas and is the Chair of the Global Engineering Deans Council (GEDC). She is a member of the National Academy of Engineering (NAE) and Fellow of AAAS, ASEE, ASME, EIC and IEEE.

Table of Contents

Robert R. Anderson

Mr. Anderson has served as our director since January 2001. Mr. Anderson is a private investor. From October 1998 to October 2000, Mr. Anderson served as Chairman of Yield Dynamics, Inc., a private semiconductor control software company, and served as its CEO from October 1998 to April 2000. Mr. Anderson also served as CEO of Silicon Valley Research, Inc., a semiconductor design automation software company, from December 1996 to August 1998 and as Chairman from January 1994 to January 2001. Mr. Anderson currently serves as a director of AeHR Test Systems, Inc., a manufacturer of semiconductor test and burn-in equipment. He also serves as the President and a director of the Robert Anderson Foundation and as a director of a private company.

Gregory R. Beecher

Mr. Beecher has served as our director since August 2006. Mr. Beecher has served as CFO of Teradyne, Inc., a semiconductor and system level test equipment provider, since 2001. He is a certified public accountant, and was a Partner with PricewaterhouseCoopers LLP from October 1993 to March 2001, working with numerous semiconductor equipment and instruments providers, along with other technology-related enterprises.

Leo Berlinghieri

Mr. Berlinghieri has served as our director and as our Chief Executive Officer and President since July 2005. He previously served as President and Chief Operating Officer from April 2004 to July 2005, and as Vice President and Chief Operating Officer from July 2003 until April 2004. From November 1995 to July 2003, he served as Vice President, Global Sales and Service. From 1980 to November 1995, he served in various management positions of MKS, including Manufacturing Manager, Production and Inventory Control Manager, and Director of Customer Support Operations. He also serves as a director of Rudolph Technologies, Inc.

Richard S. Chute

Mr. Chute has served as our director since 1974. Mr. Chute was a member of the law firm of Hill & Barlow, a Professional Corporation, from 1971 to January 2003, and is currently an attorney in private practice. Mr. Chute serves as a director of two non-profit corporations.

Peter R. Hanley

Mr. Hanley has served as our director since March 2008. Mr. Hanley served as President of Novellus Systems, Inc. from May 2001 to December 2003. Prior to that, he served as Novellus Executive Vice President of Worldwide Sales from June 1992 until May 2001. After his retirement as President, Mr. Hanley served as a part-time employee of Novellus from January 2004 until December 2007. Since January 2008, Mr. Hanley has served as an independent consultant to Novellus, focused on customer sales strategies and executive training.

Hans-Jochen Kahl

Mr. Kahl has served as our director since January 2001. From June 1994 through September 1996, Mr. Kahl served as a consultant to Ebara, a Japanese manufacturer of industrial water pumps and vacuum process equipment for the semiconductor industry. Mr. Kahl was employed by Leybold AG, formerly Leybold-Heraeus GmbH, a leading international manufacturer of vacuum pumps and other vacuum process equipment for the semiconductor industry, from July 1983 to March 1992, where he served as a managing director and was primarily responsible for sales, marketing and strategic planning. From September 1995 to November 2000, he was a director of Applied Science and Technology, Inc. (ASTeX) which was acquired by MKS. Since November 1996, he has served as a director of Solid

State Management, a privately held manufacturer of high precision measurement tools.

Louis P. Valente

Mr. Valente has served as our director since February 1996. Mr. Valente has served as Chairman of Palomar Medical Technologies, Inc., a company which designs, manufactures and markets cosmetic lasers, since September 1997. He has been a director of Palomar Medical Technologies, Inc. since February 1997 and was its President and

Table of Contents

Chief Executive Officer from May 1997 to May 2002. Mr. Valente is also a director of Medical Information Technology, Inc.

Agreements as to Nomination

Mr. Bertucci resigned from his employment with MKS effective December 31, 2006. Mr. Bertucci's employment agreement provided that if Mr. Bertucci resigned from his employment, then, subject to applicable law, our By-Laws and articles of organization and the directors' fiduciary duties, the Board of Directors shall nominate Mr. Bertucci for election as a Class III director and consider Mr. Bertucci for appointment as Chairman of the Board, until such time as Mr. Bertucci is no longer eligible for nomination as a director.

CORPORATE GOVERNANCE

Board Independence

The Board of Directors has determined that all of the members of the Board of Directors, other than Mr. Bertucci and Mr. Berlinghieri, are independent as defined under the rules of the NASDAQ Stock Market.

In determining Mr. Hanley's independence, the Board of Directors considered Mr. Hanley's past and current relationship with Novellus, a significant customer of MKS. The Board considered such factors including, but not limited to, the fact that Mr. Hanley is not a significant shareholder of Novellus and has not been an executive officer of Novellus since December 2003, and that Mr. Hanley's current role and compensation as a consultant to Novellus does not relate in any way to relationships with that company's suppliers in general or with us in particular.

The Board of Directors has selected Mr. Valente to serve as Lead Director of the Board of Directors. The primary role of the Lead Director is to serve as a liaison between the independent directors and the Chairman of the Board and the Chief Executive Officer and to represent the interest of the independent directors, as appropriate.

Board of Director Meetings and Committees of the Board of Directors

The Board of Directors held four meetings in 2008. Each director attended at least 75% of the aggregate of the total number of meetings of the Board of Directors and the total number of meetings of all committees of the Board of Directors on which he or she served. Pursuant to our Corporate Governance Guidelines, directors are encouraged to attend annual meetings of shareholders. All of the directors then serving on the Board attended the 2008 Annual Meeting of Shareholders.

The Board of Directors has established three standing committees – Audit, Compensation and Nominating and Corporate Governance – each of which operates under a charter that has been approved by the Board of Directors. Each committee's current charter is posted under the Investors link on our website, www.mksinstruments.com, under the heading Corporate Governance.

Compensation Committee

The Compensation Committee consists of Messrs. Anderson, Kahl, Hanley and Valente (Chairman). The Compensation Committee's responsibilities include:

determining the CEO's compensation;

reviewing and approving, or making recommendations to the Board of Directors with respect to, the compensation of our other executive officers;

CEO succession planning;

annually reviewing and approving our management incentive bonus plan;

reviewing the Compensation Discussion and Analysis required to be included in the annual proxy statement;

overseeing and administering our equity incentive plans; and

Table of Contents

reviewing and making recommendations to the Board of Directors with respect to director compensation.

The Compensation Committee held four meetings in 2008.

Audit Committee

The Audit Committee consists of Messrs. Anderson, Beecher (Chairman) and Valente. The Audit Committee's responsibilities include:

appointing, approving the fees of and assessing the independence of, our independent registered public accounting firm;

overseeing the work of our independent registered public accounting firm, including through the receipt and consideration of certain reports from the independent registered public accounting firm;

reviewing and discussing our annual audited financial statements and related disclosures with management and the independent registered public accounting firm;

reviewing our quarterly unaudited financial statements;

coordinating oversight of our internal control over financial reporting, disclosure controls and procedures and code of business conduct and ethics;

overseeing our internal audit function;

establishing procedures for the receipt and retention of accounting related complaints and concerns;

meeting independently with our internal auditing staff, independent registered public accounting firm and management;

reviewing any related party transactions; and

preparing the Audit Committee report required by SEC rules (which is included on page 31 of this proxy statement).

The Audit Committee held five meetings in 2008.

Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee consists of Ms. Amon, Messrs. Chute (Chairman) and Kahl. The Nominating and Corporate Governance Committee's responsibilities include:

identifying individuals qualified to become members of the Board of Directors;

recommending to the Board of Directors the persons to be nominated for election as directors and to each of the Board's committees; and

developing and recommending corporate governance principles to the Board of Directors.

The Nominating and Corporate Governance Committee also oversees the annual self-evaluations of the Board of Directors and each of the Board committees. The Nominating and Corporate Governance Committee held two meetings in 2008.

For information relating to the nomination of directors, see [Director Candidates](#) below.

Audit Committee Financial Expert

The Board of Directors has determined that each of the three members of the Audit Committee is an audit committee financial expert as defined in Item 407(d)(5) of Regulation S-K.

Table of Contents

Director Candidates

The Nominating and Corporate Governance Committee recommended to the Board of Directors that the director nominees be nominated by the Board of Directors for election as Class I directors. The process followed by the Nominating and Corporate Governance Committee to identify and evaluate director candidates includes requests to Board members and others for recommendations, meetings from time to time to evaluate biographical information and background material relating to potential candidates and interviews of selected candidates by members of the Committee and the Board of Directors.

In considering whether to recommend any particular candidate for inclusion in the Board of Directors' slate of recommended director nominees, the Nominating and Corporate Governance Committee applies the criteria attached to the Committee's charter. These criteria include the candidate's integrity, business acumen, knowledge of our business and industry, experience, diligence, conflicts of interest and the ability to act in the interests of all shareholders. Nominees should generally be under the age of 75 at the time of nomination. The Committee does not assign specific weights to particular criteria and no particular criterion is a prerequisite for each prospective nominee. We believe that the backgrounds and qualifications of our directors, considered as a group, should provide a composite mix of experience, knowledge and abilities that will allow the Board of Directors to fulfill its responsibilities.

Shareholders may recommend individuals to the Nominating and Corporate Governance Committee for consideration as potential director candidates by submitting their names, together with appropriate biographical information and background materials and a statement as to whether the shareholder or group of shareholders making the recommendation has beneficially owned more than 5% of our Company's Common Stock for at least a year as of the date such recommendation is made, to the Nominating and Corporate Governance Committee, in care of Kathleen F. Burke, Esq., General Counsel, MKS Instruments, Inc., 2 Tech Drive, Suite 201, Andover, MA 01810. Assuming that appropriate biographical and background material has been provided on a timely basis, the Nominating and Corporate Governance Committee will evaluate shareholder-recommended candidates by following substantially the same process, and applying the same criteria, as it does in considering other candidates.

Shareholders also have the right under our By-Laws to directly nominate director candidates, without any action or recommendation on the part of the Nominating and Corporate Governance Committee or the Board of Directors, by following the procedures set forth under the heading "Deadline for Submission of Shareholder Proposals for the 2010 Annual Meeting" below.

Communications from Shareholders

The Board of Directors will give appropriate attention to written communications that are submitted by shareholders, and will respond if appropriate.

The Chairman of the Nominating and Corporate Governance Committee, with the assistance of our General Counsel, is primarily responsible for monitoring communications from shareholders and for providing copies or summaries to the other directors as he considers appropriate.

Communications are forwarded to all directors if they relate to important substantive matters and include suggestions or comments that the Chairman of the Nominating and Corporate Governance Committee considers to be important for the directors to know. In general, communications relating to corporate governance and long-term corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances and matters as to which we tend to receive repetitive or duplicative communications.

Shareholders who wish to send communications on any topic to the Board of Directors should address such communications to the Board of Directors in care of Kathleen F. Burke, Esq., General Counsel, MKS Instruments, Inc., 2 Tech Drive, Suite 201, Andover, MA 01810.

Code of Ethics

Pursuant to Section 406 of the Sarbanes Oxley Act of 2002, we have adopted a written code of business conduct and ethics that applies to all of our directors, officers and employees (including the principal executive

Table of Contents

officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions), which is posted in the Investors link on our website, www.mksinstruments.com, under the heading Corporate Governance. We intend to disclose any amendments to, or waivers from, our code of business conduct and ethics on our website.

Compensation Committee Interlocks and Insider Participation

In 2008, the Compensation Committee comprised Messrs. Anderson, Kahl, Hanley and Valente. None of the members were, at any time, officers or employees of MKS or our subsidiaries, and none of them had any relationship with us requiring disclosure under Item 404 of Regulation S-K under the Securities Exchange Act of 1934, as amended (the Exchange Act). None of our executive officers serves, or has served, as a member of the Board of Directors or Compensation Committee (or other committee serving an equivalent function) of any other entity which has one or more executive officers serving as a member of our Board of Directors or Compensation Committee.

EXECUTIVE OFFICERS

The following is a brief summary of the background of each of our current executive officers, other than Mr. Berlinghieri, whose background is described under the heading **Directors** above:

Gerald G. Colella, Vice President, Chief Business Officer and Acting Group VP, PRG Products, Age 52

Mr. Colella has served as our Vice President and Chief Business Officer since April 2005 and as Acting Group Vice President, PRG Products since July 2007. Prior to that, Mr. Colella served as Vice President, Global Business and Service Operations from October 1997 to April 2005. From March 1996 to October 1997, he served as Director of Materials Planning and Logistics, and from February 1994 to March 1996, he served as Materials Planning and Logistics Manager. Mr. Colella joined us in April 1983 as Purchase Contract Administrator. He holds an M.B.A. from Southern New Hampshire University, Manchester, New Hampshire, as well as a B.A. in Secondary Education from the University of Lowell, Lowell, Massachusetts.

John T.C. Lee, Group Vice President, CIT Products, Age 46

Mr. Lee has served as our Group Vice President, CIT Products since October 2007. Prior to joining us, Mr. Lee served as the Managing Director of Factory Technology and Projects within the Solar Business Group at Applied Materials, Inc. from February 2007 until October 2007. From 2002 until 2007, he served as General Manager of the Cleans Product Group and the Maydan Technology Center at Applied Materials. Prior to Applied Materials, Mr. Lee served from 1997 until 2002 as the Research Director of the Silicon Fabrication Research Department at Lucent Technologies and from 1991 until 1997 as a Member of Technical Staff in the Plasma Processing Research Group within Bell Labs. Mr. Lee holds a Ph.D. in Chemical Engineering from the Massachusetts Institute of Technology. Mr. Lee has also served as a non-executive director to SiXtron Advanced Materials, Inc. since August 14, 2008.

John A. Smith, Vice President and Chief Technology Officer, Age 58

Dr. Smith has served as our Vice President and Chief Technology Officer since January 2005. From December 2002 to January 2005, Dr. Smith served as Vice President of Technology and General Manager of the Instruments and Control Systems Product Group, which comprises Pressure Measurement and Control, Materials Delivery, Gas Composition and Analysis, and Control and Information Technology products. Prior to this position, Dr. Smith served as Vice President and General Manager of Materials Delivery Products and Advanced Process Control, from February 2002 to December 2002. From July 1994 until February 2002, he was Managing Director of MKS Instruments, U.K. Ltd. Dr. Smith has a Ph.D. in electronic engineering from the University of Manchester, U.K.

Table of Contents

William D. Stewart, Group Vice President, Vacuum Products and PFM&C Products, Age 64

Mr. Stewart has served as our Group Vice President, Vacuum Products and PFM&C Products since January 2009. From November 1997 to January 2009, he was Vice President and General Manager, Vacuum Products Group and from October 1986 to November 1997, he was President of HPS Products, which we acquired in 1986. Mr. Stewart co-founded HPS in 1976. Mr. Stewart has an M.B.A. from Northwestern University and a B.S. in Business Administration from the University of Colorado. Mr. Stewart also serves on the Board of Directors of the Janus Funds.

Ronald C. Weigner, Vice President, Chief Financial Officer and Treasurer, Age 63

Mr. Weigner has served as our Vice President and Chief Financial Officer since November 1995, and in addition, has served as our Treasurer since February 2009. From September 1993 until November 1995, he served as Vice President and Corporate Controller, and from 1980 to 1993, he served as Corporate Controller. Mr. Weigner is a certified public accountant and has a B.S. in Business Administration from Boston University.

Our executive officers are appointed by the Board of Directors on an annual basis and serve until their successors are duly appointed and qualified. There are no family relationships among any of our executive officers or directors.

EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

Compensation Philosophy and Objectives

The primary objective of our executive compensation program is to attract, retain and motivate the critical talent that is required to execute our business strategy and lead us to achieve our long-term growth and earnings goals.

As addressed in greater detail below, as part of our effort to reduce costs during the current economic slowdown in the semiconductor manufacturing industry, the Compensation Committee has temporarily reduced the salaries of our Named Executive Officers from their respective 2008 levels. Such reductions shall remain in place until otherwise determined by the Board of Directors or Compensation Committee, as appropriate.

Our executive compensation program is guided by the following principles:

Offer compensation programs that are competitive with programs at companies of similar size and in a similar industry.

Reward individual initiative, leadership and achievement.

Provide short-term annual performance bonus incentives for management to meet or exceed our earnings goals.

Provide long-term equity incentive compensation, such as stock options, restricted stock and restricted stock units, or RSUs, to encourage management to focus on shareholder return.

Emphasize our pay-for-performance philosophy.

The Company's executive compensation program is designed to provide an overall compensation package that is competitive, on a position-by-position basis, when benchmarked against that of comparable companies, while

factoring in an executive's individual performance, tenure and potential with the Company. The differentiation in compensation among the executive officers reflects the relative value that the market places on these positions, as well as each individual's performance, tenure and potential with the Company. Our goal is to use executive compensation programs to closely align the interests of our management with the interests of shareholders so that our management has incentives to achieve short-term performance goals while building long-term value for our shareholders. We will review our executive compensation programs from time to time in order to determine their competitiveness, and to take into account factors that are unique to us.

Table of Contents***Elements of Compensation***

The following summarizes the compensation elements for our principal executive officer, principal financial officer, and each of the three other most highly compensated executive officers (collectively, the Named Executive Officers). We benchmark each of the various compensation elements, including salary, short-term incentives, and long-term incentives, to the median levels for the individual position in the market. In considering the compensation of an executive relative to the market level, we look qualitatively at the individual s overall performance, tenure and potential with the Company. Currently, not taking into account the temporary salary reductions in effect, all of our Named Executive Officers are paid in the range of, or slightly below the range of, their competitive market.

Base Salary

Base salaries are designed to provide executives with a level of predictability and stability with respect to a portion of their total compensation package. In establishing base salaries for executive officers, the Compensation Committee considers the executive s responsibilities, performance, historical salary levels, internal equity among executives and the base salaries of executives at comparable companies and, with respect to salaries other than that of the Chief Executive Officer, the Chief Executive Officer s recommendations. As part of our effort to reduce costs during the current economic slowdown in the semiconductor manufacturing industry, the Compensation Committee has temporarily reduced the salaries of our Named Executive Officers. In August 2008, the base salary of Mr. Berlinghieri, our President and Chief Executive Officer, was decreased by 10% and the base salaries of the other Named Executive Officers were decreased by 5%. In January 2009, the Compensation Committee further reduced the base salary of Mr. Berlinghieri, resulting in an aggregate reduction of 20% from its original 2008 level, and further reduced the salaries of the other Named Executive Officers, resulting in an aggregate reduction of 10% from their respective original 2008 levels. The Compensation Committee sought to make the temporary reductions reasonable in light of the current economic circumstances, in order to align Named Executive Officers incentives with the interests of shareholders, while not sacrificing the retentive value of the overall long-term compensation package. Such reductions shall remain in place until otherwise determined by the Board of Directors or Compensation Committee, as appropriate.

Short-term Incentives

Our Management Incentive Bonus Plan provides a short-term incentive to reward management for reaching our overall earnings goals and those of certain product groups and to reinforce our pay-for-performance philosophy. We believe that our bonus plan provides significant incentive to the executive officers to exceed our financial goals. Because of the unique market conditions in 2009 caused by the global economic crisis, we have elected not to implement our Management Incentive Bonus Plan in 2009. However, in typical years, each executive would be eligible for an annual performance bonus calculated based on a specified target percentage of base salary, called an Individual Incentive Target. In 2008, the Individual Incentive Targets were 100% of base salary for Mr. Berlinghieri, 65% of base salary for Mr. Colella, and 50% of base salary for Messrs. Smith, Stewart and Weigner. The maximum bonus payout possible was 200% of this Individual Incentive Target and the minimum payout was zero, with incremental pay-outs for performance between these levels. For Named Executive Officers other than Mr. Stewart, annual performance bonuses are based solely upon achievement of specific corporate pro-forma pre-tax earning goals. In 2008, participants would not receive any portion of their corporate-based bonus if operating income after bonus and before tax was \$80,000,000 or less, and participants would receive the maximum amount of their corporate-based bonus if such pro-forma operating income was \$227,666,000 or more.

For Mr. Stewart, who was the Vice President of a product group, 70% of his bonus was based on the achievement of the corporate objective, while 30% was based on the achievement of annual earnings goals for his product group. The purpose of the product group targets is to create an incentive for the executive officer to maximize the performance of

his product group, while balancing the overall interests of the corporation as a whole. Achievement of the portion of the bonus based on product group targets has fluctuated significantly in the three years since these incentives were first initiated. Mr. Stewart's achievement of the product group based portion of his bonus was at the maximum of 200% in 2006, 58% in 2007 and 0% in 2008.

Table of Contents

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

Base Salary x Individual Incentive Target x Corporate Performance Multiplier

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

Base Salary x Individual Incentive Target x Product Group Performance Multiplier

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

For 2008, we paid no bonus under the Management Incentive Bonus Plan to the Named Executive Officers.

Long-Term Incentive Compensation

We provide executives with long-term incentive compensation, in the form of stock options, restricted stock and RSUs in order to:

Align executives' interests with those of the shareholders by allowing executives to share in appreciation in the value of our Common Stock.

Balance the short-term focus of annual short-term incentive compensation with a longer term reward for appreciating our value.

Retain executives because equity-based compensation vests over time.

Prior to 2006, we issued primarily stock options. In 2006, we issued restricted stock and in 2007, we began to issue RSUs. We believe that RSUs are attractive because they help ensure executives' interests are aligned with shareholders in both an increasing and declining stock market. We believe RSUs are preferable to options, which have a relatively high accounting cost as compared to their potential value to the executive and preferable to restricted stock, which gives the executive voting rights prior to full vesting. In 2008, the Named Executive Officers received 50% of their total equity grant value in the form of performance-based RSUs and 50% in the form of time-based RSUs to further our pay-for-performance philosophy. These RSUs vest in equal annual installments over three years, subject to achievement of the performance goal with respect to the performance-based portion.

When establishing equity grant levels, the Compensation Committee considers general corporate performance and material economic conditions, comparable company grants to comparable executives, executive seniority and experience, the dilutive impact of the grants, previous grant history for each executive, vesting schedules of outstanding equity-based grants, the current stock price and individual contributions to our financial, operational and strategic objectives and, with respect to grants made to individuals other than the Chief Executive Officer, the Chief Executive Officer's recommendations.

It is our practice to make an initial equity-based grant to all executives at the time they commence employment, in an amount that is consistent with those granted to executive officers in the industry at similar levels of seniority. In addition, we typically make an annual grant of equity-based compensation to executives during the first fiscal quarter of each year. Discretionary equity-based grants may be made throughout the year to provide an incentive to achieve a

specific goal or to reward a significant achievement.

Retirement Benefits

Pursuant to employment agreements, we provide supplemental retirement benefits to certain executives, including Messrs. Berlinghieri, Colella, Smith and Weigner. These supplemental benefits are designed to reward long service with us and to serve as a significant incentive for these executives to remain with us. In addition, these benefits are designed to provide for supplemental retirement benefits for executives that are not available under our company-wide employee benefit plans due to regulatory limitations on benefit accruals.

Table of Contents

In addition, we also provide retiree medical benefits to Messrs. Stewart and Weigner, and their respective spouses, for their lifetimes, upon meeting specified criteria. This benefit was designed to retain Messrs. Stewart and Weigner over the long-term because it is contingent upon the executive maintaining his employment with us until age 62, with specified exceptions.

Perquisites

We offer certain perquisites to the Named Executive Officers to allow executives to focus on corporate strategy and enhancing shareholder value, to provide competitive pay packages and, in certain circumstances, to entertain customers. Examples of these perquisites are car payments, health cost reimbursements and club memberships.

Severance and Change-in-Control Provisions

We have entered into employment agreements with each of the Named Executive Officers, providing for certain severance provisions and benefits associated with various termination scenarios and restricting the officers' ability to compete with us. In addition, restricted stock agreements and RSU agreements with the Named Executive Officers provide for certain vesting acceleration in the event of a change-in-control. The severance and change-in-control provisions are designed to be competitive in the marketplace, and provide security for Named Executive Officers in the event that we are acquired and his respective position is impacted. They are also intended to protect us from competitive harm by compensating the Named Executive Officers for agreeing to substantial non-compete provisions after termination.

Engagement of Compensation Consultant; Market Comparison

In 2008, the Compensation Committee engaged a compensation consultant, Radford Surveys and Consulting, to serve as an independent advisor to the Compensation Committee regarding compensation for the Board of Directors and executives. The compensation consultant prepared for the Compensation Committee a competitive compensation analysis for each executive on a position-by-position basis. The consultant utilized both an analysis of comparable peer company compensation data, as well as size and industry-appropriate broad survey data. In 2008, we benchmarked against the following comparable peer companies:

Advanced Energy Industries, Inc.	Itron, Inc.
Axcelis Technologies, Inc.	Kulicke & Soffa Industries, Inc.
Brooks Automation, Inc.	Newport Corp.
Coherent, Inc.	Photronics, Inc.
Creedence Systems Corp.	Tektronix, Inc.
Cymer, Inc.	Teradyne, Inc.
Daktronics, Inc.	Varian, Inc.
Entegris, Inc.	Varian Semiconductor Equipment Assoc., Inc.
FEI Co.	Verigy Ltd.

We will review the companies used for benchmarking each year and may change from year-to-year depending on changes in the marketplace, acquisitions, divestitures and business focus of us or comparable companies. The Compensation Committee may elect to engage a compensation consultant from time to time in the future.

Role of Company Executives

The Chief Executive Officer reviews executive performance with the Compensation Committee and makes recommendations relating to executive compensation. Management develops proposed goals for review and approval by the Compensation Committee for the annual performance bonus and performance-based equity, develops proposals relating to potential changes in compensation programs for review and approval by the Compensation Committee and provides the Compensation Committee and advisors with information necessary to evaluate and implement compensation proposals and programs.

Table of Contents

Impact of Accounting and Tax on the Form of Compensation

Impact of Code Section 162(m)

Section 162(m) of the Internal Revenue Code of 1986, as amended (the Code), generally disallows a tax deduction to public companies for certain compensation in excess of \$1.0 million paid to such company's chief executive officer and other executive officers whose compensation is required to be reported to shareholders pursuant to the Exchange Act by reason of being among the four most highly paid executive officers. Certain compensation, including qualified performance-based compensation, will not be subject to the deduction limit if certain requirements are met. The Compensation Committee reviews the potential effect of Section 162(m) periodically and generally seeks to structure the compensation granted to its executive officers in a manner that is intended to avoid disallowance of deductions under Section 162(m). However, because neither our 2004 Stock Incentive Plan (other than with respect to stock options) nor our Management Incentive Bonus Plan is designed to qualify as performance-based compensation under Section 162(m), it is possible that a portion of any bonus payable to, or compensation arising under equity awards (other than stock options) granted to, the Chief Executive Officer and certain other executives will not be deductible for federal income tax purposes. The Compensation Committee reserves the right to use its judgment to authorize compensation payments which may be in excess of the Section 162(m) limit when the Committee believes such payments are appropriate, after taking into consideration changing business conditions or the officer's performance, and are in the best interests of the shareholders.

Impact of SFAS 123R

The Compensation Committee has considered the impact of the Statement on Financial Accounting Standards No. 123R, Share-Based Payment (SFAS 123R), on our use of equity incentives as a key retention tool. Because of the significant cost associated with options under SFAS 123R as compared to the potential value delivered, the Compensation Committee elected to grant more efficient equity instruments instead of stock options. Accordingly, it granted to executives restricted stock in 2006 and RSUs beginning in 2007. The Compensation Committee will regularly review its choice of equity instruments taking into account both tax and accounting considerations.

COMPENSATION COMMITTEE REPORT

In 2008, the Compensation Committee comprised Messrs. Anderson, Kahl, Hanley (who joined the Committee on May 5, 2008) and Valente. None of the members were, at any time, officers or employees of us or our subsidiaries, and none of them had any relationship with us requiring disclosure under Item 404 of Regulation S-K under the Exchange Act. None of our executive officers serves, or has served, as a member of the board of directors or compensation committee (or other committee serving an equivalent function) of any other entity which has one or more executive officers serving as a member of our Board of Directors or Compensation Committee.

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with management. Based on such review and discussions, the Committee recommended to the Board of Directors that the Compensation Discussion and Analysis be included in this proxy statement on Schedule 14A.

Respectfully submitted,

Louis P. Valente, Chairman
Robert R. Anderson
Peter R. Hanley
Hans-Jochen Kahl

The Report of the Compensation Committee and related disclosure shall not be deemed incorporated by reference by any general statement incorporating this proxy statement into any filing under the Securities Act of 1933 or under the Exchange Act, except to the extent that we specifically incorporate this information by reference, and shall not otherwise be deemed filed under such Acts.

Table of Contents**Summary Compensation Table**

The following table sets forth the aggregate amounts of compensation earned by our Named Executive Officers in the years ended December 31, 2008, 2007 and 2006.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards(\$)(1)	Option Awards(\$)(1)	Non Equity Incentive Plan Compensation (\$)(2)	Change in Pension Value and Nonqualified Deferred	All Other Compensation (\$)	Total
							Earnings(\$)(3)		
G. Ghisleri, President	2008	\$ 511,967	\$ 0	\$ 865,131	\$ 68,069	\$ 0	\$ 766,886	\$ 30,114(4)	\$ 2,200,000
	2007	\$ 483,654	\$ 0	\$ 650,203	\$ 189,866	\$ 270,266	\$ 1,499,711	\$ 26,032(4)	\$ 3,100,000
	2006	\$ 450,001	\$ 0	\$ 457,450	\$ 362,184	\$ 673,558	\$ 438,613	\$ 26,724(4)	\$ 2,400,000
C. Weigner, Vice President & Chief Financial Officer & Director	2008	\$ 270,325	\$ 0	\$ 202,109	\$ 40,841	\$ 0	\$ 442,527	\$ 34,374(5)	\$ 900,000
	2007	\$ 262,504	\$ 0	\$ 139,086	\$ 71,232	\$ 66,009	\$ 355,926	\$ 35,238(5)	\$ 900,000
	2006	\$ 250,112	\$ 0	\$ 57,261	\$ 153,948	\$ 199,764	\$ 91,308	\$ 34,840(5)	\$ 700,000
F. Colella, Vice President and Acting Group Manager of G Products	2008	\$ 358,826	\$ 0	\$ 329,075	\$ 47,650	\$ 0	\$ 459,074	\$ 45,913(6)	\$ 1,200,000
	2007	\$ 349,038	\$ 0	\$ 207,029	\$ 90,337	\$ 117,025	\$ 632,818	\$ 43,742(6)	\$ 1,400,000
	2006	\$ 319,110	\$ 0	\$ 80,166	\$ 183,918	\$ 317,763	\$ 253,670	\$ 42,370(6)	\$ 1,100,000
J. Smith, Vice President and Chief Technology Officer (7)	2008	\$ 290,083	\$ 0	\$ 202,109	\$ 47,650	\$ 0	\$ (171,110)	\$ 38,412(8)	\$ 400,000
	2007	\$ 284,450	\$ 0	\$ 139,086	\$ 83,103	\$ 79,475	\$ 145,953	\$ 31,631(8)	\$ 700,000
D. Stewart, Vice President, Vacuum Products & G Products	2008	\$ 242,150	\$ 0	\$ 242,571	\$ 40,841	\$ 0	\$ 0	\$ 25,406(9)	\$ 500,000
	2007	\$ 255,406	\$ 0	\$ 166,903	\$ 87,044	\$ 72,249	\$ 0	\$ 24,936(9)	\$ 600,000
	2006	\$ 244,550	\$ 0	\$ 68,714	\$ 310,716	\$ 195,350	\$ 0	\$ 24,249(9)	\$ 800,000

(1) Represents the proportionate amount of the total fair value of stock and option awards recognized by us as an expense in the applicable year for financial accounting purposes. The fair values of these awards and the amounts expensed in the year indicated were determined in accordance with SFAS 123R. The awards for which expense is shown in this table include the awards described in the Grants of Plan-Based Awards table of this proxy statement, as well as awards granted in previous years for which we recognized expense in the year indicated. We granted restricted stock to the Named Executive Officers in 2006 and RSUs to the Named Executive Officers in

2007. The assumptions used in determining the grant date fair values of awards are set forth in the notes to our consolidated financial statements, which are included in our Annual Report on Form 10-K filed with the SEC on February 27, 2009.

- (2) Reflects compensation under the Management Incentive Bonus Plan earned for the year indicated that was paid in the following year. Each executive was eligible for an annual performance bonus calculated based on a specified target percentage of base salary, called an Individual Incentive Target. The Individual Incentive Targets for the Named Executive Officers in 2008 were: Mr. Berlinghieri 100%; Mr. Weigner 50%; Mr. Colella 65%; Mr. Smith 50% and Mr. Stewart 50%. For 2008, we paid no bonus under the Management Incentive Bonus Plan. In 2007 the targets for the Named Executive Officers were: Mr. Berlinghieri 100%, Mr. Weigner 45%, Mr. Colella 60%, Mr. Smith 50% and Mr. Stewart 50%. For 2007, we paid a bonus of 55.88% of Individual Incentive Targets to the Named Executive Officers. In 2006, the targets for the 2006 Named Executive Officers were: Mr. Berlinghieri 75%, Mr. Weigner 40%, Mr. Colella 50% and Mr. Stewart 40%. The maximum bonus payout possible was 200% of this Individual Incentive Target and the minimum payout was zero, with incremental pay-outs for performance between these levels. For 2006, we paid a bonus of 200% of Individual Incentive Targets to the Named Executive Officers. For all Named Executive Officers other than Mr. Stewart, annual performance bonuses were paid out upon achievement of specific corporate pro forma pre-tax EPS goals. For Mr. Stewart, who was the

Table of Contents

Vice President of a product group, 70% of the bonus was based on this corporate objective, while 30% was based on annual earnings achieved by his product group.

- (3) For supplement retirement benefits, this reflects the actuarial increase in present value for each year indicated, from the prior fiscal year. For deferred compensation, this reflects the theoretical change in assets from the prior fiscal year. The employment agreements for each Messrs. Berlinghieri, Weigner and Colella provide for supplemental retirement benefits. The employment agreement for Mr. Smith provides for a deferred compensation program.
- (4) With respect to 2008, this amount was comprised of \$5,784 for payments for car, \$5,200 for golf club membership and \$19,130 for company paid health and life insurances. With respect to 2007, this amount was comprised of \$3,291 for payments for car, \$5,200 for golf club membership and \$17,541 for company paid health and life insurances. With respect to 2006, this amount was comprised of \$7,462 for payments for car, \$5,200 for golf club membership and \$14,062 for company paid health and life insurances.
- (5) With respect to 2008, this amount was comprised of \$13,477 for payments for car, \$13,997 for company paid health and life insurances and \$6,900 for 401(k) matching contributions. With respect to 2007, this amount was comprised of \$13,822 for payments for car, \$14,666 for company paid health and life insurances and \$6,750 for 401(k) matching contributions. With respect to 2006, this amount was comprised of \$14,891 for payments for car, \$13,349 for company paid health and life insurances and \$6,600 for 401(k) matching contributions.
- (6) With respect to 2008, this amount was comprised of \$13,264 for payments for car, \$5,200 for golf club membership, \$20,549 for company paid health and life insurances and \$6,900 for 401(k) matching contributions. With respect to 2007, this amount was comprised of \$13,518 for payments for car, \$5,200 for golf club membership, \$18,274 for company paid health and life insurances and \$6,750 for 401(k) matching contributions. With respect to 2006, this amount was comprised of \$13,222 for payments for car, \$5,200 for golf club membership, \$17,348 for company paid health and life insurances and \$6,600 for 401(k) matching contributions.
- (7) Mr. Smith was not a Named Executive Officer in 2006, and accordingly, information for 2006 is not required.
- (8) With respect to 2008, this amount was comprised of \$10,719 for payments for car, \$3,268 for golf club membership, \$18,203 for company paid health and life insurances and \$6,222 for 401(k) matching contributions. With respect to 2007, this amount was comprised of \$10,749 for payments for car, \$3,268 for golf club membership, \$10,864 for company paid health and life insurances and \$6,750 for 401(k) matching contributions.
- (9) With respect to 2008, this amount was comprised of \$13,208 for payments for car, \$5,298 for company paid health and life insurances and \$6,900 for 401(k) matching contributions. With respect to 2007, this amount was comprised of \$12,545 for payments for car, \$5,641 for company paid health and life insurances and \$6,750 for 401(k) matching contributions. With respect to 2006, this amount was comprised of \$12,605 for payments for car, \$5,044 for company paid health and life insurances and \$6,600 for 401(k) matching contributions.

Grants of Plan-Based Awards in Fiscal Year 2008

Estimated Future Payouts	Estimated Future Payouts	All Other Stock Awards	All Other Option Awards	Grant Date
--------------------------	--------------------------	------------------------	-------------------------	------------

Name	Date(1)	Under Non-Equity Incentive			Under Equity Incentive			Number	Number	Price	Fair Value
		Grant	Threshold	Target	Maximum	Threshold	Target	Maximum	of Shares of Stock Underlying Units(4)	of Securities Underlying Awards(\$)(5)	of Stock and Option Awards(\$)(5)
Leo Berlinghieri	3/10/08	\$ 0	\$ 477,000	\$ 954,000	0	26,100	26,100	26,100			1,028,862
Ronald C. Weigner	3/10/08	\$ 0	\$ 130,625	\$ 261,250	0	5,000	5,000	5,000			197,100
Gerald G. Colella	3/10/08	\$ 0	\$ 225,388	\$ 450,775	0	8,750	8,750	8,750			344,925
John A. Smith	3/10/08	\$ 0	\$ 140,125	\$ 280,250	0	5,000	5,000	5,000			197,100
William D. Stewart	3/10/08	\$ 0	\$ 123,500	\$ 247,000	0	6,000	6,000	6,000			236,520

(1) This column shows the date of grant for all equity awards granted in 2008.

Table of Contents

- (2) Amounts have been adjusted to reflect the impact of the temporary salary reduction implemented in August 2008 (a 10% reduction in base salary for Mr. Berlinghieri and a 5% reduction in base salary for other Named Executive Officers). Represents threshold, target and maximum payout levels under the 2008 Management Incentive Bonus Plan. The actual amount of incentive bonus earned by each Named Executive Officer in 2008 is reported under the Non-Equity Incentive Plan Compensation column in the Summary Compensation Table. The following summarizes the individual target bonus for each Named Executive Officer in 2008: Mr. Berlinghieri - 100%, Mr. Weigner 50%, Mr. Colella 65%, Mr. Smith 50% and Mr. Stewart 50% (for Mr. Stewart, 70% is Corporate Bonus and 30% is Product Group Bonus). Maximum award opportunities were capped at 200% of the target award for all executives. As previously noted, for 2008, we paid no bonus under the 2008 Management Incentive Bonus Plan.
- (3) The RSUs vest in equal annual installments over three years, subject to achievement of performance criteria.
- (4) Vests in equal installments over three years.
- (5) Reflects the grant date fair value of RSUs. The fair value was \$19.71 per share for RSUs awarded on March 10, 2008.

Outstanding Equity Awards at 2008 Fiscal Year-End

Name	Option Awards(1)				Stock Awards(2)			Equity Incentive Plan
	Number of Securities Underlying Unexercised Options	Number of Securities Underlying Exercised Options	Unearned Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested	Market Value of Shares or Units of Stock That Have Not Vested(3)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested(3)
Leo Berlinghieri	11,000	0	\$ 32.00	01/04/10	25,000(4)	\$ 369,750	26,100(6)	\$ 386,019
	30,000	0	\$ 17.25	03/21/11	10,421(5)	\$ 154,127		
	880	0	\$ 20.02	10/15/11	11,667(5)	\$ 172,555		
	125,000	0	\$ 24.50	11/14/11	26,100(6)	\$ 386,019		
	30,000	0	\$ 23.50	01/30/12				

Edgar Filing: MKS INSTRUMENTS INC - Form DEF 14A

	466	0	\$ 18.44	06/24/12				
	30,000	0	\$ 16.88	11/22/12				
	482	0	\$ 12.97	02/07/13				
	50,000	0	\$ 17.60	07/01/13				
	375	0	\$ 17.60	07/01/13				
	35,000	0	\$ 27.11	11/11/13				
	15,000	0	\$ 29.93	01/05/14				
	50,000	0	\$ 14.72	07/30/14				
Ronald C. Weigner	12,000	0	\$ 32.00	01/04/10	10,000(4)	\$ 147,900	5,000(6)	\$ 73,950
	30,000	0	\$ 17.25	03/21/11	2,978(5)	\$ 44,045		
	950	0	\$ 20.02	10/15/11	3,334(5)	\$ 49,310		
	125,000	0	\$ 24.50	11/14/11	5,000(6)	\$ 73,950		
	30,000	0	\$ 23.50	01/30/12				
	503	0	\$ 18.44	06/24/12				
	30,000	0	\$ 16.88	11/22/12				
	503	0	\$ 12.97	02/07/13				
	392	0	\$ 17.60	07/01/13				
	24,000	0	\$ 27.11	11/11/13				
	6,000	0	\$ 29.93	01/05/14				
	30,000	0	\$ 14.72	07/30/14				

Table of Contents

Name	Option Awards(1)				Stock Awards(2)			Equity Incentive Plan
	Number of Securities Underlying Unexercised Options	Number of Securities Underlying Exercised Options	Equity Incentive Plan	Price (\$)	Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested(3) (\$)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested(3) (\$)
Gerald G. Colella	11,000	0		\$ 32.00	01/04/10	14,000(4)	\$ 207,060	8,750(6) \$ 129,413
	30,000	0		\$ 17.25	03/21/11	4,466(5)	\$ 66,052	
	823	0		\$ 20.02	10/15/11	5,000(5)	\$ 73,950	
	125,000	0		\$ 24.50	11/14/11	8,750(6)	\$ 129,413	
	30,000	0		\$ 23.50	01/30/12	2,000(7)	\$ 29,580	
	436	0		\$ 18.44	06/24/12			
	375	0		\$ 18.12	05/29/13			
	28,000	0		\$ 27.11	11/11/13			
	250	0		\$ 26.86	12/03/13			
	7,000	0		\$ 29.93	01/05/14			
John A. Smith	7,500	0		\$ 32.00	01/04/10	10,000(4)	\$ 147,900	5,000(6) \$ 73,950
	55,000	0		\$ 24.75	11/19/11	2,978(5)	\$ 44,045	
	461	0		\$ 18.44	06/24/12	3,334(5)	\$ 49,310	
	2,400	0		\$ 27.11	11/11/13	5,000(6)	\$ 73,950	
	6,000	0		\$ 29.93	01/05/14			
	2,188	0		\$ 14.72	07/30/14			
William D. Stewart	11,000	0		\$ 32.00	01/04/10	12,000(4)	\$ 177,480	6,000(6) \$ 88,740
	24,000	0		\$ 27.11	11/11/13	3,573(5)	\$ 52,845	
	6,000	0		\$ 29.93	01/05/14	4,000(5)	\$ 59,160	
	1,875	0		\$ 14.72	07/30/14	6,000(6)	\$ 88,740	

- (1) Stock options listed above have a 10-year term and vest 1/4 on the one year anniversary of the date of grant, and thereafter in equal quarterly installments over the next three years.
- (2) Except as provided in footnote 7, RSUs vest in equal annual installments over 3 years. RSUs listed in Equity Incentive Plan Awards columns were also subject to achievement of performance criteria as of December 31, 2008. Restricted stock vests in full on the third anniversary of the date of grant. The grant date for each option is the date on or about 10 years prior to the respective date listed under the heading Option Exercise Date.
- (3) Reflects the values as calculated based on the closing price of our common stock on December 31, 2008 of \$14.27 per share.
- (4) Grant date is February 13, 2006.
- (5) Grant date is March 1, 2007.
- (6) Grant date is March 10, 2008.
- (7) This RSU vests 331/3 on the one year anniversary of the date of grant and each successive anniversary thereafter through the third anniversary. Grant date is September 17, 2007.

Table of Contents**Option Exercises and Stock Vested in Fiscal Year 2008**

Name	Option Awards		Stock Awards	
	Number of Shares Acquired on Exercise (#)	Value Realized Upon Exercise(1) (\$)	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting (\$)
Leo Berlinghieri	60,000	\$ 1,043,712	48,543	\$ 997,591
Ronald C. Weigner	0	\$ 0	3,154	\$ 62,039
Gerald G. Colella	8,750	\$ 57,579	5,733	\$ 113,158
John A. Smith	8,750	\$ 61,642	3,154	\$ 62,039
William D. Stewart	7,500	\$ 81,882	3,786	\$ 74,471

(1) Value realized represents the excess of the fair market value of the shares at the time of exercise over the exercise price of options.

Equity Compensation Plan Information

The following table provides information about the securities authorized for issuance under MKS equity compensation plans as of December 31, 2008:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights(1)	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans
	(a)		(b)
Equity compensation plans approved by security holders	4,558,838	\$ 23.44	9,243,068(2)(3)
Equity compensation plans not approved by security holders			
Total	4,558,838	\$ 23.44	9,243,068(2)(3)

- (1) Excludes an aggregate of 44,095 shares issuable upon the exercise of outstanding options assumed by the Company in connection with an acquisition. The weighted average exercise price of the excluded options is \$38.63.
- (2) Securities available for future issuance under the 2004 Stock Incentive Plan increase on January 1 of each year by 5% of the issued and outstanding shares as of December 31 of the prior year up to the amount authorized by the shareholders.
- (3) Includes 104,104 shares issuable under the Company's Third Restated Employee Stock Purchase Plan and 41,026 shares issuable under the Company's Second Restated International Employee Stock Purchase Plan as of December 31, 2008.

Pension Benefits

Pursuant to employment agreements, we provide supplemental retirement benefits to certain executives including Messrs. Berlinghieri, Weigner and Colella. These supplemental benefits are designed to reward long service with us and to serve as a significant incentive for these executives to remain with us. In addition, these benefits are designed to provide for supplemental retirement benefits for executives that are not available under our company-wide employee benefits due to regulatory limitations on benefit accruals.

The benefits vest upon (a) the employee reaching both (i) specified ages and (ii) 25 years of service with us, in each case while employed with us, or (b) upon the employee's earlier death, disability, termination without cause (as defined in the employment agreements) or a qualifying termination in connection with a change-in-control (as defined in the agreement), and are forfeited in the event of termination for cause. When vested, the benefits provide for a lump sum payment of an aggregate amount calculated in accordance with actuarial tables, payable not sooner

Table of Contents

than six months after the date of termination (except in the case of death or disability). These benefits are not subject to any deduction for social security or other offset amounts. Final average compensation is equal to the average of the respective officer's three highest years of compensation (salary plus bonus) during the 10 years prior to the officer's retirement (or other qualifying termination).

Subject to the years of service qualifications, Mr. Berlinghieri's benefits will vest 80%, 90% and 100% upon retirement at the ages of 60, 61 and 62, respectively; Mr. Weigner's benefits have vested 80% and will vest 90% and 100% upon retirement at the ages of 64 and 65 respectively; and Mr. Colella's benefits will vest 80%, 90% and 100% upon retirement at the ages of 60, 61 and 62, respectively.

The table below summarizes the present value as of December 31, 2008 of the accumulated benefits of our Named Executive Officers under their Supplemental Pension arrangements.

PENSION BENEFITS

Name	Plan Name	Number of Years Credited Service (#)(1)	Present Value of Accumulated Benefit (\$)(2)	Payments During the Last Fiscal Year (\$)
Leo Berlinghieri	Supplemental Retirement Benefits under Employment Agreement	25	\$4,643,469	\$ 0
Ronald C. Weigner	Supplemental Retirement Benefits under Employment Agreement	25	\$2,719,988	\$ 0
Gerald G. Colella	Supplemental Retirement Benefits under Employment Agreement	25	\$2,523,264	\$ 0
John A. Smith	N/A	N/A	N/A	N/A
William D. Stewart	N/A	N/A	N/A	N/A

(1) Maximum number of years credited is 25.

(2) Present value of accumulated benefit is calculated using the same assumptions we used for financial reporting purposes. The calculations use a discount rate of 5.75%, a maturity value rate of 3.5% and salary increases of 4.5% per annum and the 1994 Group Annuity Reserve Mortality Table.

Nonqualified Deferred Compensation

We have provided supplemental defined contribution retirement benefits to Mr. Smith. We contribute an annual amount equal to 15% of Mr. Smith's salary and bonus, and may elect to contribute additional amounts in our sole discretion. These amounts are placed into hypothetical investment instruments in accordance with Mr. Smith's

instruction. These benefits will vest 80%, 90% and 100% upon Mr. Smith retiring at age 63, 64 and 65, respectively. When vested, the benefits provide for a lump sum payment subject to a six month waiting period for the initial payment. Mr. Smith may also elect to defer up to 25% of his base salary and up to 100% of his bonus annually, until a time specified by Mr. Smith. These benefits are not subject to any deduction for social security or other offset amounts.

Table of Contents**NONQUALIFIED DEFERRED COMPENSATION**

Name	Executive Contributions in Last FY (\$)	Registrant Contributions in Last FY (\$)	Aggregate Earnings in Last FY (\$)	Aggregate Withdrawals / Distributions (\$)	Aggregate Balance at Last FYE (\$)
Leo Berlinghieri	N/A	N/A	N/A	N/A	N/A
Ronald C. Weigner	N/A	N/A	N/A	N/A	N/A
Gerald G. Colella	N/A	N/A	N/A	N/A	N/A
John A. Smith	\$ 0	\$ 55,434	\$ (225,544)	\$ 0	\$ 393,066
William D. Stewart	N/A	N/A	N/A	N/A	N/A

Potential Payments Upon Termination of Employment or Change-in-Control

This section summarizes each Named Executive Officers' estimated payments and other benefits that would be received by the Named Executive Officer or his estate if his employment had terminated on December 31, 2008, under the circumstances set forth below.

Mr. Berlinghieri

Mr. Berlinghieri's employment and equity agreements provide for the following:

If Mr. Berlinghieri's employment is terminated by us (other than for failure or refusal to perform his obligations, commitment of acts not in our interest, commission of a felony or willful misconduct), he will receive salary for 12 months after the date of such termination. He will also receive company paid medical, dental, life and vision insurance for 12 months.

If Mr. Berlinghieri's employment is terminated by us without cause or by Mr. Berlinghieri for good reason (each as defined in the agreement), within two years after a change-in-control, and certain other criteria are met, Mr. Berlinghieri will be entitled to:

salary and bonus for 36 months paid in a lump sum and grossed-up for applicable state and federal taxes;

paid medical, dental, life and vision insurance for 36 months;

full vesting of restricted stock and RSUs; and

a tax gross-up for any excise taxes due under Code Section 4999 with respect to parachute payments.

We also provide supplemental retirement benefits to Mr. Berlinghieri, as described under the heading Pension Benefits above.

During the term of Mr. Berlinghieri's employment and for a period of one year thereafter (or two years, if employment was terminated by Mr. Berlinghieri other than for good reason), Mr. Berlinghieri may not (i) engage in any competitive business or activity, (ii) work for or become a partner with any of our employees, officers or agents, or

(iii) have any financial interest in or be a director, officer, 1% shareholder, partner, employee or consultant to any of our competitors. For a period of two years after termination of employment, Mr. Berlinghieri may not (i) solicit any customer to become a customer, distributor or supplier of any other person or entity or to cease doing business with us, or (ii) solicit or hire any of our employees or agents to terminate such person's employment or engagement with us or to work for a third party.

Other Named Executive Officers

All of the other Named Executive Officers' employment terms are month to month, with termination upon death, disability, or at our election if the employee fails to perform his duties or commits any act not in our best interest. Messrs. Colella, Smith, Stewart and Weigner are entitled to the following benefits under their agreements:

severance equal to 1/2 of their base salary in the event that they are terminated without cause; and

six months continuation of specified health benefits at our cost.

Table of Contents

Messrs. Colella and Weigner also receive gross-up payments for any excise taxes imposed under Code Section 4999 and Messrs. Stewart and Weigner also receive retiree medical benefits.

We have provided supplemental retirement benefits to Messrs. Colella and Weigner, as described under the heading Pension Benefits above, and have provided supplemental defined contribution retirement benefits to Mr. Smith as described under the heading Nonqualified Deferred Compensation above.

Each of the Named Executive Officers' employment agreements contains a non-competition provision. With respect to Messrs. Colella, Smith, Stewart and Weigner, such employees may not, during the term of their employment and for the period of one year after termination of employment (or, in the case of Messrs. Weigner and Stewart, two years if employment was terminated by such employee other than for good reason (as defined in the agreement)):

engage in any competitive business or activity;

work for, employ, become a partner with, or cause to be employed, any of our employees, officers or agents;

give, sell or lease any competitive services or goods to any of our customers; or

have any material financial interest in or be a director, officer, partner, employee or consultant to or exceed specified shareholding limitations in, any of our competitors.

Each of the employment agreements also contains non-solicitation provisions. During the term of employment and for a period of two years after termination of employment (one year for Messrs. Colella and Smith), the employees may not (i) solicit any customer to become a customer, distributor or supplier of any other person or entity or to cease doing business with us, or (ii) solicit or hire any of our employees or agents to terminate such person's employment or engagement with us or to work for a third party.

Each Named Executive Officer's RSUs and restricted stock awards provide for 100% acceleration of vesting of all shares if the executive is terminated without cause or resigns with good reason within 24 months of a change-in-control, as defined in the agreement. RSUs typically vest in three equal annual installments, and 50% are generally subject to performance criteria. Restricted stock awards normally vest in full on the third anniversary of the date of grant.

Potential Payments Upon Termination or Change-in-Control – Leo Berlinghieri

	Cash Severance			State and		Gross up of
	Management	Value of		Federal Income	Acceleration of	I.R.C.
	Incentive	Accelerated	Benefits	Tax Gross-up on	Pension	Golden
Base Salary	Bonus	Unvested Equity	Continuation(1)	Cash Severance	Benefits(2)	Parachute
						excise
						tax
						resulting
						from
						Change-in-
						Control(3)
	N/A	N/A	\$16,582	N/A	\$4,643,469	N/A

without ation	\$477,000 (1x salary)							
	\$477,000 (1x salary)	N/A	\$1,837,325	N/A	N/A	\$2,321,735	N/A	\$
	N/A	N/A	\$1,837,325	N/A	N/A	\$4,643,469	N/A	\$
months								
ontrol: by the out utive r (5),(6) months	\$1,431,000 (3x salary)	\$1,431,000 (3x bonus)	\$1,866,150	\$49,746	\$1,927,557	\$4,643,469	\$ 4,390,021	\$
ontrol: by the out	\$477,000 (1x salary)	N/A	N/A	\$16,582	\$321,260	\$4,643,469	\$ 2,125,109	\$
	N/A	N/A	N/A	\$16,582	\$0	\$4,643,469	\$ 1,723,520	\$
r (6)								

Table of Contents

- (1) Benefits Continuation reflects our cost for continuation of life insurance, medical, dental and vision coverage for 12 months following involuntary termination without cause or termination by Mr. Berlinghieri for good reason or 36 months following termination within 24 months after a change-in-control.
- (2) This amount represents the present value of the accelerated amount of the accumulated benefit under the Supplemental Retirement Benefit. See also the description under Pension Benefits above.
- (3) For purposes of assessing whether Mr. Berlinghieri would be liable for a Section 4999 excise tax on parachute payments (and in turn entitled to a gross-up from us), the calculations assume that if Mr. Berlinghieri was terminated within 24 months of a change-in-control, the vesting on his options would be accelerated (which the Board of Directors may determine at its discretion).
- (3) The total does not include the present value of accumulated benefit under the Supplemental Retirement Benefits. See the Pension Benefits table for this information.
- (4) Upon death and disability, RSUs fully vest and the percentage of restricted stock equal to the percentage of time between the grant date and the third anniversary of the grant date remaining at the time of such death or disability is forfeited. The stated value assumes the death or disability occurred on December 31, 2008.
- (5) 100% of the unvested RSUs and restricted stock awards vest. For purposes of determining the value of the acceleration of unvested options, the calculations assume that Mr. Berlinghieri was terminated following the change-in-control and the vesting on his options was accelerated by the Board of Directors (which the Board of Directors may determine at its discretion).
- (6) We will reimburse Mr. Berlinghieri for any state and federal income taxes associated with the severance payment, as well as any excise taxes due under Section 4999 applicable to parachute payments.

Potential Payments Upon Termination or Change-in-Control Ronald C. Weigner

Termination Circumstance:	Cash Severance Base Salary	Value of Accelerated Unvested Equity	Benefits Continuation(1)	Retiree Medical Benefits(2)	Acceleration of Pension Benefits(3)	Gross up of I.R.C. Golden Parachute excise tax resulting from Change-in-Control(4)	Total
Involuntary Without Cause Termination	\$130,625 (0.5x salary)	N/A	\$416	\$267,420	\$ 543,998	N/A	\$ 942,459
Executive Resignation with Good Reason	N/A	N/A	N/A	\$267,420	\$ 543,998	N/A	\$ 811,418
Retirement	N/A	N/A	N/A	\$210,487	\$ 543,998	N/A	\$ 754,485
Death(5)	N/A	\$375,106	N/A	\$160,354	\$ 271,999	N/A	\$ 807,459
Disability(5)	N/A	\$375,106	N/A	\$267,420	\$ 543,998	N/A	\$ 1,186,524

Within 24 Months Following a Change-in-Control:							
Termination by the Company Without Cause(6),(7),(8)	\$130,625 (0.5x salary)	\$382,800	\$416	\$267,420	\$ 543,998	\$0	\$ 1,325,259
Executive Resignation for Good Reason(6),(7),(8)	N/A	\$382,800	N/A	\$267,420	\$ 543,998	\$0	\$ 1,194,218
Between 24 Months and 36 Months Following a Change-in-Control:							
Termination by the Company Without Cause	\$130,625 (0.5x salary)	N/A	\$416	\$267,420	\$ 543,998	\$0	\$ 942,459
Executive Resignation for Good Reason	N/A	N/A	N/A	\$267,420	\$ 543,998	\$0	\$ 811,418

- (1) Benefits Continuation reflects our cost for continuation of life insurance, dental and vision coverage for 6 months.
- (2) Retiree Medical Benefits represent the estimated present value of the retiree medical benefit assuming the separation occurred on December 31, 2008.
- (3) This amount represents the present value of the accelerated amount of the accumulated benefit under the Supplemental Retirement Benefit. See also the description under Pension Benefits above.

Table of Contents

- (4) For purposes of assessing whether Mr. Weigner would be liable for a Section 4999 excise tax on parachute payments (and in turn entitled to a gross-up from us), the calculations assume that if Mr. Weigner was terminated within 24 months of a change-in-control, the vesting on his options would be accelerated (which the Board of Directors may determine at its discretion).
- (5) Upon death and disability, RSUs fully vest and the percentage of restricted stock equal to the percentage of time between the grant date and the third anniversary of the grant date remaining at the time of such death or disability is forfeited. The stated value assumes the death or disability occurred on December 31, 2008.
- (6) 100% of the unvested RSUs and restricted stock awards vest. For purposes of determining the value of the acceleration of unvested options, the calculations assume that Mr. Weigner was terminated following the change-in-control and the vesting on his options was accelerated by the Board of Directors (which the Board of Directors may determine at its discretion).
- (7) Upon a change-in-control, Mr. Weigner may be subject to certain excise taxes under Section 4999 applicable to parachute payments. We will reimburse Mr. Weigner for those excise taxes as well as any income and excise taxes payable by Mr. Weigner as a result of any reimbursement for the Section 4999 excise taxes. Had Mr. Weigner been terminated following a change-in-control on December 31, 2008, there would not have been an excise tax liability due.
- (8) To be eligible for retiree medical benefits, the termination only needs to occur within 36 months of the change-in-control.

Potential Payments Upon Termination or Change-in-Control Gerald G. Colella

Termination Circumstance:	Cash Severance	Value of	Benefits Continuation(1)	Acceleration of Pension Benefits(2)	Gross up of I.R.C. Golden Parachute excise tax resulting from	Total
	Base Salary	Accelerated Unvested Equity		Change-in-Control(3)		
Involuntary Without Cause Termination	\$137,375 (0.5x salary)	N/A	\$8,045	\$ 2,523,264	N/A	\$ 2,668,684
Death(4)	N/A	\$601,704	N/A	\$ 1,261,632	N/A	\$ 1,863,336
Disability(4) Within 24 Months Following a Change-in-Control:	N/A	\$601,704	N/A	\$ 2,523,264	N/A	\$ 3,124,968
Termination by the Company Without Cause(5),(6)	\$137,375 (0.5x salary)	\$612,480	\$8,045	\$ 2,523,264	\$1,128,576	\$ 4,409,740
Executive Resignation with Good Reason(5),(6)	N/A	\$612,480	N/A	\$ 2,523,264	\$1,055,418	\$ 4,191,162

Between 24 Months
and 36 Months
Following a

Change-in-Control:

Termination by the
Company Without
Cause

\$137,375
(0.5x salary)

N/A

\$8,045

\$ 2,523,264

\$1,042,946

\$ 3,711,630

Executive
Resignation for
Good Reason

N/A

N/A

N/A

\$ 2,523,264

\$969,788

\$ 3,493,052

- (1) Benefits Continuation reflects our cost for continuation of life insurance, medical, dental and vision coverage for 6 months.
- (2) This amount represents the present value of the accelerated amount of the accumulated benefit under the Supplemental Retirement Benefit. See also the description under Pension Benefits above.
- (3) For purposes of assessing whether Mr. Colella would be liable for a Section 4999 excise tax on parachute payments (and in turn entitled to a gross-up from us), the calculations assume that if Mr. Colella was terminated within 24 months of a change-in-control, the vesting on his options would be accelerated (which the Board of Directors may determine at its discretion).

Table of Contents

- (4) Upon death and disability, RSUs fully vest and the percentage of restricted stock equal to the percentage of time between the grant date and the third anniversary of the grant date remaining at the time of such death or disability is forfeited. The stated value assumes the death or disability occurred on December 31, 2008.
- (5) 100% of the unvested RSUs and restricted stock awards vest. For purposes of determining the value of the acceleration of unvested options, the calculations assume that Mr. Colella was terminated following the change-in-control and the vesting on his options was accelerated by the Board of Directors (which the Board of Directors may determine at its discretion).
- (6) Upon a change-in-control, Mr. Colella may be subject to certain excise taxes under Section 4999 applicable to parachute payments. We will reimburse Mr. Colella for those excise taxes as well as any income and excise taxes payable by Mr. Colella as a result of any reimbursement for the Section 4999 excise taxes. Had Mr. Colella been terminated following a change-in-control on December 31, 2008, there would not have been an excise tax liability due.

Potential Payments Upon Termination or Change-in-Control John A. Smith

Termination Circumstance:	Cash Severance Base Salary	Value of Accelerated Unvested Equity	Benefits Continuation(1)	Total(2)
Involuntary Without Cause Termination	\$140,125 (0.5x salary)	N/A	\$8,150	\$ 148,275
Death or Disability(3)	N/A	\$375,106	N/A	\$ 375,106
Within 24 Months of a Change-in-Control: Termination by the Company Without Cause(4)	\$140,125 (0.5x salary)	\$382,800	\$8,150	\$ 531,075
Within 24 Months of a Change-in-Control Executive Resignation with Good Reason	N/A	\$382,800	N/A	\$ 382,800

- (1) Benefits continuation reflects our cost for continuation of life insurance, medical, dental and vision coverage for 6 months.
- (2) The total does not include the present value of the accumulated benefit of deferred compensation. See the Nonqualified Deferred Compensation table for this information.
- (3) Upon death and disability, RSUs fully vest and the percentage of restricted stock equal to the percentage of time between the grant date and the third anniversary of the grant date remaining at the time of such death or disability is forfeited. The stated value assumes the death or disability occurred on December 31, 2008.
- (4) 100% of the unvested RSUs and restricted stock awards vest. For purposes of determining the value of accelerated unvested options, the calculations assume that Mr. Smith was terminated following the change-in-control and the vesting of his options was accelerated by the Board of Directors (which the Board of Directors may determine at its discretion).

Table of Contents**Potential Payments Upon Termination or Change-in-Control William D. Stewart**

Termination Circumstance:	Cash Severance Base Salary	Value of Accelerated Unvested Equity	Benefits Continuation(1)	Retiree Medical Benefits(2)	Total
Involuntary Without Cause Termination	\$123,500 (0.5x salary)	N/A	\$282	\$85,545	\$ 209,327
Executive Resignation with Good Reason	N/A	N/A	N/A	\$85,545	\$ 85,545
Retirement	N/A	N/A	N/A	\$75,344	\$ 75,344
Death(3)	N/A	\$450,135	N/A	N/A	\$ 450,135
Disability(3)	N/A	\$450,135	N/A	\$85,545	\$ 535,680
Within 24 Months of a Change-in-Control:					
Termination by the Company Without Cause(4),(5)	\$123,500 (0.5x salary)	\$459,360	\$282	\$85,545	\$ 668,687
Within 24 Months of a Change-in-Control					
Executive Resignation with Good Reason(4),(5)	N/A	\$459,360	N/A	\$85,545	\$ 544,905

- (1) Benefits Continuation reflects our cost for continuation of life insurance, dental and vision coverage for 6 months.
- (2) Retiree Medical Benefits represent the estimated present value of the retiree medical benefit assuming the separation occurred on December 31, 2008.
- (3) Upon death and disability, RSUs fully vest and the percentage of restricted stock equal to the percentage of time between the grant date and the third anniversary of the grant date remaining at the time of such death or disability is forfeited. The stated value assumes the death or disability occurred on December 31, 2008.
- (4) 100% of the unvested RSUs and restricted stock awards vest. For purposes of determining the value of the acceleration of unvested options, the calculations assume that Mr. Stewart was terminated following the change-in-control and the vesting on his options was accelerated by the Board of Directors (which the Board of Directors may determine at its discretion).
- (5) To be eligible for retiree medical benefits, the termination only needs to occur within 36 months of the change-in-control.

Table of Contents**DIRECTOR COMPENSATION***Cash Compensation*

The following table summarizes cash compensation payable by MKS to non-employee directors effective as of December 31, 2008. Effective as of August 25, 2008, the Board of Directors approved a temporary reduction of the cash compensation payable to John R. Bertucci, Chairman of the Board, by 10% from its original 2008 level, and by 5% with respect to other non-employee directors. The table below reflects this reduction. In addition, effective as of January 20, 2009, the Board of Directors approved a further temporary reduction to their cash compensation. Giving effect to this additional reduction, the cash compensation payable to John R. Bertucci has been reduced by 20% from its original 2008 level and by 10% for the other non-employee directors, as reflected in our Current Report on Form 8-K filed with the SEC on January 20, 2009.

	Annual Retainer	Attendance Fee per Meeting
Chairman	\$ 67,500	\$ 1,800
Board Members other than Chairman	\$ 30,400	\$ 1,900
Lead Director	\$ 15,200	\$ 0
Audit Committee Chairman	\$ 11,400	\$ 1,425
Other Audit Committee Members	\$ 0	\$ 1,425
Compensation Committee Chairman	\$ 9,500	\$ 1,425
Other Compensation Committee Members	\$ 0	\$ 1,425
Nominating & Corporate Governance Committee Chairman	\$ 5,700	\$ 1,425
Other Nominating & Corporate Governance Committee Members	\$ 0	\$ 1,425

Equity Compensation

Non-employee directors participate in our 2004 Stock Incentive Plan, which is administered by the Board of Directors. Non-employee directors receive automatic grants of RSUs as follows:

Type of Award	Date of Award	Number of RSUs	Vesting Schedule
Initial Award	Date of initial election to Board	6,666	Vests in 12 equal quarterly installments over a three year period
Annual*	Date of each Annual Meeting of Shareholders	4,000	Fully vests on the day prior to the first annual meeting of shareholders following the date of grant (or if no such meeting is held within 13 months after the date of grant, on the 13 month anniversary of the date of grant)

* Non-employee directors are eligible to receive annual awards if the non-employee director has been in office for at least six months prior to the date of the respective annual meeting of shareholders.

Mr. Bertucci

Mr. Bertucci resigned from his employment as our Executive Chairman effective December 31, 2006. At that time, he remained a Class III director and became non-executive Chairman of the Board. Pursuant to the terms of his employment agreement, Mr. Bertucci receives retiree medical benefits, which had a net present value of \$135,682 as of December 31, 2008, and which require that he make an annual contribution toward the benefit of \$1,500, plus

Table of Contents

30% of all costs. Mr. Bertucci also receives a car allowance for life, which had a net present value of \$178,691 as of December 31, 2008.

The following table summarizes compensation paid to non-employee directors in 2008. Mr. Berlinghieri is excluded from the table because he is an executive officer, and his compensation is set forth in the Executive Officer section above, under the heading Summary Compensation Table.

Director Compensation Table

Name	Fees Earned or		Change in Pension Value and Nonqualified Non-Equity Deferred Incentive				Total (\$)
	Paid in Cash (\$)	Stock Awards (\$)(1)	Option Awards (\$)(1)	Plan Compensation (\$)	Earnings Compensation		
					(\$)	(\$)	
Cristina H. Amon	\$ 42,339	\$ 118,162	\$ 0	\$ 0	\$ 0	\$ 0	\$ 160,501
Robert R. Anderson	\$ 52,614	\$ 101,276	\$ 0	\$ 0	\$ 0	\$ 0	\$ 153,890
Gregory R. Beecher	\$ 58,554	\$ 101,276	\$ 67,770	\$ 0	\$ 0	\$ 0	\$ 227,600
John R. Bertucci	\$ 80,171	\$ 57,285	\$ 0	\$ 0	\$ 0	\$ 314,373(3)	\$ 451,829
Richard S. Chute	\$ 48,235	\$ 101,276	\$ 0	\$ 0	\$ 0	\$ 0	\$ 149,511
Peter R. Hanley	\$ 34,856	\$ 37,241	\$ 0	\$ 0	\$ 0	\$ 0	\$ 72,097
Hans-Jochen Kahl	\$ 48,189	\$ 101,276	\$ 0	\$ 0	\$ 0	\$ 0	\$ 149,465
Louis P. Valente	\$ 72,826	\$ 101,276	\$ 0	\$ 0	\$ 0	\$ 0	\$ 174,102

(1) Represents the proportionate amount of the total fair value of equity awards recognized by us as an expense in 2008 for financial accounting purposes. The fair values of these awards and the amounts expensed in 2008 were determined in accordance with FAS 123R. The awards for which expense is shown in this table include awards granted in previous years for which we recognized expense in 2008. The assumptions used in determining the grant date fair values of these awards are set forth in the notes to our consolidated financial statements, which are included in our Annual Reports on Form 10-K filed with the SEC. Aggregate grant date fair values, calculated in accordance with FAS 123R, for RSUs granted in 2008 to the non-employee directors were \$133,920 for Mr. Hanley (who received an RSU for 6,666 shares on March 1, 2008) and \$94,520 for each of the other non-employee directors (who received RSUs for 4,000 shares on May 5, 2008). Aggregate number of equity awards (unvested RSUs and vested or unvested options) to non-employee directors outstanding at December 31, 2008 were as follows: Ms. Amon, 7,333 RSUs; Mr. Anderson, 62,819 options and 4,000 RSUs; Mr. Beecher, 20,000 options and 4,000 RSUs; Mr. Chute, 76,500 options and 4,000 RSUs; Mr. Hanley, 5,000 RSUs; Mr. Kahl, 14,819 options and 4,000 RSUs; and Mr. Valente, 82,500 options and 4,000 RSUs.

(2) As of December 31, 2008, Mr. Bertucci had 8,819 options outstanding, which options were granted to him in his former capacity as a director of Applied Science and Technology, Inc., which was acquired by MKS in 2001.

- (3) Mr. Bertucci receives retiree medical benefits under his previous employment agreement, which had a net present value of \$135,682 as of December 31, 2008 and which requires that he make an annual contribution toward the benefit of \$1,500, plus 30% of all costs. Mr. Bertucci also receives a car allowance for life, which had a net present value of \$178,691 as of December 31, 2008.

Table of Contents

Transactions with Related Persons

Mr. Stewart, our Group Vice President of Vacuum Products and PFM&C Products, shares a household with our Director of Operations, Vacuum Products Group, who in 2008 received from MKS approximately \$179,000 in salary, RSU grants for an aggregate of 3,250 shares of our Common Stock (with aggregate grant date value of approximately \$69,000) and was eligible to receive an annual bonus targeted at 25% of her salary (for which there was no payment in 2008).

Our written Code of Business Conduct and Ethics sets forth the general principle that our directors, officers and employees should refrain from engaging in any activity having a personal interest that presents a conflict of interest. The Code prohibits certain specified activities, and also prohibits directors, officers and employees from engaging in any other activity that may reasonably be expected to give rise to a conflict of interest or to adversely affect the interests of MKS. The Code provides that all employees are responsible to disclose any material transaction or relation that reasonably could be expected to give rise to a material conflict of interest to the Chief Financial Officer and officers and directors must report such transactions to the Board of Directors, who shall be responsible for determining whether such transaction or relationship constitutes a material conflict of interest. In addition, pursuant to its written charter, the Audit Committee must review all related party transactions (defined as transactions required to be disclosed pursuant to Item 404 of Regulation S-K) on an ongoing basis. Accordingly, any relationship that arises at any time that constitutes, or could in the future constitute, a related party transaction will be reported to the Audit Committee for its review. Additionally, directors and officers are required to submit annual certifications as to whether they are involved in any related party transaction and the Audit Committee reviews any such activities annually.

Table of Contents

REPORT OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

The Audit Committee of our Board of Directors is currently composed of three members and acts under a written charter adopted and approved on February 4, 2004 and amended on February 12, 2007 and on October 20, 2008. The members of the Audit Committee are independent directors, as defined by its charter and the rules of the NASDAQ Stock Market, and possess the financial sophistication required by such charter and rules. The Audit Committee held five meetings during the fiscal year ended December 31, 2008.

Management is responsible for our internal controls and the financial reporting process. Our independent registered public accounting firm, PwC, is responsible for performing an independent audit of our Company's financial statements and our internal control over financial reporting in accordance with the standards of the Public Company Accounting Oversight Board (United States), and issues a report on those financial statements. The Audit Committee is responsible for monitoring and overseeing these processes. As appropriate, the Audit Committee reviews and evaluates, and discusses with our management, internal accounting, financial and internal auditing personnel and the independent registered public accounting firm, the following:

the plan for, and the independent registered public accounting firm's report on, audits of our financial statements;

our financial disclosure documents, including all financial statements and reports filed with the SEC or sent to shareholders;

management's selection, application and disclosure of critical accounting policies;

major changes in our significant accounting practices, principles, controls or methodologies;

significant developments or changes in accounting rules applicable to us; and

the adequacy of our internal controls and accounting, financial and internal auditing personnel.

The Audit Committee reviewed our audited financial statements for the fiscal year ended December 31, 2008 and discussed these financial statements with our management. Management represented to the Audit Committee that our financial statements had been prepared in accordance with accounting principles generally accepted in the United States. The Audit Committee also reviewed and discussed the audited financial statements and the matters required by Statement on Auditing Standards No. 61—Communication with Audit Committees, as amended (SAS 61), with PwC, our independent registered public accounting firm. SAS 61 requires our independent registered public accounting firm to discuss with our Audit Committee, among other things, the following:

methods to account for significant unusual transactions;

the effect of significant accounting policies in controversial or emerging areas for which there is a lack of authoritative guidance or consensus;

the process used by management in formulating particularly sensitive accounting estimates and the basis for the registered public accounting firm's conclusions regarding the reasonableness of those estimates; and

disagreements with management over the application of accounting principles, the basis for management's accounting estimates and the disclosures in the financial statements.

The Audit Committee has discussed with the independent auditors the auditors' independence from management and the Company, including the matters in the written disclosures and a letter required by the applicable requirements of the Public Company Accounting Oversight Board regarding the independent auditor's communication with the Audit Committee concerning independence. The Audit Committee also considered whether the independent registered public accounting firm's provision of the other, non-audit related services to us, which are referred to below, is compatible with maintaining such independent registered public accounting firm's independence.

Table of Contents

Based on its discussions with management and the independent registered public accounting firm and its review of the representations and information provided by management and the independent registered public accounting firm, the Audit Committee recommended to our Board of Directors that our audited financial statements be included in the our Annual Report on Form 10-K for the year ended December 31, 2008.

By the Audit Committee of the Board of Directors of MKS Instruments, Inc.

Gregory R. Beecher, Chairman
Robert R. Anderson
Louis P. Valente

Table of Contents

**SECTION 16(a) BENEFICIAL
OWNERSHIP REPORTING COMPLIANCE**

Section 16(a) of the Exchange Act (Section 16(a)) requires executive officers, directors and shareholders who beneficially own more than ten percent (10%) of the our stock to file initial reports of ownership on Form 3 and reports of changes in ownership on Form 4 with the SEC and any national securities exchange on which our securities are registered. Executive officers, directors and greater than ten percent (10%) beneficial owners are required by the SEC s regulations to furnish us with copies of all Section 16(a) forms they file.

Based solely on a review of the copies of such forms furnished to us and written representations from the executive officers and directors, pursuant to Item 405 of Regulation S-K, we believe that all Section 16(a) filing requirements applicable to its officers, directors and greater than ten percent (10%) shareholders were complied with, except that each of Messrs. Colella, Stewart and Valente filed one late report with respect to a single transaction.

PROPOSAL TWO

**APPROVAL OF AMENDMENT TO 2004 STOCK INCENTIVE PLAN
TO ALLOW FOR A ONE-TIME STOCK OPTION EXCHANGE PROGRAM
FOR EMPLOYEES OTHER THAN DIRECTORS AND EXECUTIVE OFFICERS**

Overview

Our stock price has experienced a significant decline due to the downturn in the semiconductor manufacturing industry and compounded by the worldwide economic crisis. As a result, a significant number of stock options that were granted to MKS employees have an exercise price that is substantially under the current trading price (called underwater options). The Compensation Committee and the Board of Directors believe that these underwater options no longer provide the long-term incentive and retention objectives that they were intended to provide. Accordingly, we are seeking shareholder approval of an amendment to our 2004 Stock Incentive Plan, as amended (the 2004 Plan) to allow for a one-time stock option exchange program (the Option Exchange Program). If implemented, the Option Exchange Program would allow us to cancel underwater stock options with an exercise price in excess of a fixed amount in exchange for the grant of a lesser amount of restricted stock units (the New RSUs) with a one-year vesting period. All employees of MKS, but not MKS executive officers or members of the Board of Directors, would be eligible to participate (the Eligible Employees). The exchange ratio will be designed to result in a fair value of the New RSUs to be granted that will be approximately equal to the fair value of the options that are surrendered, based on valuation assumptions made as of the close of the Option Exchange Program, which we believe should result in no adverse impact on our reported earnings. We will use the 52-week high trading price of our Common Stock (measured from the start date of the Option Exchange Program) as the threshold for the exercise price of options that will be eligible to be exchanged (Eligible Options). Using this threshold is designed to ensure that only outstanding options that are substantially underwater are eligible for the Option Exchange Program. Under the proposed Option Exchange Program, each New RSU will have a new 12-month vesting period that begins on the grant date. The ratio of shares underlying exchanged options to shares underlying New RSUs will vary based on the relative market value of the exchanged options to the New RSUs. The number of New RSUs to be granted in exchange for each Eligible Option would be that number of RSUs (rounded down to the nearest whole) that would be derived by dividing the fair value of such Eligible Option (using the Black-Scholes option valuation model) by the closing sale price of the Common Stock on the closing date of the Option Exchange Program. Shareholder approval is required for this proposal under the Nasdaq listing rules. If MKS shareholders approve this proposal to amend the 2004 Plan, MKS intends to commence the Option Exchange Program as soon as practicable after the annual meeting, but in any event, the Option Exchange Program would need to be completed by November 4, 2009 (which is six months from the date of the

annual meeting). If MKS shareholders do not approve this proposal, the Option Exchange Program will not take place.

Table of Contents

Objectives of Program

Many of our employees now hold stock options with exercise prices significantly higher than the current market price of our Common Stock. For example, on February 27, 2009 (the last trading day preceding March 1, 2009), the closing price of our Common Stock on Nasdaq Global Select Market was \$12.59 per share. On that date, options to purchase approximately 3,087,299 shares of Common Stock held by Eligible Employees, representing substantially all outstanding stock options held by such holders, were underwater, meaning that the exercise price of the outstanding stock option was less than the market price for our Common Stock. Assuming that the Option Exchange Program commenced on March 1, 2009, the weighted average exercise price of options that would be deemed to be Eligible Options would have been \$29.02. Although we continue to believe that equity awards are an important component of our employees' total compensation, many of our employees view their existing options as having little or no value due to the difference between the exercise prices and the current market price of our Common Stock. As a result, for many employees, these options are ineffective at providing the incentive and retentive values that our Board of Directors believes are necessary to motivate our employees and to increase long-term shareholder value. We believe that the Option Exchange Program provides the following benefits:

The Option Exchange will provide renewed incentives and motivate the Eligible Employees to contribute to achieving future stock price growth. By realigning the value of previously granted stock options with the current value of our Common Stock, based on the exchange ratios described below, we believe that the New RSUs will become an important tool to help motivate the Eligible Employees to continue to create shareholder value.

The Option Exchange Program is designed to benefit our shareholders by providing renewed retention value due to the extended vesting terms of the New RSUs. Currently, we anticipate that all or substantially all of the Eligible Options will be fully vested at the time of the close of the Option Exchange Program. However, the New RSUs will have a new 12-month vesting period, thus providing an incentive for Eligible Employees to continue their employment.

The Option Exchange Program will also enable us to recapture value from compensation costs that we already are incurring with respect to outstanding equity awards that currently have very little motivational impact. By replacing options that have little or no retentive or incentive value with a lesser number of New RSUs, we will increase the retentive and incentive value of equity awards for which the Company has already incurred costs. In addition, replacing these options will not create additional compensation expense (other than immaterial expenses that may result from fluctuations in our stock price between the date the exchange ratios are set and the date the exchange actually occurs).

We estimate a reduction in our overhang of outstanding stock options of approximately 1,002,473 shares as a result of granting a lesser number of New RSUs in exchange for the Eligible Options, assuming (a) full participation in the Option Exchange Program, (b) market price of our Common Stock of \$12.59 per share, and (c) exchange ratios that result in the fair value of the New RSUs being equal to the fair value of the Eligible Options surrendered based on valuation assumptions made as of the close of the Option Exchange Program. The actual reduction in our total overhang that could result from the Option Exchange Program could vary significantly and is dependent upon a number of factors, including the actual level of participation in the Option Exchange Program.

Consideration of Alternatives

When considering how best to continue to incentivize and reward our employees who have underwater options, we considered alternatives:

Take no action. If we take no action, participants with significantly underwater options would continue to have diminished incentive and our equity overhang would not decrease.

Implement Option Exchange Program. Alternatively, we considered implementing an Option Exchange Program. We determined that a program under which employees could exchange stock options having an exercise

Table of Contents

price greater than the 52-week high trading price for our Common Stock, covering fewer shares, and having an additional vesting requirement was more attractive for a number of reasons, including the following:

Reasonable, Balanced Incentives. Under the Option Exchange Program, Eligible Employees would be able to surrender those underwater options with exercise prices greater than the 52-week high trading price for New RSUs covering fewer shares, and with an additional 12-month vesting requirement. In addition, we would calculate the exchange ratios to result in a fair value, for accounting purposes, of the New RSUs being equal to the fair value of the Eligible Options surrendered based on valuation assumptions made as of the close of the Option Exchange Program, which we believe should result in no adverse impact on our reported earnings. We believe this approach represents a reasonable and balanced Option Exchange Program with the potential for a positive impact on employee retention, motivation and performance.

Reduction of the Number of Shares Subject to Outstanding Equity Awards. Not only do the underwater options have little or no retentive value, they also cannot be removed from our stock option overhang until they are exercised or expire unexercised. If the proposal is approved by the shareholders and the Option Exchange Program is implemented, it will reduce our overhang of outstanding stock options by eliminating the ineffective options that are currently outstanding. Under the proposed Option Exchange Program, Eligible Employees will receive New RSUs covering fewer shares than the options surrendered. As a result, the number of shares subject to the total number of outstanding equity awards will be reduced, thereby reducing the overhang.

No Participation by Our Executive Officers or our Board of Directors. While several of our executive officers and Board of Directors hold underwater options, the Compensation Committee and the Board of Directors elected to exclude executive officers and members of the Board of Directors from the Option Exchange Program.

Description of the Option Exchange Program

Implementing the Option Exchange Program. If MKS shareholders approve this proposal to amend the 2004 Plan, MKS intends to commence the Option Exchange Program as soon as practicable after the annual meeting, but in any event, the Option Exchange Program would need to be completed by November 4, 2009 (which is six months from the date of the annual meeting). MKS would file a tender offer (an Offer to Exchange) with the SEC promptly following the annual meeting. From the time the Offer to Exchange commences, the Eligible Employees will be given at least 20 business days to make an election to surrender for cancellation all or a portion of their Eligible Options on a grant-by-grant basis in exchange for New RSUs. The New RSUs will be issued promptly following the closing of the Offer to Exchange. Even if the proposal is approved by our shareholders, our Board of Directors will retain the authority, in its sole discretion, to terminate or postpone the program, at any time prior to the closing of the Offer to Exchange, provided that the Option Exchange Program would need to be completed by November 4, 2009 (which is six months from the date of the annual meeting). In addition, the Board of Directors shall retain the right to exclude certain Eligible Options or Eligible Employees from participating in the Option Exchange Program due to tax, regulatory or accounting reasons or because participation would be inadvisable or impractical. Shareholder approval of the amendment to the 2004 Plan would only allow for this Option Exchange Program. If we were to implement an Option Exchange Program in the future, we would once again need to seek shareholder approval.

Outstanding Options Eligible for the Option Exchange Program. To be eligible for exchange under the Option Exchange Program, an option must have an exercise price that is greater than the highest closing price for the Common Stock on the Nasdaq Global Select Market in the 52 week period preceding the close of the exchange offer. Only employees who are not executive officers or members of the Board of Directors will be eligible to participate. As of March 1, 2009, options to purchase approximately 4,490,309 shares of our Common Stock were outstanding, of

which options to purchase approximately 1,215,245 shares would be eligible for exchange under the Option Exchange Program (assuming the program were to have commenced on that date).

Eligibility. The Option Exchange Program will be open to all of our employees, other than executive officers or members of the Board of Directors, who hold Eligible Options. We may exclude employees located outside of the United States from the Option Exchange Program if, for any reason, we believe that their participation would be

Table of Contents

inadvisable or impractical. To be eligible, an employee must be actively employed by MKS or our subsidiaries at the time the Offer to Exchange commences. Additionally, in order to receive the New RSUs, an Eligible Employee who surrenders his or her Eligible Options for exchange must be an active employee on the date the New RSUs are granted. As of March 1, 2009, approximately 758 employees hold Eligible Options (assuming the program were to have commenced on that date).

Exchange Ratios. Exchange ratios will be designed to result in a fair value, for accounting purposes, of the New RSUs that will be equal to the fair value of the Eligible Options surrendered based on valuation assumptions made as of the close of the Option Exchange Program. The exchange ratios will be designed to be cost-neutral for accounting purposes and may result in an immaterial accounting expense, depending upon the fluctuation of the stock price between the date the exchange ratios are set and the date the exchange actually occurs. In the proposed exchange offer, Eligible Employees would be offered a one-time opportunity to exchange their Eligible Options for New RSUs covering a smaller number of shares. The number of New RSUs to be granted in exchange for each Eligible Option would be that number of RSUs (rounded down to the nearest whole) that would be derived by dividing the fair value of such Eligible Option (using the Black-Scholes option valuation model) by the closing sale price of the Common Stock on the closing date of the Option Exchange Program.

The following table shows (a) the number of shares underlying outstanding Eligible Options in various exercise price ranges as of March 1, 2009 and (b) a hypothetical example of the exchange ratios that could be applied to calculate the number of shares subject to New RSUs to be granted in exchange for surrendered Eligible Options in each such exercise price range. The exchange ratios set forth in the table were calculated based on the assumption that the market price of our Common Stock is \$12.59 per share at the close of the Option Exchange Program and using exchange ratios that result in the fair value of the New RSUs being equal to the fair value of the Eligible Options surrendered based on valuation assumptions made as of the close of the Option Exchange Program. If the proposal is approved, and the Option Exchange Program is implemented, the actual exchange ratios used should result in (1) the issuance of fewer shares subject to the New RSUs than were subject to the cancelled Eligible Options tendered in the exchange offer and (2) the fair value, for accounting purposes, of Eligible Options surrendered being equal to the fair value of the New RSUs replacing them (other than immaterial expenses that might result from fluctuations in our stock price after the exchange ratios have been set but before the exchange actually occurs).

Exercise Price Range	Maximum Number of Shares Underlying Eligible Options	Weighted Average Exercise Price	Weighted Average Life (in years)	Hypothetical Weighted Average Exchange Ratio (Shares Underlying Eligible Options to Shares Underlying New RSUs) Based on Specified Assumptions	Hypothetical Number of Shares Underlying New RSUs that May be Granted Based on Specified Assumptions
\$48.62 - \$61.50	8,140	\$50.96	1.16	476.19 to 1	17
\$37.00 - \$41.88	33,000	\$38.22	2.46	17.63 to 1	1,871
\$29.25 - \$32.25	497,845	\$30.64	3.30	7.86 to 1	63,325
\$25.86 - \$27.87	676,260	\$27.11	4.64	4.58 to 1	147,559
\$25.86 - \$61.50	1,215,245	\$29.02	4.00	5.71 to 1	212,772

The actual exchange ratios will be determined once the closing price of our Common Stock on the closing day of the exchange offer is reported by the Nasdaq Global Select Market. New RSUs granted in accordance with the actual exchange ratios will be rounded down to the nearest whole share on a grant-by-grant basis. Adjustments to any of the assumptions used to calculate the information in the above table will result in a change to the number of shares underlying New RSUs that may be granted under the Option Exchange Program.

Election to Participate. Participation in the Option Exchange Program will be voluntary. Eligible Employees will be permitted to exchange all or none of their Eligible Options for New RSUs on a grant-by-grant basis.

Table of Contents

Vesting of New RSUs. Currently, we anticipate that all or substantially all of the Eligible Options will be fully vested at the time of the close of the Option Exchange Program. However, the New RSUs will have a new 12-month vesting period, beginning on the grant date of the New RSU.

Must be Completed within Six Months of Approval. If our shareholders approve the proposal, we intend to commence the Option Exchange Program as soon as practicable after the annual meeting, but in any event, the Option Exchange Program would need to be completed by November 4, 2009 (which is six months from the date of the annual meeting).

Other Terms and Conditions of the New RSUs. The other terms and conditions of the New RSUs will be set forth in an award agreement to be entered into as of the New RSU grant date, consistent with our standard terms for RSU awards. The shares of Common Stock for which the New RSUs may be exercised are currently registered on a registration statement filed with the SEC.

Return of Eligible Options Surrendered. Consistent with the terms of the 2004 Plan, the pool of shares of Common Stock available for the grant of future awards under the 2004 Plan will increase or decrease by that number of shares equal to the difference between (a) the number of shares of Common Stock underlying surrendered Eligible Options originally issued under the 2004 Plan and (b) the number of shares of Common Stock underlying New RSUs issued under the Plans.

Accounting Treatment. We are following the provisions of Financial Accounting Standards Board Statement of Financial Accounting Standards No. 123 (Revised), or FAS 123(R), regarding accounting for share-based payments. Under FAS 123(R), we will recognize any incremental compensation cost of the New RSUs granted in the Option Exchange Program. The incremental compensation cost will be measured as the excess, if any, of the fair value of each New RSU granted to employees in exchange for surrendered Eligible Options, measured as of the date the New RSUs are granted, over the fair value of the Eligible Options surrendered in exchange for the New RSUs, measured immediately prior to the cancellation. This potential incremental compensation cost, if any, will be recognized ratably over the vesting period of the New RSUs. However, because the exchange ratios will be calculated to result in the fair value of Eligible Options surrendered being equal to the fair value of the New RSUs replacing them, we do not expect to recognize any significant incremental compensation expense for financial reporting purposes as a result of the Option Exchange Program. As would be the case with Eligible Options, in the event that any of the New RSUs are forfeited prior to their vesting due to termination of service, any compensation cost for the forfeited New RSUs would not be recognized.

U.S. Federal Income Tax Consequences. The following is a summary of the material United States federal income tax consequences of the Option Exchange Program for those Eligible Employees who are subject to United States federal income tax. This summary is based on the federal tax laws in effect as of the date of this proxy statement. Changes to these laws could alter the tax consequences described below. A more detailed summary of the applicable tax considerations to Eligible Employees will be provided to them in the Offer to Exchange. This summary does not discuss all of the tax consequences that may be relevant to an Eligible Employee in light of his or her personal circumstances, nor is it intended to be applicable in all respects to all categories of Eligible Employees.

We believe that the exchange of Eligible Options for New RSUs pursuant to the Option Exchange Program should be treated as a non-taxable exchange, and no income should be recognized for United States federal income tax purposes by the Eligible Employees upon the issuance of the New RSUs. The Eligible Employees will recognize ordinary compensation income on the date that the New RSUs vest in an amount equal to the fair market value of our stock on such date multiplied by the number of shares subject to the New RSUs. Upon disposition of the shares, the Eligible Employees will recognize capital gain or loss (which will be short-term or long-term depending on whether the shares were held for more than one year from the date of vesting) equal to the difference between the selling price and the

fair market value of the shares on the date of vesting. The holding period for the shares will begin on the day after the date of vesting. If Eligible Options that are incentive stock options are not exchanged in the Option Exchange Program, then such options may be deemed to be newly granted for United States federal income tax purposes.

There will be no United States federal income tax consequences to us with respect to the Option Exchange Program or the vesting of the New RSUs (or the exercise of Eligible Options not exchanged) except that we will be

Table of Contents

entitled to a deduction when an Eligible Employee has compensation income. Any such deduction will be subject to the limitations of Section 162(m) of the Internal Revenue Code.

Potential Modifications to Terms to Comply with Governmental Requirements. The terms of the Option Exchange Program will be described in an Offer to Exchange that we will file with the SEC. Although we do not anticipate that the SEC will require us to modify the terms significantly, it is possible we will need to alter the terms of the Option Exchange Program to comply with comments from the SEC. In addition, we intend to make the Option Exchange Program available to our employees located outside of the United States, where permitted by local law and where we determine it is feasible and practicable to do so. It is possible that we may need to make modifications to the terms offered to employees in countries outside the United States to comply with local requirements, or for tax or accounting reasons. We reserve the right not to conduct the Option Exchange Program in countries in which we deem it inadvisable to do so for any reason.

Effect on Shareholders

We are not able to predict the impact the Option Exchange Program will have on your interests as a shareholder, as we are unable to predict how many participants will exchange their Eligible Options or what the future market price of our Common Stock will be on the date that the New RSUs are granted. If the proposal is approved and the Option Exchange Program is implemented, the exchange ratios should result in (1) the issuance of fewer shares subject to the New RSUs than were subject to the cancelled Eligible Options tendered in the exchange offer and (2) the fair value of Eligible Options surrendered being equal to the fair value of the New RSUs replacing them. As a consequence, we do not expect to recognize any incremental compensation expense for financial reporting purposes from the Option Exchange Program (other than immaterial expenses that might result from fluctuations in our stock price after the exchange ratios have been set but before the exchange actually occurs). In addition, the Option Exchange Program is intended to reduce our existing stock option overhang. The actual reduction in our overhang that could result from the Option Exchange Program could vary significantly and is dependent upon a number of factors, including the actual level of participation in the Option Exchange Program.

While we cannot predict how many Eligible Options will be exchanged, assuming full participation in the Option Exchange Program, market price of our Common Stock of \$12.59 per share and exchange ratios that result in the fair value of the New RSUs being equal to the fair value of the Eligible Options surrendered based on valuation assumptions made as of the close of the Option Exchange Program, the total number of shares underlying our outstanding options would be reduced by approximately 1,002,473 shares.

Text of Amendment to the 2004 Plan

In order to permit the Company to implement the one-time stock option exchange program in compliance with the 2004 Plan and applicable NASDAQ listing rules, the Compensation Committee and the Board of Directors approved the amendment to the 2004 Plan, subject to approval of our shareholders. The amendment would add a new subsection (g) to Section 5 of the 2004 Plan, which new section will read as follows:

(g) Option Exchange. The Board may authorize a one-time option exchange program (the Exchange Offer) to be completed prior to November 4, 2009. Under the Exchange Offer, employee holders (who are not members of the Board or executive officers (as such term is defined under Rule 3b-7 of the Securities Exchange Act of 1934, as amended)) (the Exchange Act) of outstanding stock options having an exercise price in excess of the highest closing price for the Common Stock on the Nasdaq Global Select Market in the 52 week period preceding the commencement of the Exchange Offer (the Old Options) would have the right to elect to exchange such Old Options for a lesser number of restricted stock units (the New RSUs). The number of New RSUs to be granted in exchange for each Old Option would be that number of RSUs (rounded down to the nearest whole) that would be derived by dividing the fair

value of such Old Option by the closing sale price of the Common Stock at the close of the Exchange Offer. The New RSUs would have a new vesting period of one year (provided that if the Old Option is still subject to vesting at the time of surrender, the vesting period shall be one year plus such remaining vesting period) and would be granted promptly after cancellation of the Old Options.

Table of Contents

Summary of the 2004 Plan

The following summary of the 2004 Plan is qualified in its entirety by reference to the full text of the 2004 Plan, a copy of which is attached as Appendix A to the electronic copy of this Proxy Statement filed with the SEC and may be accessed from the SEC's home page (www.sec.gov). In addition, a copy of the 2004 Plan may be obtained by making a written request to MKS.

Description of Awards.

The 2004 Plan provides for the grant of incentive stock options, nonstatutory stock options, stock appreciation rights, awards of restricted stock and unrestricted stock, and other stock-based awards, including restricted stock units (or RSUs) and performance shares. As of January 1, 2009, an aggregate of 13,442,295 shares of Common Stock was authorized for issuance under the 2004 Plan (subject to adjustment for certain changes in MKS' capitalization).

Incentive Stock Options and Nonstatutory Options. Optionees receive the right to purchase a specified number of shares of Common Stock at some time in the future at an option price and subject to such terms and conditions as are specified at the time of the grant. Incentive stock options and options that the Board of Directors or Compensation Committee intends to qualify as performance-based compensation under Section 162(m) of the Internal Revenue Code, may not be granted at an exercise price less than the fair market value of the Common Stock on the date of grant (or less than 110% of the fair market value in the case of incentive stock options granted to optionees holding 10% or more of the total combined voting stock of MKS or any of its subsidiaries). Non-qualified options may be granted with an exercise price that may be less than, equal to or greater than the fair market value of the Common Stock on the date of grant. The 2004 Plan permits the following forms of payment of the exercise price of options: (i) payment by cash, check or in connection with a cashless exercise through a broker, (ii) delivery to MKS of a promissory note, (iii) any other lawful means, or (iv) any combination of these forms of payment.

Restricted Stock. Restricted stock awards entitle recipients to acquire shares of Common Stock, subject to the right of MKS to repurchase all or part of such shares at their issue price from the recipient in the event that the conditions specified in the applicable stock award are not satisfied prior to the end of the applicable restriction period established for such award, or portion of such award, in the case of restrictions which lapse ratably.

RSUs. RSU awards entitle recipients to acquire shares of Common Stock to be delivered at the time the RSU vests. RSU awards to executive officers typically vest in equal annual installments over three years, with half of the award subject to achievement of the performance goal. RSU awards to non-executive officers typically vest on the third anniversary of the date of grant.

Stock Appreciation Rights and Performance Shares. A stock appreciation right is based on the value of Common Stock and entitles the holder to receive consideration to the extent that the fair market value on the date of exercise of the shares of Common Stock underlying the right exceeds the fair market value of the underlying shares on the date the right was granted. A performance share award entitles the recipient to acquire shares of Common Stock upon the attainment of specified performance goals.

Administration.

The 2004 Plan is administered by the Board of Directors and the Compensation Committee. The Board of Directors has the authority to grant awards under the 2004 Plan and to accelerate, waive or amend certain provisions of outstanding awards. The Board of Directors has authorized the Compensation Committee to administer certain aspects of the 2004 Plan. The Board of Directors has authorized the Chief Executive Officer of MKS to make awards to non-executive officer employees, subject to the limitations that (i) option awards may not be for more than

35,000 shares, and restricted stock and RSU awards may not be for more than 15,000 shares, each subject to adjustment as set forth in the plan, and (ii) in addition, such awards may not exceed a maximum fair market value on the date of grant of \$150,000. The maximum number of shares with respect to which awards may be granted to any one participant in any calendar year is 900,000 shares.

Subject to any applicable limitations contained in the 2004 Plan, the Board of Directors or any committee or individual to whom the Board of Directors delegates authority, as the case may be, selects the recipients of awards

Table of Contents

and determines (i) the number of shares of Common Stock covered by awards and the dates upon which such options become exercisable, (ii) the exercise price of options, (iii) the duration of options (which may not exceed 10 years) and (iv) the number of shares of Common Stock subject to any restricted stock, RSU or other stock-based awards and the terms and conditions of such awards, including conditions for repurchase or vesting, and any issue price or repurchase price.

The Board of Directors is required to make appropriate adjustments in connection with the 2004 Plan and any outstanding awards to reflect stock splits, stock dividends, recapitalizations, spin-offs and other similar changes in capitalization. The 2004 Plan also contains provisions addressing the consequences of any Reorganization Event, which is defined as (a) any merger or consolidation of the Company with or into another entity as a result of which all of the Common Stock of the Company is converted into or exchanged for the right to receive cash, securities or other property, (b) any exchange of all of the Common Stock of the Company for cash, securities or other property pursuant to a share exchange transaction or (c) the liquidation or dissolution of the Company. Upon the occurrence of a Reorganization Event, the Board of Directors will take one or more of the following actions as to all or any outstanding awards on such terms as the Board determines: (i) provide that awards are assumed or be substituted by the acquiring or succeeding corporation, (ii) upon written notice to a participant, provide that the participant's unexercised options or other unexercised awards become exercisable in full and will terminate immediately prior to the consummation of the Reorganization Event unless exercised by the participant within a specified period following the date of such notice, (iii) provide that outstanding awards become realizable or deliverable, or restrictions applicable to an award lapse, in whole or in part prior to or upon such Reorganization Event, (iv) make or provide for a cash payment to a Participant, (v) provide that, in connection with a liquidation or dissolution of the Company, awards convert into the right to receive liquidation proceeds and (vi) any combination of the foregoing. Upon the occurrence of a Reorganization Event, the repurchase and other rights of the Company under each outstanding restricted stock award will inure to the benefit of the acquiring or succeeding corporation. The Board of Directors will specify the effect of a Reorganization Event on any other award at the time the award is granted.

If any award expires or is terminated, surrendered, canceled or forfeited, the unused shares of Common Stock covered by such award will again be available for grant under the 2004 Plan, subject, however, in the case of incentive stock options, to any limitations under the Code.

Eligibility to Receive Awards

Employees, officers, directors, consultants and advisors of the Company and its subsidiaries are eligible to be granted awards under the 2004 Plan. Under present law, however, incentive stock options may only be granted to employees of the Company and its subsidiaries. The maximum number of shares with respect to which awards may be granted to any participant under the 2004 Plan may not exceed 900,000 shares per calendar year.

Plan Benefits

As of March 31, 2009, approximately 815 persons were eligible to receive awards under the 2004 Plan, including the Company's executive officers, non-employee directors and consultants. The granting of awards under the 2004 Plan is discretionary, and the Company cannot determine the number or type of awards to be granted in the future to any particular person or group. Each recipient of an award under the 2004 Plan is referred to as a participant. All of the employees, officers, directors, consultants and advisors of MKS and its subsidiaries who are expected to contribute to MKS' future growth and success are eligible to participate in the 2004 Plan.

Amendment or Termination

No award may be made under the 2004 Plan after March 3, 2014, but awards previously granted may extend beyond that date. The Board of Directors may at any time amend, suspend or terminate the 2004 Plan, except that no award designated as subject to Section 162(m) of the Code by the Board of Directors after the date of such amendment shall become exercisable, realizable or vested (to the extent such amendment was required to grant such award) unless and until such amendment shall have been approved by the Company's stockholders. If the amendment to the 2004 Plan proposed above is not approved by the shareholders, the 2004 Plan will continue to be effective, but we will not be able to effect the proposed Option Exchange Program.

Table of Contents

Federal Income Tax Consequences

The following generally summarizes the United States federal income tax consequences that generally will arise with respect to awards granted under the 2004 Plan and with respect to the sale of Common Stock acquired under the 2004 Plan. This summary is based on the tax laws in effect as of the date of this proxy statement. Changes to these laws could alter the tax consequences described below.

Incentive Stock Options. A participant will not have income upon the grant of an incentive stock option. Also, except as described below, a participant will not have income upon exercise of an incentive stock option if the participant has been employed by MKS or a majority-owned corporate subsidiary of MKS at all times beginning with the option grant date and ending three months before the date the participant exercises the option. If the participant has not been so employed during that time, then the participant will be taxed as described below under Nonstatutory Stock Options. The exercise of an incentive stock option may subject the participant to the alternative minimum tax.

A participant will have income upon the sale of the stock acquired under an incentive stock option at a profit (if sales proceeds exceed the exercise price). The type of income will depend on when the participant sells the stock. If a participant sells the stock more than two years after the option was granted and more than one year after the option was exercised, then all of the profit will be long-term capital gain. If a participant sells the stock prior to satisfying these waiting periods, then the participant will have engaged in a disqualifying disposition and a portion of the profit will be ordinary income and a portion may be capital gain. This capital gain will be long-term if the participant has held the stock for more than one year and otherwise will be short-term. If a participant sells the stock at a loss (sales proceeds are less than the exercise price), then the loss will be a capital loss. This capital loss will be long-term if the participant held the stock for more than one year and otherwise will be short-term.

Nonstatutory Stock Options. A participant will not have income upon the grant of a nonstatutory stock option. A participant will have compensation income upon the exercise of a nonstatutory stock option equal to the value of the stock on the day the participant exercised the option less the exercise price. Upon sale of the stock, the participant will have capital gain or loss equal to the difference between the sales proceeds and the value of the stock on the day the option was exercised. This capital gain or loss will be long-term if the participant has held the stock for more than one year and otherwise will be short-term.

Restricted Stock. A participant will not have income upon the grant of restricted stock unless an election under Section 83(b) of the Code is made within 30 days of the date of grant. If a timely 83(b) election is made, then a participant will have compensation income equal to the value of the stock less the purchase price. When the stock is sold, the participant will have capital gain or loss equal to the difference between the sales proceeds and the value of the stock on the date of grant. If the participant does not make an 83(b) election, then when the stock vests the participant will have compensation income equal to the value of the stock on the vesting date less the purchase price. When the stock is sold, the participant will have capital gain or loss equal to the sales proceeds less the value of the stock on the vesting date. Any capital gain or loss will be long-term if the participant held the stock for more than one year and otherwise will be short-term.

RSUs. A participant will not have income upon the grant of a restricted stock unit. A participant is not permitted to make a Section 83(b) election with respect to a restricted stock unit award. When the restricted stock unit vests, the participant will have income on the vesting date in an amount equal to the fair market value of the stock on the vesting date less the purchase price, if any. When the stock is sold, the participant will have capital gain or loss equal to the sales proceeds less the value of the stock on the vesting date. Any capital gain or loss will be long-term if the participant held the stock for more than one year and otherwise will be short-term.

Other Stock-Based Awards. The tax consequences associated with any other stock-based award granted under the 2004 Plan will vary depending on the specific terms of such award. Among the relevant factors are whether or not the award has a readily ascertainable fair market value, whether or not the award is subject to forfeiture provisions or restrictions on transfer, the nature of the property to be received by the participant under the award and the participant's holding period and tax basis for the award or underlying Common Stock.

Table of Contents

Tax Consequences to MKS. The grant of an award under the 2004 Plan will have no tax consequences to MKS. MKS will be entitled to a business-expense deduction when a participant has compensation income. Any such deduction will be subject to the limitations of Section 162(m) of the Code.

THE BOARD OF DIRECTORS BELIEVES THAT THE PROPOSAL TO APPROVE AN AMENDMENT TO THE 2004 STOCK INCENTIVE PLAN TO ALLOW FOR A ONE-TIME STOCK OPTION EXCHANGE PROGRAM FOR EMPLOYEES OTHER THAN DIRECTORS AND EXECUTIVE OFFICERS IS IN THE BEST INTERESTS OF MKS AND OUR SHAREHOLDERS AND THEREFORE RECOMMENDS A VOTE FOR THIS PROPOSAL.

Table of Contents

PROPOSAL THREE

**APPROVAL OF AMENDMENT TO THE
THIRD RESTATED EMPLOYEE STOCK PURCHASE PLAN
TO INCREASE THE NUMBER OF SHARES AVAILABLE THEREUNDER
FROM 1,250,000 TO 1,950,000**

Overview

Our Board of Directors adopted the Third Restated 1999 Employee Stock Purchase Plan (the 1999 ESPP) to provide eligible employees of MKS and certain of our subsidiaries with opportunities to purchase shares of Common Stock. Under the 1999 ESPP, we are currently authorized to sell to our eligible employees, through payroll deductions, up to an aggregate of 1,250,000 shares of Common Stock. As of February 9, 2009, there were 104,104 shares available for future sale under the 1999 ESPP. Accordingly, on February 9, 2009, MKS Board of Directors adopted an amendment, subject to stockholder approval, to the 1999 ESPP that increased from 1,250,000 to 1,950,000 the number of shares of Common Stock available for sale under the 1999 ESPP, subject to adjustment for certain changes in our capitalization.

Summary of the 1999 ESPP

The following summary of the 1999 ESPP is qualified in its entirety by reference to the full text of the 1999 ESPP, a copy of which is attached as Appendix B to the electronic copy of this Proxy Statement filed with the SEC and may be accessed from the SEC's home page (www.sec.gov). In addition, a copy of the 1999 ESPP may be obtained by making a written request to MKS.

Description of the Plan.

The 1999 ESPP permits employees of MKS and its designated subsidiaries to purchase shares of Common Stock through a series of offerings. Each offering may last up to one year. Offerings under the 1999 ESPP commence every six months, so at any given point in time, MKS may be conducting more than one offering. Each eligible employee may elect to have amounts withheld from compensation, which amounts will accrue in an account for such employee during the period of an offering. On the last day of the offering period, funds that have accrued in this account will be used to purchase Common Stock, subject to certain limitations, at a purchase price that is generally 85% of the closing price of the Common Stock on either the initial date of each offering period, or on the last day of the offering period, whichever is less.

Administration.

The 1999 ESPP is administered by the Board of Directors or by a committee appointed by the Board of Directors. The Board of Directors or its committee has the authority to adopt, amend and repeal such administrative rules, guidelines and practices relating to the 1999 ESPP as it shall deem advisable. The Board of Directors may also correct any defect, supply any omission or reconcile any inconsistency in the 1999 ESPP in the manner and to the extent it deems expedient to carry the 1999 ESPP into effect. The Board of Directors or its committee is the sole and final judge of such expediency and its decisions are final and binding.

Eligibility.

Persons eligible to participate in an offering under the 1999 ESPP are generally those employees who (i) are customarily employed by MKS for more than twenty (20) hours a week and for more than five (5) months in a

calendar year; (ii) have been employed by MKS for at least three (3) months prior to enrollment; (iii) are MKS employees on the date that the option is offered; and (iv) do not own five percent (5%) or more of the total combined voting power or value of all classes of MKS stock or that of its subsidiaries.

Table of Contents

Limitation.

No employee may be granted an option under the 1999 ESPP which permits the employee's rights to purchase Common Stock under the 1999 ESPP and any other MKS stock purchase plan to accrue at a rate that exceeds \$25,000 of the fair market value (measured based on the fair market value of the stock on the offering period commencement date) of Common Stock for each calendar year in which the option to purchase such stock is outstanding at any time.

Payroll Deductions.

Eligible employees may authorize a payroll deduction up to a maximum of 10% of their compensation. Payroll deductions are then credited to the employee's accounts and are withheld in whole percentages only. Interest will not be paid on any account. The employee may decrease or discontinue payroll deductions once during an offering period by filing a new payroll deduction authorization form. However, the employee may not increase payroll deductions during an offering period. If the employee elects to discontinue payroll deductions, but does not elect to withdraw funds, the funds in the account will be used to purchase Common Stock on the last day of the offering period.

Grant of Option.

On the beginning date of each offering period, MKS will grant each employee who is participating in the 1999 ESPP an option to purchase a certain maximum number of shares on the last day of the offering period. That amount is determined by multiplying \$2,083 by the number of full months in the offering period and dividing the result by the closing price of Common Stock on the beginning date of the offering period. The employee does not become a stockholder of the Common Stock granted by the option until the shares are purchased and issued.

Purchase Price.

The purchase price of the shares of Common Stock to be sold pursuant to any given offering is equal to the lesser of (i) 85% of the closing price of Common Stock on the first business day of the offering period; or (ii) 85% of the closing price of Common Stock on the last trading day of the purchase period. For so long as Common Stock is traded on the Nasdaq Global Select Market, the closing price of Common Stock shall be the last reported sales price.

Exercise of Option.

An employee's option to purchase shares is exercised automatically on the last trading date of the offering period. Upon exercise, the employee will purchase the maximum number of full or fractional shares of Common Stock allowable on this date based on the applicable purchase price and the accumulated payroll deductions in the employee's account, subject in all cases to the limits described above. Any money left over in the employee's account following the purchase will be returned.

Changes in Capitalization.

In the event of a stock split, a subdivision of outstanding shares of Common Stock, or payment of a dividend in Common Stock, the number of shares and the share limitation, approved for the 1999 ESPP, shall be modified proportionately.

Merger or Consolidation.

In the event of a merger or consolidation of MKS with another corporation in which the holders of MKS capital stock before the merger or consolidation continue to hold at least 80% of the voting power of the capital stock in the newly

merged corporation, those who hold options under the 1999 ESPP will, per exercisable option, upon an exercise of such options under the terms described in the 1999 ESPP, be entitled to purchase what the stockholders of MKS capital stock received per share during the merger or consolidation.

In the event of a merger or consolidation of MKS with another corporation in which the holders of MKS capital stock before the merger or consolidation do not hold at least 80% of the voting power of the capital stock in

Table of Contents

the newly merged corporation, and the merger or consolidation does not constitute a sale of substantially all of the Company's assets, the options outstanding under the 1999 ESPP shall be cancelled on the date of such merger or consolidation. However, notice of this cancellation will be provided, and each option holder will have the right to exercise their options based on payroll deductions credited in the account at a date determined by the Board of Directors or its committee, but not less than ten days prior to such transaction.

United States Federal Income Tax Consequences

The following generally summarizes the United States federal income tax consequences that will arise with respect to participation in the 1999 ESPP and with respect to the sale of Common Stock acquired under the 1999 ESPP. This summary is based on the tax laws in effect as of the date of this proxy statement. Changes to these laws could alter the tax consequences described below.

Tax Consequences to Participants. A participant will not have income upon enrolling in the 1999 ESPP or upon purchasing stock at the end of an offering.

A participant may have both compensation income and a capital gain or loss upon the sale of stock that was acquired under the 1999 ESPP. The amount of each type of income and loss will depend on when the participant sells the stock. If the participant sells the stock more than two years after the commencement of the offering during which the stock was purchased and more than one year after the date that the participant purchased the stock, at a profit (the sales proceeds exceed the purchase price), then the participant will have compensation income equal to the lesser of:

15% of the value of the stock on the day the offering commenced; and

the participant's profit.

Any excess profit will be long-term capital gain. If the participant sells the stock at a loss (if sales proceeds are less than the purchase price) after satisfying these waiting periods, then the loss will be a long-term capital loss.

If the participant sells the stock prior to satisfying these waiting periods, then he or she will have engaged in a disqualifying disposition. Upon a disqualifying disposition, the participant will have compensation income equal to the value of the stock on the day he or she purchased the stock less the purchase price. The participant also will have a capital gain or loss equal to the difference between the sales proceeds and the value of the stock on the day he or she purchased the stock. This capital gain or loss will be long-term if the participant has held the stock for more than one year and otherwise will be short-term.

Tax Consequences to MKS. There will be no tax consequences to MKS except that it will be entitled to a business-expense deduction when a participant has compensation income upon a disqualifying disposition. Any such deduction will be subject to the limitations of Section 162(m) of the Code.

BOARD RECOMMENDATION

THE BOARD OF DIRECTORS BELIEVES THAT THE PROPOSED AMENDMENT TO THE 1999 ESPP IS IN THE BEST INTERESTS OF MKS AND OUR SHAREHOLDERS AND THEREFORE RECOMMENDS A VOTE FOR THIS PROPOSAL.

Table of Contents

PROPOSAL FOUR

**APPROVAL OF AMENDMENT TO THE
SECOND AMENDED AND RESTATED
INTERNATIONAL EMPLOYEE STOCK PURCHASE PLAN
TO INCREASE THE NUMBER OF SHARES AVAILABLE THEREUNDER
FROM 250,000 TO 400,000**

Overview

Our Board of Directors adopted the Second Amended and Restated International Employee Stock Purchase Plan (the International ESPP), to provide eligible employees of certain non-United States subsidiaries of MKS with opportunities to purchase shares of Common Stock. Under the International ESPP, MKS is currently authorized to sell to its eligible employees of designated subsidiaries, through payroll deductions, up to an aggregate of 250,000 shares of Common Stock. As of February 9, 2009, there were 41,026 shares available for future sale under the International ESPP. Accordingly, on February 9, 2009, MKS Board of Directors adopted, subject to stockholder approval, an amendment to the International ESPP that increased the number of shares of Common Stock available for sale under the International ESPP from 250,000 to 400,000, subject to adjustment for certain changes in MKS capitalization.

Summary of the International ESPP

The following summary of the International ESPP is qualified in its entirety by reference to the full text of the International ESPP, a copy of which is attached as Appendix C to the electronic copy of this Proxy Statement filed with the SEC and may be accessed from the SEC's home page (www.sec.gov). In addition, a copy of the International ESPP may be obtained by making a written request to MKS.

Description of the Plan

The International ESPP permits employees of certain non-U.S. subsidiaries to purchase shares of Common Stock through a series of offerings. Each offering may last up to one year. Offerings under the International ESPP commence every six months, so at any given point in time, MKS may be conducting more than one offering. Each eligible employee may elect to have amounts withheld from compensation which amounts will accrue in an account for such employee during the period of an offering. On the last day of the offering period, funds that have accrued in this account will be used to purchase Common Stock, subject to certain limitations, at a purchase price that is generally 85% of the closing price of the Common Stock on either the initial date of each offering, or on the last day of the offering period, whichever is less.

Administration

The International ESPP is administered by the Board of Directors or by a committee appointed by the Board of Directors. The Board of Directors or its committee has the authority to adopt, amend and repeal such administrative rules, guidelines and practices relating to the International ESPP as it shall deem advisable. The Board of Directors may also correct any defect, supply any omission or reconcile any inconsistency in the International ESPP in the manner and to the extent it deems expedient to carry the International ESPP into effect. The Board of Directors or its committee is the sole and final judge of such expediency and its decisions are final and binding. The Board of Directors or its committee may also establish additional conditions or provisions for the participation of the Company's eligible employees in the International ESPP in order to comply with the tax, securities and other laws and regulation of the countries in which the Company's eligible employees reside, even if such conditions or provisions increase the

benefits accruing to the Company's eligible employees under the International ESPP.

Eligibility

Persons eligible to participate in an offering under the International ESPP, to the extent permitted by local law, are generally those employees who (i) are customarily employed by a designated non-U.S. subsidiary for more than twenty (20) hours a week and for more than five (5) months in a calendar year; (ii) have been employed by a

Table of Contents

designated non-U.S. subsidiary for at least three (3) months prior to enrollment; (iii) are MKS employees of a designated non-U.S. subsidiary on the day the option is offered; and (iv) do not own five percent (5%) or more of the total combined voting power or value of all classes of MKS stock.

Limitation

No employee may be granted an option under the International ESPP which permits the employee's rights to purchase Common Stock under the International ESPP and any other stock purchase plan of MKS and its subsidiaries, to accrue at a rate that exceeds U.S. \$25,000 of the fair market value (measured based on the fair market value of the stock on the offering period commencement date) of Common Stock for each calendar year in which the option is outstanding at any time.

Tax Withholding

The employee's enrollment in the International ESPP will authorize MKS to deduct from the employee's compensation the amount necessary for payment or reimbursement of any tax liability payable by the employee because of a grant of options to the employee under the International ESPP, the exercise of options under the International ESPP, or the sale of any stock acquired through the exercise of options.

Payroll Deductions

Eligible employees may authorize a payroll deduction up to a maximum of 10% of their compensation. Payroll deductions are then credited to the employee's accounts and are withheld in whole percentages only. Interest will not be paid on any account. The employee may decrease or discontinue payroll deductions once during a plan period by filing a new payroll deduction authorization form. However, the employee may not increase payroll deductions during a plan period. All payroll deductions will be converted into U.S. currency at such time or times as is approved by the Board of Directors or its committee.

Grant of Option

On the beginning date of each plan period, MKS will grant the employee who is participating in the International ESPP, an option to purchase a certain number of shares on the last day of the plan period. That amount is determined by multiplying U.S. \$2,083 by the number of full months in the offering period and dividing the results by the closing price of MKS stock on the beginning date of the plan period. An employee does not become a stockholder of the Common Stock subject to an option until the shares are purchased and issued.

Purchase Price

The purchase price of the shares of Common Stock to be sold pursuant to any given plan period is equal to the lesser of (i) 85% of the fair market value of Common Stock on the first business day of the plan period or (ii) 85% of the fair market value of Common Stock on the last day of the offering period. For so long as the Common Stock is traded on the Nasdaq Global Select Market, the closing price of Common Stock shall be the last reported sales price.

Exercise of Option

An employee's option to purchase shares is exercised automatically on the last trading date of the plan period. Upon exercise, the employee will purchase the maximum number of full or fractional shares of Common Stock allowable on this date based on the applicable purchase price and the accumulated payroll deductions in the employee's account, subject in all cases to the limits described above.

Change in Capitalization

In the event of a subdivision of outstanding shares of Common Stock, or payment of a dividend in Common Stock, the number of shares and the share limitation, approved for the International ESPP, shall be modified proportionately.

Table of Contents

Merger or Consolidation

In the event of a merger or consolidation of MKS with another corporation in which the stockholders of MKS capital stock before the merger or consolidation continue to hold at least 80% of the voting power of the capital stock in the newly merged corporation, those who hold options under the International ESPP, will, per exercisable option, upon an exercise of such options under the terms described in the International ESPP, be entitled to purchase what the holders of MKS capital stock received per share during the merger or consolidation.

In the event of a merger or consolidation of MKS with another corporation in which the holders of MKS capital stock before the merger or consolidation do not hold at least 80% of the voting power of the capital stock in the newly merged corporation, and the merger or consolidation does not constitute a sale of substantially all of the Company's assets, the options outstanding under the International ESPP shall be cancelled on the date of such merger or consolidation, provided that notice of such cancellation will be given, and each option holder will have the right to exercise his or her options based on payroll deductions credited in the account at a date determined by the Board of Directors or its committee, but not less than ten days before the date of the transaction.

Certain United States Federal Tax Consequences for Non-U.S. Participants in MKS's International ESPP

The following is a general discussion of certain material U.S. federal tax consequences to a non-U.S. person who receives and exercises options to purchase shares of Common Stock under MKS's International ESPP, and who disposes of Common Stock following such exercise. Each non-U.S. participant in the International ESPP should consult a tax advisor regarding the U.S. federal, state, local, estate, gift and all non-U.S. tax consequences of participating in MKS's International ESPP. This discussion does not consider, among other things, U.S. state and local or non-U.S. tax consequences. This summary is based on the tax laws in effect as of the date of this Proxy Statement. Changes to these laws could alter the tax consequences described below, possibly with retroactive effect.

As used in this discussion, the term "non-U.S. participant" means an individual participant in MKS's International ESPP who is not, for U.S. federal income tax purposes, a citizen or resident of the United States. As used in this discussion, the term "non-U.S. holder" means an individual beneficial owner of Common Stock who is not, for U.S. federal income tax purposes, a citizen or resident of the United States or otherwise subject to United States taxation on their worldwide income.

An individual may be treated as a resident of the United States in any calendar year for U.S. federal income tax purposes, instead of as a nonresident, if, among other things, such individual is physically present in the United States on at least 31 days in that calendar year and for an aggregate of at least 183 days during the three-year period ending on December 31 of that calendar year, counting all of the days physically present in the United States in the current year, one-third of the days present in the immediately preceding year and one-sixth of the days present in the second preceding year. Residents are taxed for U.S. federal income tax purposes as if they were U.S. citizens.

Receipt and Exercise of Option to Purchase Common Stock

A non-U.S. participant generally will not be subject to any U.S. federal income tax or withholding tax upon the receipt of an option to purchase Common Stock under the International Employee Purchase Plan. A non-U.S. participant generally will not be subject to any U.S. federal income tax or withholding tax upon the exercise of an option to purchase Common Stock under the International ESPP.

Gain on Disposition of Common Stock

A non-U.S. holder generally will not be subject to any U.S. federal income tax or withholding tax on any gain recognized on a sale or other disposition of Common Stock, whether or not such disposition is deemed to be a disqualifying disposition, unless, among other things: (i) the gain is effectively connected with the non-U.S. holder's conduct of a trade or business in the United States and, in the event that an income tax treaty applies, is also attributable to a permanent establishment maintained by the non-U.S. holder in the United States; (ii) the non-U.S. holder is an individual who is present in the United States for 183 or more days in the taxable year of the disposition and certain other requirements are met; or (iii) the holder is subject to tax pursuant to U.S. federal income tax provisions applicable to certain U.S. expatriates.

Table of Contents

U.S. Estate Tax Consequences

Common Stock that is owned or is treated as owned by a non-U.S. holder at the time of death will be included in that individual's gross estate for U.S. federal estate tax purposes, unless an applicable estate tax treaty provides otherwise.

Tax Consequences to MKS

There will be no U.S. federal income tax consequences to MKS in connection with transactions relating to MKS's International ESPP, except that MKS may be entitled to a deduction when a participant has compensation. Any such deduction will be subject to the limitations of Section 162(m) of the Code.

BOARD RECOMMENDATION

THE BOARD OF DIRECTORS BELIEVES THAT THE PROPOSED AMENDMENT TO THE INTERNATIONAL ESPP IS IN THE BEST INTERESTS OF MKS AND OUR SHAREHOLDERS AND THEREFORE RECOMMENDS A VOTE FOR THIS PROPOSAL.

Table of Contents

PROPOSAL FIVE

**RATIFICATION OF APPOINTMENT OF INDEPENDENT
REGISTERED PUBLIC ACCOUNTING FIRM**

On February 3, 2009, the Audit Committee appointed PwC as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2009. PwC was our independent registered public accounting firm for the fiscal year ended December 31, 2008.

Representatives of PwC are expected to be present at the Annual Meeting and will have the opportunity to make a statement if they so desire and will be available to respond to appropriate questions from shareholders. In the event that the ratification of the appointment of PwC as our independent registered public accounting firm is not obtained at the Annual Meeting, the Board of Directors will reconsider its appointment.

THE BOARD OF DIRECTORS BELIEVES THAT THE PROPOSAL TO RATIFY THE APPOINTMENT OF PWC AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2009 IS IN THE BEST INTERESTS OF MKS AND OUR SHAREHOLDERS AND THEREFORE RECOMMENDS A VOTE FOR THIS PROPOSAL.

OTHER MATTERS

The Board of Directors does not know of any other matters which may come before the meeting. However, if any other matters are properly presented to the meeting, it is the intention of the persons named in the accompanying proxy to vote, or otherwise act, in accordance with their judgment on such matters.

All costs of solicitation of proxies will be borne by us. In addition to solicitations by mail, our directors, officers and regular employees, without additional remuneration, may solicit proxies by telephone and personal interviews and we reserve the right to retain outside agencies for the purpose of soliciting proxies. Brokers, custodians and fiduciaries will be requested to forward proxy soliciting material to the owners of stock held in their names, and we will reimburse them for their reasonable out-of-pocket expenses incurred in connection with the distribution of proxy materials.

Table of Contents**INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

For the years ended December 31, 2008 and 2007, aggregate fees for professional services rendered by our independent registered public accounting firm, PwC, in the following categories were as follows:

	2008	2007
Audit Fees	\$ 1,707,454	\$ 1,807,497
Audit-Related Fees		
Tax Fees	306,100	707,214
All Other Fees	1,500	1,500
Total	\$ 2,015,054	\$ 2,516,211

Audit Fees

Audit Fees for the years ended December 31, 2008 and 2007 were for professional services provided for the audit of our consolidated financial statements and of our internal control over financial reporting, statutory and subsidiary audits, consents and assistance with review of documents filed with the SEC.

Tax Fees

Tax Fees for the year ended December 31, 2008 were for services related to tax compliance, including the preparation of tax returns; and tax planning and tax advice, including assistance with foreign operations. Tax Fees for the year ended December 31, 2007 were for services related to tax compliance, including the preparation of tax returns; and tax planning and tax advice, including assistance with acquisitions, mergers, reorganizations and foreign operations.

All Other Fees

All Other Fees for the year ended December 31, 2008 and 2007 were for research software.

In 2008 and 2007, no fees were provided under the de minimis exception to the Audit Committee pre-approval requirements.

Pre-Approval Policy and Procedures

The Audit Committee's charter sets forth their obligations relating to the approval of all audit and non-audit services that are to be performed by our independent registered public accounting firm. The charter provides that we will not engage our independent registered public accounting firm to provide audit or non-audit services unless the service is pre-approved by the Audit Committee. In addition, we will not engage any other accounting firm to provide audit services unless such services are pre-approved by the Audit Committee.

In connection with the foregoing, the Audit Committee may approve specific services in advance. In addition, from time to time, the Audit Committee may pre-approve specified types of services that are expected to be provided to us by our independent registered public accounting firm during the next 12 months. Any such pre-approval of types of services is detailed as to the particular service or type of service to be provided and is also generally subject to a

maximum dollar amount.

The Audit Committee has also delegated to the Chairman of the Audit Committee the authority to approve any audit or non-audit services to be provided to us by our independent registered public accounting firm. Any approval of services by the Chairman of the Audit Committee pursuant to this delegated authority is reported on at the next meeting of the Audit Committee.

The Audit Committee has considered and determined that the provision of the non-audit services noted in the foregoing table is compatible with maintaining PwC's independence.

Table of Contents

**DEADLINE FOR SUBMISSION OF SHAREHOLDER PROPOSALS
FOR THE 2010 ANNUAL MEETING**

Proposals of shareholders intended to be presented at the 2010 Annual Meeting of Shareholders must be received by us at our principal office in Andover, Massachusetts not later than November 24, 2009, for inclusion in the proxy statement for that meeting.

In addition, our By-Laws (which are on file with the SEC) require that we be given advance notice of matters that shareholders wish to present for action at an Annual Meeting of Shareholders (other than matters included in MKS's proxy statement in accordance with Rule 14a-8 of the Exchange Act). The required written notice must be delivered to our Secretary at our principal offices at least 60 days prior to the Annual Meeting, but no more than 90 days prior to such meeting or it will be considered untimely. However, if less than 40 days notice of the Annual Meeting is provided to the shareholders, the written notice of the shareholder must be received by our Secretary no later than 10 days after the notice of the Annual Meeting was mailed or publicly disclosed. The advance notice provisions of our By-Laws contain the requirements of the written notice of shareholders and supersede the notice requirement contained in Rule 14a-4(c)(1) under the Exchange Act.

IMPORTANT NOTICE REGARDING DELIVERY OF SECURITY HOLDER DOCUMENTS

Some banks, brokers and other nominee record holders are currently "householding" proxy statements and annual reports. This means that only one copy of our proxy statement or annual report may have been sent to multiple shareholders in your household. We will promptly deliver a separate copy of either document to you if you call or write us at the following address or phone number: **MKS Instruments, Inc., 2 Tech Drive, Suite 201, Andover, Massachusetts 01810, (978) 645-5500, Attn: Investor Relations or (800) 227-8766 ext. 5576**. You may also access our proxy statement and related materials at www.mksinstruments.com/AnnualMeetingMaterials. If you want to receive separate copies of the annual report and proxy statement in the future, or if you are receiving multiple copies and would like to receive only one copy for your household, you should contact your bank, broker, or other nominee record holder, or you may contact us at the above address and phone number.

By Order of the Board of Directors,

RICHARD S. CHUTE

Secretary

March 23, 2009

THE BOARD OF DIRECTORS ENCOURAGES SHAREHOLDERS TO ATTEND THE ANNUAL MEETING. WHETHER OR NOT YOU PLAN TO ATTEND, YOU ARE URGED TO COMPLETE, DATE, SIGN AND RETURN THE ENCLOSED PROXY IN THE ACCOMPANYING ENVELOPE. A PROMPT RESPONSE WILL GREATLY FACILITATE ARRANGEMENTS FOR THE MEETING AND YOUR COOPERATION WILL BE APPRECIATED. SHAREHOLDERS WHO ATTEND THIS MEETING MAY VOTE THEIR STOCK PERSONALLY EVEN THOUGH THEY HAVE SENT IN THEIR PROXIES.

MKS INSTRUMENTS, INC.

**SECOND AMENDED & RESTATED
AUDIT COMMITTEE CHARTER
October 20, 2008**

A. Purpose

The purpose of the Audit Committee is to assist the Board of Directors' oversight of the Company's accounting and financial reporting processes and the audits of the Company's financial statements.

B. Structure and Membership

1. *Selection and Number.* Members of the Audit Committee, appointed after the adoption of this charter, shall be appointed by the Board of Directors. The Audit Committee shall consist of at least three members of the Board of Directors.

2. *Independence.* Except as otherwise permitted by the applicable NASDAQ rules, each member of the Audit Committee shall be independent as defined by NASDAQ rules, meet the criteria for independence set forth in Rule 10A-3(b)(1) under the Securities Exchange Act of 1934, as amended, (the "Exchange Act") (subject to the exemptions provided in Rule 10A-3(c)).

3. *Financial Literacy.* Each member of the Audit Committee must be able to read and understand fundamental financial statements, including the Company's balance sheet, income statement, and cash flow statement, at the time of his or her appointment to the Audit Committee. In addition, at least one member must have past employment experience in finance or accounting, requisite professional certification in accounting, or any other comparable experience or background which results in the individual's financial sophistication, including being or having been a chief executive officer, chief financial officer or other senior officer with financial oversight responsibilities. Unless otherwise determined by the Board of Directors (in which case disclosure of such determination shall be made in the Company's annual report filed with the SEC), at least one member of the Audit Committee shall be an audit committee financial expert (as defined by applicable SEC rules).

4. *Chair.* Unless the Board of Directors elects a Chair of the Audit Committee, the Audit Committee shall elect a Chair by majority vote.

5. *Compensation.* No member of the Audit Committee may receive, directly or indirectly, any consulting, advisory or other compensatory fee from the Company or any of its subsidiaries, other than fees paid in his or her capacity as a member of the Board of Directors or a committee of the Board.

C. Authority and Responsibilities

General

The Audit Committee shall discharge its responsibilities, and shall assess the information provided by the Company's management and the independent auditor, in accordance with its business judgment. Management is responsible for the preparation, presentation, and integrity of the Company's financial statements and for the appropriateness of the accounting principles and reporting policies that are used by the Company. The independent auditors are responsible

for auditing the Company's financial statements and for reviewing the Company's unaudited interim financial statements. The authority and responsibilities set forth in this Charter do not reflect or create any duty or obligation of the Audit Committee to plan or conduct any audit, to determine or certify that the Company's financial statements are complete, accurate, fairly presented, or in accordance with generally accepted accounting principles or applicable law, or to guarantee the independent auditor's report.

Table of Contents

Oversight of Independent Auditors

1. *Selection.* The Audit Committee shall be solely and directly responsible for appointing, evaluating, retaining and, when necessary, terminating the engagement of the independent auditor. The Audit Committee may, in its discretion, seek stockholder ratification of the independent auditor it appoints.

2. *Independence.* The Audit Committee shall take, or recommend that the full Board of Directors take, appropriate action to oversee the independence of the independent auditor. In connection with this responsibility, the Audit Committee shall obtain and review a formal written statement from the independent auditor describing all relationships between the auditor and the Company, including the disclosures required by Independence Standards Board Standard No. 1. The Audit Committee shall actively engage in dialogue with the auditor concerning any disclosed relationships or services that might impact the objectivity and independence of the auditor.

Annually, the Audit Committee shall consider whether, in order to assure continuing auditor independence, there should be regular rotation of the independent audit firm.

3. *Compensation.* The Audit Committee shall have sole and direct responsibility for setting the compensation of the independent auditor. The Audit Committee is empowered, without further action by the Board of Directors, to cause the Company to pay the compensation of the independent auditor established by the Audit Committee.

4. *Preapproval of Services.* The Audit Committee shall preapprove all audit services to be provided to the Company, whether provided by the principal auditor or other firms, and all other services (review, attest and non-audit) to be provided to the Company by the independent auditor; provided, however, that de minimis non-audit services may instead be approved in accordance with applicable SEC rules.

5. *Oversight.* The independent auditor shall report directly to the Audit Committee, and the Audit Committee shall have sole and direct responsibility for overseeing the work of the independent auditor, including resolution of disagreements between Company management and the independent auditor regarding financial reporting. In connection with its oversight role, the Audit Committee shall, from time to time as appropriate, receive and consider the reports required to be made by the independent auditor regarding:

critical accounting policies and practices;

alternative treatments within generally accepted accounting principles for policies and practices related to material items that have been discussed with Company management, including ramifications of the use of such alternative disclosures and treatments, and the treatment preferred by the independent auditor; and

other material written communications between the independent auditor and Company management.

Audited Financial Statements

6. *Review and Discussion.* The Audit Committee shall review and discuss with the Company's management and independent auditor the Company's audited financial statements, including the matters about which Statement on Auditing Standards No. 61 (Codification of Statements on Auditing Standards, AU §380) requires discussion.

7. *Recommendation to Board Regarding Financial Statements.* The Audit Committee shall consider whether it will recommend to the Board of Directors that the Company's audited financial statements be included in the Company's Annual Report on Form 10-K.

8. *Audit Committee Report.* The Audit Committee shall prepare an annual committee report for inclusion where necessary in the proxy statement of the Company relating to its annual meeting of security holders.

Review of Other Financial Disclosures

9. *Independent Auditor Review of Interim Financial Statements.* The Audit Committee shall direct the independent auditor to use its best efforts to perform all reviews of interim financial information prior to disclosure by the Company of such information and to discuss promptly with the Audit Committee and the Chief Financial Officer any matters identified in connection with the auditor's review of interim financial information which are

Table of Contents

required to be discussed by applicable auditing standards. The Audit Committee shall direct management to advise the Audit Committee in the event that the Company proposes to disclose interim financial information prior to completion of the independent auditor's review of interim financial information.

10. *Earnings Release and Other Financial Information.* The Audit Committee shall discuss generally the types of information to be disclosed in the Company's earnings press releases, as well as in financial information and earnings guidance provided to analysts, rating agencies and others. The Audit Committee need not discuss in advance each earnings release or each instance in which the Company may provide earnings guidance.

11. *Quarterly Financial Statements.* The Company shall distribute to the Audit Committee, and provide the Audit Committee the opportunity to comment on, the Company's quarterly financial statements prior to the public disclosure thereof.

Controls and Procedures

12. *Oversight.* The Audit Committee shall coordinate the Board of Directors' oversight of the Company's internal control over financial reporting, disclosure controls and procedures and code of conduct. The Audit Committee shall receive and review the reports of the CEO and CFO required by Rule 13a-14 of the Exchange Act.

The Audit Committee shall review the reports on internal accounting controls contemplated by Sections 103 and 404 of the Sarbanes-Oxley Act.

The Audit Committee, where appropriate, shall discuss with the Company's outside counsel, legal matters that may have a material impact on the financial statements or the Company's compliance policies.

The Audit Committee shall be notified of all communications and discussions with the SEC's accounting staff and the Audit Committee shall receive copies of all correspondence between the Company and the SEC's accounting staff.

13. *Procedures for Complaints.* The Audit Committee shall establish procedures for (i) the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters; and (ii) the confidential, anonymous submission by employees of the Company of concerns regarding questionable accounting or auditing matters.

14. *Related-Party Transactions.* The Audit Committee shall review all related party transactions (defined as transactions required to be disclosed pursuant to Item 404 of Regulation S-K) on an ongoing basis.

15. *Additional Powers.* The Audit Committee shall have such other duties as may be delegated to it from time to time by the Board of Directors.

Procedures and Administration

16. *Meetings.* The Audit Committee shall meet as often as it deems necessary in order to perform its responsibilities. The Audit Committee may also act by unanimous written consent in lieu of a meeting. The Audit Committee may, as deemed necessary, meet separately with: (i) the independent auditor; (ii) Company management; and (iii) the Company's internal auditors. The Audit Committee shall keep such records of its meetings as it shall deem appropriate.

17. *Subcommittees.* The Audit Committee may form and delegate authority to one or more subcommittees (including a subcommittee consisting of a single member), as it deems appropriate from time to time under the circumstances. Any decision of a subcommittee to preapprove audit, review, attest or non-audit services shall be presented to the full

Audit Committee at its next scheduled meeting.

18. *Reports to Board.* The Audit Committee shall report regularly to the Board of Directors. The Audit Committee shall review with the full Board of Directors any issues that arise with respect to the quality or integrity of the Company's financial statements, the Company's compliance with legal or regulatory requirements, the performance and independence of the Company's independent auditors or the performance of the internal audit function.

Table of Contents

19. *Charter.* At least annually, the Audit Committee shall review and reassess the adequacy of this Charter.

20. *Independent Advisors.* The Audit Committee is authorized, without further action by the Board of Directors, to engage such independent legal, accounting and other advisors as it deems necessary or appropriate to carry out its responsibilities. Such independent advisors may be the regular advisors to the Company. The Audit Committee is empowered, without further action by the Board of Directors, to cause the Company to pay the compensation of such advisors as established by the Audit Committee.

21. *Investigations.* The Audit Committee shall have the authority to conduct or authorize investigations into any matters within the scope of its responsibilities as it shall deem appropriate, including the authority to request any officer, employee or advisor of the Company to meet with the Audit Committee or any advisors engaged by the Audit Committee.

22. *Funding.* The Audit Committee is empowered, without further action by the Board of Directors, to cause the Company to pay the ordinary administrative expenses of the Audit Committee that are necessary or appropriate in carrying out its duties.

Table of Contents

APPENDIX A

**MKS INSTRUMENTS, INC.
2004 STOCK INCENTIVE PLAN**
(as amended by the Board of Directors on
February 9, 2009, subject to Stockholder approval)

1. Purpose

The purpose of this 2004 Stock Incentive Plan (the **Plan**) of MKS Instruments, Inc., a Massachusetts corporation (the **Company**), is to advance the interests of the Company's stockholders by enhancing the Company's ability to attract, retain and motivate persons who are expected to make important contributions to the Company and by providing such persons with equity ownership opportunities and performance-based incentives that are intended to better align their interests with those of the Company's stockholders. Except where the context otherwise requires, the term **Company** shall include any of the Company's present or future subsidiary corporations as defined in Section 424(f) of the Internal Revenue Code of 1986, as amended, and any regulations promulgated thereunder (the **Code**) and any other business venture (including, without limitation, joint venture or limited liability company) in which the Company has a controlling interest, as determined by the Board of Directors of the Company (the **Board**).

2. Eligibility

All of the Company's employees, officers, directors, consultants and advisors are eligible to receive options, restricted stock awards, stock appreciation rights and other stock-based awards (each, an **Award**) under the Plan. Each person who receives an Award under the Plan is deemed a **Participant**.

3. Administration and Delegation

(a) **Administration by Board of Directors.** The Plan will be administered by the Board. The Board shall have authority to grant Awards and to adopt, amend and repeal such administrative rules, guidelines and practices relating to the Plan as it shall deem advisable. The Board may correct any defect, supply any omission or reconcile any inconsistency in the Plan or any Award in the manner and to the extent it shall deem expedient to carry the Plan into effect and it shall be the sole and final judge of such expediency. All decisions by the Board shall be made in the Board's sole discretion and shall be final and binding on all persons having or claiming any interest in the Plan or in any Award. No director or person acting pursuant to the authority delegated by the Board shall be liable for any action or determination relating to or under the Plan made in good faith.

(b) **Appointment of Committees.**

(1) To the extent permitted by applicable law, the Board may delegate any or all of its powers under the Plan to one or more committees or subcommittees of the Board (a **Committee**). During such time as the common stock, no par value per share, of the Company (the **Common Stock**) is registered under the Securities Exchange Act of 1934 (the **Exchange Act**), the Board shall appoint one such Committee of not less than two members, each member of which shall be an **outside director** within the meaning of Section 162(m) of the Code and a **non-employee director** as defined in Rule 16b-3 promulgated under the Exchange Act.

Table of Contents

(2) To the extent permitted by applicable law, the Board may delegate to one or more officers of the Company, who, if required by law, are also members of the Board, the power to make Awards and exercise such other powers under the Plan as the Board shall determine, provided that the Board shall fix the maximum number of shares subject to Awards to be made by any such person and such other terms as the Board may determine are appropriate.

(3) All references in the Plan to the Board shall mean the Board, a Committee of the Board or any person described in subsection (2) above, to the extent that the Board's powers or authority under the Plan have been delegated to such Committee or person.

4. Stock Available for Awards

(a) Number of Shares. Subject to adjustment under Section 9, the number of shares of Common Stock available for Awards under the Plan: (i) shall annually increase by 5% of the total shares of the Company's outstanding Common Stock on January 1 of each year; and (ii) in the event of an increase in the total shares of the Company's Common Stock after January 1 of any such year in connection with the acquisition of any corporation, partnership or other business entity by the Company (whether by merger, stock purchase or otherwise), shall increase by 5% of such increased amount. Such increases shall occur until such time as the aggregate number of shares of Common Stock which may be issued under the Plan is 15,000,000 shares, subject to adjustment under Section 9. If any Award expires or is terminated, surrendered or canceled without having been fully exercised or is forfeited in whole or in part (including as the result of shares of Common Stock subject to such Award being repurchased by the Company at the original issuance price pursuant to a contractual repurchase right) or results in any Common Stock not being issued, the unused Common Stock covered by such Award shall again be available for the grant of Awards under the Plan, subject, however, in the case of Incentive Stock Options (as hereinafter defined), to any limitations under the Code. Shares issued under the Plan may consist in whole or in part of authorized but unissued shares or treasury shares.

(b) Per-Participant Limit. Subject to adjustment under Section 9, the maximum number of shares of Common Stock with respect to which Awards may be granted to any Participant under the Plan shall be 900,000 per calendar year. The per-Participant limit described in this Section 4(b) shall be construed and applied consistently with Section 162(m) of the Code.

5. Stock Options

(a) General. The Board may grant options to purchase Common Stock (each, an Option) and determine the number of shares of Common Stock to be covered by each Option, the exercise price of each Option and the conditions and limitations applicable to the exercise of each Option, including conditions relating to applicable federal or state securities laws, as it considers necessary or advisable. An Option which is not intended to be an Incentive Stock Option (as hereinafter defined) shall be designated a Nonstatutory Stock Option.

(b) Incentive Stock Options. An Option that the Board intends to be an incentive stock option as defined in Section 422 of the Code (an Incentive Stock Option) shall only be granted to employees of MKS Instruments, Inc., any of MKS Instruments, Inc.'s present or future subsidiary corporations as defined in Section 424(f) of the Code, and any other entities the

Table of Contents

employees of which are eligible to receive Incentive Stock Options under the Code, and shall be subject to and shall be construed consistently with the requirements of Section 422 of the Code. The Company shall have no liability to a Participant, or any other party, if an Option (or any part thereof) that is intended to be an Incentive Stock Option is not an Incentive Stock Option or for any action taken by the Board pursuant to Section 10(f), including without limitation the conversion of an Incentive Stock Option to a Nonstatutory Stock Option.

(c) **Exercise Price.** The Board shall establish the exercise price of each Option and specify such exercise price in the applicable option agreement.

(d) **Duration of Options.** Each Option shall be exercisable at such times and subject to such terms and conditions as the Board may specify in the applicable option agreement; provided, however, that no Option will be granted for a term in excess of 10 years.

(e) **Exercise of Option.** Options may be exercised by delivery to the Company of a written notice of exercise signed by the proper person or by any other form of notice (including electronic notice) approved by the Board together with payment in full as specified in Section 5(f) for the number of shares for which the Option is exercised.

(f) **Payment Upon Exercise.** Common Stock purchased upon the exercise of an Option granted under the Plan shall be paid for as follows:

- (1) in cash or by check, payable to the order of the Company;
- (2) except as the Board may otherwise provide in an option agreement, by (i) delivery of an irrevocable and unconditional undertaking by a creditworthy broker to deliver promptly to the Company sufficient funds to pay the exercise price and any required tax withholding or (ii) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a creditworthy broker to deliver promptly to the Company cash or a check sufficient to pay the exercise price and any required tax withholding;
- (3) to the extent permitted by applicable law and by the Board, by (i) delivery of a promissory note of the Participant to the Company on terms determined by the Board, or (ii) payment of such other lawful consideration as the Board may determine; or
- (4) by any combination of the above permitted forms of payment.

(g) **Option Exchange.** The Board may authorize a one-time option exchange program (the **Exchange Offer**) to be completed prior to November 4, 2009. Under the Exchange Offer, employee holders (who are not members of the Board or executive officers (as such term is defined under Rule 3b-7 of the Securities Exchange Act of 1934, as amended)) (the **Exchange Act**) of outstanding stock options having an exercise price in excess of the highest closing price for the Common Stock on the Nasdaq Global Select Market in the 52 week period preceding the commencement of the Exchange Offer (the **Old Options**) would have the right to elect to exchange such Old Options for a lesser number of restricted stock units (the **New RSUs**). The number of New RSUs to be granted in exchange for each Old Option would be that number of RSUs (rounded down to the nearest whole) that would be derived by dividing the fair value of such Old Option by the closing sale price of the Common Stock at the close of the Exchange Offer. The New RSUs would have a new vesting period of one year (provided that if the Old Option is still subject to vesting at the time of surrender, the vesting period shall be one year plus such remaining vesting period) and would be granted promptly after cancellation of the Old Options.

6. Stock Appreciation Rights.

(a) **Nature of Stock Appreciation Rights.** A Stock Appreciation Right, or SAR, is an Award entitling the holder on exercise to receive an amount in cash or Common Stock or a combination thereof (such form to be determined by the Board) determined in whole or in part by reference to appreciation, from and after the date of grant, in the fair market value of a share of Common Stock. SARs may be based solely on appreciation in the fair market value of Common Stock or on a comparison of such appreciation with some other measure of market growth such as (but not limited to) appreciation in a recognized market index. The date as of which such appreciation or other measure is determined shall be the exercise date unless another date is specified by the Board in the SAR Award.

Table of Contents

(b) Grants. Stock Appreciation Rights may be granted in tandem with, or independently of, Options granted under the Plan.

(c) Exercise. Any exercise of a Stock Appreciation Right must be in writing, signed by the proper person and delivered or mailed to the Company, accompanied by any other documents required by the Board.

7. Restricted Stock.

(a) Grants. The Board may grant Awards entitling recipients to acquire shares of Common Stock, subject to the right of the Company to repurchase all or part of such shares at their issue price or other stated or formula price (or to require forfeiture of such shares if issued at no cost) from the recipient in the event that conditions specified by the Board in the applicable Award are not satisfied prior to the end of the applicable restriction period or periods established by the Board for such Award (each, a Restricted Stock Award).

(b) Terms and Conditions. The Board shall determine the terms and conditions of a Restricted Stock Award, including the conditions for repurchase (or forfeiture) and the issue price, if any.

(c) Stock Certificates. Any stock certificates issued in respect of a Restricted Stock Award shall be registered in the name of the Participant and, unless otherwise determined by the Board, deposited by the Participant, together with a stock power endorsed in blank, with the Company (or its designee). At the expiration of the applicable restriction periods, the Company (or such designee) shall deliver the certificates no longer subject to such restrictions to the Participant or if the Participant has died, to the beneficiary designated, in a manner determined by the Board, by a Participant to receive amounts due or exercise rights of the Participant in the event of the Participant's death (the Designated Beneficiary). In the absence of an effective designation by a Participant, Designated Beneficiary shall mean the Participant's estate.

(d) Deferred Delivery of Shares. The Board may, at the time any Restricted Stock Award is granted, provide that, at the time Common Stock would otherwise be delivered pursuant to the Award, the Participant shall instead receive an instrument evidencing the right to future delivery of Common Stock at such time or times, and on such conditions, as the Board shall specify. The Board may at any time accelerate the time at which delivery of all or any part of the Common Stock shall take place.

8. Other Stock-Based Awards.

Other Awards of shares of Common Stock, and other Awards that are valued in whole or in part by reference to, or are otherwise based on, shares of Common Stock or other property, may be granted hereunder to Participants (Other Stock Unit Awards), including without limitation Awards entitling recipients to receive shares of Common Stock to be delivered in the future. Such Other Stock Unit Awards shall also be available as a form of payment in the settlement of other Awards granted under the Plan or as payment in lieu of compensation to which a Participant is otherwise entitled. Other Stock Unit Awards may be paid in shares of Common Stock or cash, as the Board shall determine. Subject to the provisions of the Plan, the Board shall determine the conditions of each Other Stock Unit Award, including any purchase

Table of Contents

price applicable thereto. At the time any Award is granted, the Board may provide that, at the time Common Stock would otherwise be delivered pursuant to the Award, the Participant will instead receive an instrument evidencing the Participant's right to future delivery of the Common Stock.

9. Adjustments for Changes in Common Stock and Certain Other Events.

(a) Changes in Capitalization. In the event of any stock split, reverse stock split, stock dividend, recapitalization, combination of shares, reclassification of shares, spin-off or other similar change in capitalization or event, or any distribution to holders of Common Stock other than an ordinary cash dividend, (i) the number and class of securities available under this Plan, (ii) the per-Participant limit set forth in Section 4(b), (iii) the number and class of securities and exercise price per share of each outstanding Option, (iv) the repurchase price per share subject to each outstanding Restricted Stock Award and (v) the share- and per-share-related provisions of each outstanding Stock Appreciation Right and Other Stock Unit Award, shall be appropriately adjusted by the Company (or substituted Awards may be made, if applicable) to prevent enlargement or dilution of rights to the extent determined by the Board.

(b) Reorganization Events.

(1) Definition. A Reorganization Event shall mean: (a) any merger or consolidation of the Company with or into another entity as a result of which all of the Common Stock of the Company is converted into or exchanged for the right to receive cash, securities or other property, (b) any exchange of all of the Common Stock of the Company for cash, securities or other property pursuant to a share exchange transaction or (c) any liquidation or dissolution of the Company.

(2) Consequences of a Reorganization Event on Awards Other than Restricted Stock Awards. In connection with a Reorganization Event, the Board shall take any one or more of the following actions as to all or any outstanding Awards on such terms as the Board determines: (i) provide that Awards shall be assumed, or substantially equivalent Awards shall be substituted, by the acquiring or succeeding corporation (or an affiliate thereof), (ii) upon written notice to a Participant, provide that the Participant's unexercised Options or other unexercised Awards shall become exercisable in full and will terminate immediately prior to the consummation of such Reorganization Event unless exercised by the Participant within a specified period following the date of such notice, (iii) provide that outstanding Awards shall become realizable or deliverable, or restrictions applicable to an Award shall lapse, in whole or in part prior to or upon such Reorganization Event, (iv) in the event of a Reorganization Event under the terms of which holders of Common Stock will receive upon consummation thereof a cash payment for each share surrendered in the Reorganization Event (the Acquisition Price), make or provide for a cash payment to a Participant equal to (A) the Acquisition Price times the number of shares of Common Stock subject to the Participant's Options or other Awards (to the extent the exercise price does not exceed the Acquisition Price) minus (B) the aggregate exercise price of all such outstanding Options or other Awards, in exchange for the termination of such Options or other Awards, (v) provide that, in connection with a liquidation or dissolution of the Company, Awards shall convert into the right to receive liquidation proceeds (if applicable, net of the exercise price thereof) and (vi) any combination of the foregoing.

Table of Contents

For purposes of clause (i) above, an Option shall be considered assumed if, following consummation of the Reorganization Event, the Option confers the right to purchase, for each share of Common Stock subject to the Option immediately prior to the consummation of the Reorganization Event, the consideration (whether cash, securities or other property) received as a result of the Reorganization Event by holders of Common Stock for each share of Common Stock held immediately prior to the consummation of the Reorganization Event (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding shares of Common Stock); provided, however, that if the consideration received as a result of the Reorganization Event is not solely common stock of the acquiring or succeeding corporation (or an affiliate thereof), the Company may, with the consent of the acquiring or succeeding corporation, provide for the consideration to be received upon the exercise of Options to consist solely of common stock of the acquiring or succeeding corporation (or an affiliate thereof) equivalent in fair market value to the per share consideration received by holders of outstanding shares of Common Stock as a result of the Reorganization Event.

To the extent all or any portion of an Option becomes exercisable solely as a result of clause (ii) above, the Board may provide that upon exercise of such Option the Participant shall receive shares subject to a right of repurchase by the Company or its successor at the Option exercise price; such repurchase right (x) shall lapse at the same rate as the Option would have become exercisable under its terms and (y) shall not apply to any shares subject to the Option that were exercisable under its terms without regard to clause (ii) above.

(3) Consequences of a Reorganization Event on Restricted Stock Awards. Upon the occurrence of a Reorganization Event other than a liquidation or dissolution of the Company, the repurchase and other rights of the Company under each outstanding Restricted Stock Award shall inure to the benefit of the Company's successor and shall apply to the cash, securities or other property which the Common Stock was converted into or exchanged for pursuant to such Reorganization Event in the same manner and to the same extent as they applied to the Common Stock subject to such Restricted Stock Award. Upon the occurrence of a Reorganization Event involving the liquidation or dissolution of the Company, except to the extent specifically provided to the contrary in the instrument evidencing any Restricted Stock Award or any other agreement between a Participant and the Company, all restrictions and conditions on all Restricted Stock Awards then outstanding shall automatically be deemed terminated or satisfied.

10. General Provisions Applicable to Awards

(a) Transferability of Awards. Except as the Board may otherwise determine or provide in an Award, Awards shall not be sold, assigned, transferred, pledged or otherwise encumbered by the person to whom they are granted, either voluntarily or by operation of law, except by will or the laws of descent and distribution or, other than in the case of an Incentive Stock Option, pursuant to a qualified domestic relations order, and, during the life of the Participant, shall be exercisable only by the Participant. References to a Participant, to the extent relevant in the context, shall include references to authorized transferees.

(b) Documentation. Each Award shall be evidenced in such form (written, electronic or otherwise) as the Board shall determine. Each Award may contain terms and conditions in addition to those set forth in the Plan.

Table of Contents

(c) Board Discretion. Except as otherwise provided by the Plan, each Award may be made alone or in addition or in relation to any other Award. The terms of each Award need not be identical, and the Board need not treat Participants uniformly.

(d) Termination of Status. The Board shall determine the effect on an Award of the disability, death, retirement, authorized leave of absence or other change in the employment or other status of a Participant and the extent to which, and the period during which, the Participant, or the Participant's legal representative, conservator, guardian or Designated Beneficiary, may exercise rights under the Award.

(e) Withholding. Each Participant shall pay to the Company, or make provision satisfactory to the Company for payment of, any taxes required by law to be withheld in connection with an Award to such Participant. The Company may, to the extent permitted by law, deduct any such tax obligations from any payment of any kind otherwise due to a Participant.

(f) Amendment of Award. The Board may amend, modify or terminate any outstanding Award, including but not limited to, substituting therefor another Award of the same or a different type, changing the date of exercise or realization, and converting an Incentive Stock Option to a Nonstatutory Stock Option, provided that the Participant's consent to such action shall be required unless the Board determines that the action, taking into account any related action, would not materially and adversely affect the Participant.

(g) Conditions on Delivery of Stock. The Company will not be obligated to deliver any shares of Common Stock pursuant to the Plan or to remove restrictions from shares previously delivered under the Plan until (i) all conditions of the Award have been met or removed to the satisfaction of the Company, (ii) in the opinion of the Company's counsel, all other legal matters in connection with the issuance and delivery of such shares have been satisfied, including any applicable securities laws and any applicable stock exchange or stock market rules and regulations, and (iii) the Participant has executed and delivered to the Company such representations or agreements as the Company may consider appropriate to satisfy the requirements of any applicable laws, rules or regulations.

(h) Acceleration. The Board may at any time provide that any Award shall become immediately exercisable in full or in part, free of some or all restrictions or conditions, or otherwise realizable in full or in part, as the case may be.

11. Miscellaneous

(a) No Right To Employment or Other Status. No person shall have any claim or right to be granted an Award, and the grant of an Award shall not be construed as giving a Participant the right to continued employment or any other relationship with the Company. The Company expressly reserves the right at any time to dismiss or otherwise terminate its relationship with a Participant free from any liability or claim under the Plan, except as expressly provided in the applicable Award.

(b) No Rights As Stockholder. Subject to the provisions of the applicable Award, no Participant or Designated Beneficiary shall have any rights as a stockholder with respect to any

Table of Contents

shares of Common Stock to be distributed with respect to an Award until becoming the record holder of such shares. Notwithstanding the foregoing, in the event the Company effects a split of the Common Stock by means of a stock dividend and the exercise price of and the number of shares subject to such Option are adjusted as of the date of the distribution of the dividend (rather than as of the record date for such dividend), then an optionee who exercises an Option between the record date and the distribution date for such stock dividend shall be entitled to receive, on the distribution date, the stock dividend with respect to the shares of Common Stock acquired upon such Option exercise, notwithstanding the fact that such shares were not outstanding as of the close of business on the record date for such stock dividend.

(c) Effective Date and Term of Plan. The Plan shall become effective on the date on which it is adopted by the Board, but no Award may be granted unless and until the Plan has been approved by the Company's stockholders. No Awards shall be granted under the Plan after the completion of 10 years from the earlier of (i) the date on which the Plan was adopted by the Board or (ii) the date the Plan was approved by the Company's stockholders, but Awards previously granted may extend beyond that date.

(d) Amendment of Plan. The Board may amend, suspend or terminate the Plan or any portion thereof at any time; provided that, to the extent determined by the Board, no amendment requiring stockholder approval under any applicable legal, regulatory or listing requirement shall become effective until such stockholder approval is obtained. No Award shall be made that is conditioned upon stockholder approval of any amendment to the Plan.

(e) Provisions for Foreign Participants. The Board may modify Awards or Options granted to Participants who are foreign nationals or employed outside the United States or establish subplans or procedures under the Plan to recognize differences in laws, rules, regulations or customs of such foreign jurisdictions with respect to tax, securities, currency, employee benefit or other matters.

(f) Governing Law. The provisions of the Plan and all Awards made hereunder shall be governed by and interpreted in accordance with the laws of the Commonwealth of Massachusetts, without regard to any applicable conflicts of law.

As approved by the Board of Directors on March 4, 2004 and by the stockholders on May 13, 2004; as amended by the Board of Directors on October 25, 2006; as amended by the Board of Directors on February 9, 2009, subject to stockholder approval.

A-8

Table of Contents

APPENDIX B

MKS INSTRUMENTS, INC.
FOURTH RESTATED 1999 EMPLOYEE STOCK PURCHASE PLAN
(AS AMENDED BY THE BOARD
OF DIRECTORS ON FEBRUARY 9, 2009,
SUBJECT TO SHAREHOLDER
APPROVAL)

The purpose of this Plan is to provide eligible employees of MKS Instruments, Inc. (the Company) and certain of its subsidiaries with opportunities to purchase shares of the Company's Common Stock, no par value per share (the Common Stock), commencing on June 1, 1999; provided, that at such time the Company's Common Stock shall be listed for trading on the Nasdaq National Market or a national securities exchange. An aggregate of 1,950,000 shares of Common Stock have been approved for this purpose. This Plan is intended to qualify as an employee stock purchase plan as defined in Section 423 of the Internal Revenue Code of 1986, as amended (the Code) and the regulations promulgated thereunder, and shall be interpreted consistent therewith.

1. Administration. The Plan will be administered by the Company's Board of Directors (the Board) or by a Committee appointed by the Board (the Committee). The Board or the Committee has authority to make rules and regulations for the administration of the Plan and its interpretation and decisions with regard thereto shall be final and conclusive.

2. Eligibility. All employees of the Company, including Directors who are employees, and all employees of any subsidiary of the Company (as defined in Section 424(f) of the Code) designated by the Board or the Committee from time to time (a Designated Subsidiary), including employees of the Company or any designated Subsidiary who are highly compensated within the meaning of Section 414(q) of the Code, are eligible to participate in any one or more of the Offerings (as defined in Section 9) to purchase Common Stock under the Plan provided that:

(a) they are customarily employed by the Company or a Designated Subsidiary for more than 20 hours a week and for more than five months in a calendar year; and

(b) they have been employed by the Company or a Designated Subsidiary for at least three (3) months prior to enrolling in the Plan; and

(c) they are employees of the Company or a Designated Subsidiary on the first day of the applicable Plan Period (as defined below).

No employee may be granted an option hereunder if such employee, immediately after the option is granted, owns 5% or more of the total combined voting power or value of the stock of the Company or any subsidiary. For purposes of the preceding sentence, the attribution rules of Section 424(d) of the Code shall apply in determining the stock ownership of an employee, and all stock which the employee has a contractual right to purchase shall be treated as stock owned by the employee.

Table of Contents

3. Offerings. The Company will make one or more offerings (Offerings) to employees to purchase stock under this Plan. Offerings will begin each June 1 and December 1, or the first business day thereafter (the Offering Commencement Dates). Each Offering Commencement Date will begin a six (6) month period (a Plan Period) during which Payroll deductions will be made and held for the purchase of Common Stock at the end of the Plan Period. The Board or the Committee may, at its discretion, choose a different Plan Period of twelve (12) months or less for subsequent Offerings.

4. Participation. An employee eligible on the Offering Commencement Date of any Offering may participate in such Offering by completing and forwarding a payroll deduction authorization form to the employee s appropriate payroll office at least 30 days prior to the applicable Offering Commencement Date. The form will authorize a regular payroll deduction from the Compensation, as defined below, received by the employee during the Plan Period. Unless an employee files a new form or withdraws from the Plan, his deductions and purchases will continue at the same rate for future Offerings under the Plan as long as the Plan remains in effect. The term Compensation means the amount of money reportable on the employee s Federal Income Tax Withholding Statement, including overtime, shift premium, incentive or bonus awards and any other variable sales compensation and excluding allowances and reimbursements for expenses such as relocation allowances for travel expenses, income or gains on the exercise of Company stock options or stock appreciation rights, and similar items, whether or not shown on the employee s Federal Income Tax Withholding Statement, but including, in the case of salespersons, sales commissions to the extent determined by the Board or the Committee.

5. Deductions. The Company will maintain payroll deduction accounts for all participating employees. With respect to any Offering made under this Plan, an employee may authorize a payroll deduction in any whole percent amount up to a maximum of 10% (or such lower percentage as may be established by the Board or the Committee) of the Compensation he or she receives during the Plan Period or such shorter period during which deductions from payroll are made. The minimum payroll deduction is such percentage of compensation as may be established from time to time by the Board or the Committee.

No employee may be granted an Option (as defined in Section 9) which permits his rights to purchase Common Stock under this Plan and any other employee stock purchase plan (as defined in Section 423(b) of the Code) of the Company and its subsidiaries, to accrue at a rate which exceeds \$25,000 of the fair market value of such Common Stock (determined at the Offering Commencement Date of the Plan Period) for each calendar year in which the Option is outstanding at any time.

6. Deduction Changes. An employee may decrease, subject to section 5 hereof or discontinue his payroll deduction once during any Plan Period, by filing a new payroll deduction authorization form. However, an employee may not elect to increase his payroll deduction during

Table of Contents

a Plan Period. If an employee elects to discontinue his payroll deductions during a Plan Period, but does not elect to withdraw his funds pursuant to Section 8 hereof, funds deducted prior to his election to discontinue will be applied to the purchase of Common Stock on the Exercise Date (as defined below).

7. Interest. Interest will not be paid on employee accounts.

8. Withdrawal of Funds. An employee may at any time prior to the close of business on the last business day in a Plan Period and for any reason permanently draw out the balance accumulated in the employee's account and thereby withdraw from participation in an Offering. Partial withdrawals are not permitted. The employee may not begin participation again during the remainder of the Plan Period. The employee may participate in any subsequent Offering in accordance with terms and conditions established by the Board or the Committee.

9. Purchase of Shares. On the Offering Commencement Date of each Plan Period, the Company will grant to each eligible employee who is then a participant in the Plan an option (Option) to purchase on the last business day of such Plan Period (the Exercise Date), at the Option Price hereinafter provided for, the largest number of shares (fractional or whole) of Common Stock of the Company as does not exceed the number of shares determined by multiplying \$2,083 by the number of full months in the Offering Period and dividing the results by the closing price (as defined below) on the Offering Commencement Date of such Plan Period.

B-3

Table of Contents

The purchase price for each share purchased will be 85% of the closing price of the Common Stock on (i) the first business day of such Plan Period or (ii) the Exercise Date, whichever closing price shall be less. Such closing price shall be (a) the closing price on any national securities exchange on which the Common Stock is listed, (b) the closing price of the Common Stock on the Nasdaq National Market or (c) the average of the closing bid and asked prices in the over-the-counter-market, whichever is applicable, as published in The Wall Street Journal. If no sales of Common Stock were made on such a day, the price of the Common Stock for purposes of clauses (a) and (b) above shall be the reported price for the next preceding day on which sales were made.

Each employee who continues to be a participant in the Plan on the Exercise Date shall be deemed to have exercised his Option at the Option Price on such date and shall be deemed to have purchased from the Company the number of full shares of Common Stock reserved for the purpose of the Plan that his accumulated payroll deductions on such date will pay for, but not in excess of the maximum number determined in the manner set forth above.

Any balance remaining in an employee's payroll deduction account at the end of a Plan Period will be automatically refunded to the employee, except that any balance which is less than the purchase price of one share of Common Stock will be carried forward into the employee's payroll deduction account for the following Offering, unless the employee elects not to participate in the following Offering under the Plan, in which case the balance in the employee's account shall be refunded.

10. Issuance of Certificates. Certificates representing shares of Common Stock purchased under the Plan may be issued only in the name of the employee, in the name of the employee and another person of legal age as joint tenants with rights of survivorship, or (in the Company's sole discretion) in the name of a brokerage firm, bank or other nominee holder designated by the employee. The Company may, in its sole discretion and in compliance with applicable laws, authorize the use of book entry registration of shares in lieu of issuing stock certificates.

11. Rights on Retirement, Death or Termination of Employment. In the event of a participating employee's termination of employment prior to the last business day of a Plan Period, no payroll deduction shall be taken from any pay due and owing to an employee and the balance in the employee's account shall be paid to the employee or, in the event of the employee's death, (a) to a beneficiary previously designated in a revocable notice signed by the employee (with any spousal consent required under state law) or (b) in the absence such a designated beneficiary, to the executor or administrator of the employee's estate or (c) if no such executor or administrator has been appointed to the knowledge of the Company, to such other person(s) as the Company may, in its discretion, designate. If, prior to the last business day of the Plan Period, the Designated Subsidiary by which an employee is employed shall cease to be a subsidiary of the Company, or if the employee is transferred to a subsidiary of the Company that is not a

Table of Contents

Designated Subsidiary, the employee shall be deemed to have terminated employment for the purposes of this Plan.

12. Optionees not Stockholders. No employee shall have any rights as a stockholder with respect to any shares of Common Stock to be distributed with respect to an Option until becoming the record holder or such shares.

Notwithstanding the foregoing, in the event the Company effects a split of the Common Stock by means of a stock dividend (and the exercise price of and the number of shares subject to such Option are adjusted as of the date of the distribution of the dividend rather than as of the record date for such dividend), then an optionee who is deemed to have exercised an Option between the record date and the distribution date for such stock dividend shall be entitled to receive, on the distribution date, the stock dividend with respect to the shares of Common Stock.

13. Rights not Transferable. Rights under this Plan are not transferable by a participating employee other than by will or the laws of descent and distribution, and are exercisable during the employee's lifetime only by the employee.

14. Application of Funds. All funds received or held by the Company under this Plan may be combined with other corporate funds and may be used for any corporate purpose.

15. Adjustment in Case of Changes Affecting Common Stock. In the event of a subdivision of outstanding shares of Common Stock, or the payment of a dividend in Common Stock, the number of shares approved for this Plan, and the share limitation set forth in Section 9, shall be increased proportionately, and such other adjustment shall be made as may be deemed equitable by the Board or the Committee. In the event of any other change affecting the Common Stock, such adjustment shall be made as may be deemed equitable by the Board or the Committee to give proper effect to such event.

16. Merger. If the Company shall at any time merge or consolidate with another corporation and the holders of the capital stock of the Company immediately prior to such merger or consolidation continue to hold at least 80% by voting power of the capital stock of the surviving corporation (Continuity of Control), the holder of each Option then outstanding will thereafter be entitled to receive at the next Exercise Date upon the exercise of such Option for each share as to which such Option shall be exercised the securities or property which a holder of one share of the Common Stock was entitled to upon and at the time of such merger or consolidation, and the Board or the Committee shall take such steps in connection with such merger or consolidation as the Board or the Committee shall deem necessary to assure that the provisions of Section 15 shall thereafter be applicable, as nearly as reasonably may be, in relation to the said securities or property as to which such holder of such Option might thereafter be entitled to receive thereunder.

B-5

Table of Contents

In the event of a merger or consolidation of the Company with or into another corporation which does not involve Continuity of Control, or of a sale of all or substantially all of the assets of the Company while unexercised Options remain outstanding under the Plan, all outstanding Options shall be cancelled by the Board or the Committee as of the effective date of any such transaction, provided that notice of such cancellation shall be given to each holder of an Option, and each holder of an Option shall have the right to exercise such Option in full based on payroll deductions then credited to his account as of a date determined by the Board or the Committee, which date shall not be less than ten (10) days preceding the effective date of such transaction.

17. Amendment of the Plan. The Board may at any time, and from time to time, amend this Plan in any respect, except that (a) if the approval of any such amendment by the shareholders of the Company is required by Section 423 of the Code, such amendment shall not be effected without such approval, and (b) in no event may any amendment be made which would cause the Plan to fail to comply with Section 423 of the Code.

18. Sufficient Shares. In the event that the total number of shares of Common Stock specified in elections to be purchased under any Offering plus the number of shares purchased under previous Offerings under this Plan exceeds the maximum number of shares issuable under this Plan, the Board or the Committee will allot the shares then available on a pro rata basis.

19. Termination of the Plan. This Plan may be terminated at any time by the Board. Upon termination of this Plan all amounts in the accounts of participating employees shall be promptly refunded.

20. Governmental Regulations. The Company's obligation to sell and deliver Common Stock under this Plan is subject to listing on a national stock exchange or quotation on the Nasdaq National Market and the approval of all governmental authorities required in connection with the authorization, issuance or sale of such stock.

21. Governing Law. The Plan shall be governed by Massachusetts law except to the extent that such law is preempted by federal law.

22. Issuance of Shares. Shares may be issued upon exercise of an Option from authorized but unissued Common Stock, from shares held in the treasury of the Company, or from any other proper source.

23. Notification Upon Sales of Shares Each employee agrees, by entering the Plan, to promptly give the Company notice of any disposition of shares purchased under the Plan where such disposition occurs within two years after the date of grant of the Option pursuant to which such shares were purchased or one year after the date of exercise of the Option.

Table of Contents

24. Withholding. Each employee shall, no later than the date of the event creating the tax liability, make provision satisfactory to the Board for payment of any taxes required by law to be withheld in connection with any transaction related to Options granted to or shares acquired by such employee pursuant to the Plan. The Company may, to the extent permitted by law, deduct any such taxes from any payment of any kind otherwise due to an employee.

25. Effective Date. The effective date of the plan is June 1, 1999.

Adopted by the Board of Directors on February 10, 1999 and approved by the stockholders on February 17, 1999; Amended and Restated by the Board of Directors on April 22, 1999; Amended and Restated by the Board of Directors on August 1, 2002; Amended by the Board of Directors on March 4, 2004, and the stockholders on May 13, 2004; Amended by the Board of Directors on February 9, 2009, subject to stockholder approval

B-7

Table of Contents

APPENDIX C

MKS INSTRUMENTS, INC.
THIRD AMENDED AND RESTATED INTERNATIONAL EMPLOYEE STOCK PURCHASE PLAN
(AS AMENDED BY THE BOARD OF
DIRECTORS ON FEBRUARY 9,
2009 SUBJECT TO SHAREHOLDER
APPROVAL)

The purpose of this Plan is to provide eligible employees of certain non-U.S. subsidiaries of MKS Instruments, Inc. (the Company) with opportunities to purchase shares of the Company's common stock (the Common Stock), commencing on March 1, 2000. An Aggregate of 400,000 shares of Common Stock have been approved for this purpose.

1. Administration. The Plan will be administered by the Company's Board of Directors (the Board) or by a Committee appointed by the Board (the Committee). The Board or the Committee has authority to make rules and regulations for the administration of the Plan and its interpretation and decisions with regard thereto shall be final and conclusive.

2. Eligibility. All employees of any non-U.S. subsidiary of the Company designated by the Board or the Committee from time to time (a Subsidiary), excluding Officers and Directors of the Company who are employees of a Subsidiary, are eligible to participate in any one or more of the offerings of Options (as defined in Section 9) to purchase Common Stock under the Plan provided that:

- a. they have been employed by the Subsidiary for at least three (3) months prior to enrolling in the Plan;
- b. they are employees of the Subsidiary on the first day of the applicable Plan Period (as defined below);
- c. to the extent local law permits such a requirement, they are customarily employed by a Subsidiary for more than twenty (20) hours a week and for more than five (5) months in a calendar year; and
- d. they meet any other requirements imposed from time to time by the Board or the Committee on employees of one or more subsidiaries.

No employee may be granted an option hereunder if such employee, immediately after the option is granted, owns 5% or more of the total combined voting power or value of the stock of the Company or any subsidiary. For purposes of the preceding sentence, the attribution rules of Section 424(d) of the U.S. Internal Revenue Code of 1986, as amended (the Code) shall apply in determining the stock ownership of an employee, and all stock which the employee has a contractual right to purchase shall be treated as stock owned by the employee.

3. Offerings. The Company will make one or more offerings (Offerings) to employees to purchase stock under this Plan. The first Offering will begin on March 1, 2000 or the first business day thereafter (the Offering Commencement Dates) and end on May 31, 2000. Thereafter, each June 1 and December 1 or the first business day thereafter will be an Offering Commencement Date. Each Offering Commencement Date after March 1, 2000 will

Table of Contents

begin a six (6) month period (a Plan Period) during which payroll deductions will be made and held for the purchase of Common Stock at the end of the Plan Period. The Board or the Committee may, at its discretion, choose a different Plan Period of twelve (12) months or less for subsequent Offerings.

4. Participation.

a. Enrollment. An employee eligible on the Offering Commencement Date of any Offering may participate in such Offering by enrolling, in such manner and at such time approved, from time to time, by the Board or the Committee, prior to the applicable Offering Commencement Date in said Offering. The enrollment will authorize a regular payroll deduction from the Compensation received by the employee during the Plan Period. Unless an employee changes his enrollment in a manner prescribed by the Committee from time to time or withdraws from the Plan, his deductions and purchases will continue at the same rate for future Offerings under the Plan as long as the Plan remains in effect. The term Compensation shall be defined by the Board or the Committee from time to time, but until modified shall mean regular base salary, including overtime, shift premium, incentive or bonus awards and sales commissions and excluding allowances and reimbursements for expenses such as relocation allowances for travel expenses, income or gains on the exercise of Company stock options or stock appreciation rights, and similar items whether or not taxable.

b. Tax Withholding Authorized. The enrollment of each employee shall constitute such participating employee's authorization of his or her employer to deduct from such employee's compensation in the relevant month or months (or subsequent months, if appropriate) any amount necessary for the payment or reimbursement of any tax liability payable by such employee with respect to the grant or exercise of the options hereunder, or the sale of any stock acquired through the exercise of such option.

5. Deductions. The Company will maintain payroll deduction accounts for all participating employees. With respect to any Offering made under this Plan, an employee may authorize a payroll deduction in any whole percent amount between one and ten percent (1-10%) of the Compensation he or she receives during the Plan Period or such shorter period during which deductions from payroll are made (or such other percentages as may be established by the Board or the Committee). Any change in Compensation during the Plan Period will result in an automatic corresponding change in the amount withheld. The payroll deductions shall be made in the applicable local currency and will be converted into United States currency at the prevailing rate of exchange in effect on such date as the Board or Committee shall determine. All amounts deducted may be transferred to an account of the Company or the Subsidiary outside the country in which such employee is employed.

No employee may be granted an Option (as defined in Section 9) which permits his rights to purchase Common Stock under this Plan and any other employee stock purchase plan (as defined by the Committee or Board) of the Company and its subsidiaries, to accrue at a rate which exceeds \$25,000 of the fair market value of such Common Stock (determined at the

Table of Contents

Offering Commencement Date of the Plan Period) for each calendar year in which the Option is outstanding at any time.

6. Deduction Changes. An employee may decrease, subject to Section 5 hereof, or discontinue his payroll deduction once during any Plan Period, up to such date prior to the close of business on the last business day, and in such manner as is permitted by the Board or Committee. However, an employee may not elect to increase his payroll deduction during a Plan Period. If an employee elects to discontinue his payroll deductions during a Plan Period but does not elect to withdraw his funds pursuant to Section 8 hereof, amounts previously withheld will be applied to the purchase of Common Stock on the Exercise Date (as defined below).

7. Interest. Interest will not be paid on any employee accounts.

8. Withdrawal of Funds. An employee may at any time up to a deadline established by the Committee or the Board, prior to the close of business on the last business day in a Plan Period, and for any reason, permanently draw out the balance accumulated in the employee's account, which will be paid in the local currency or, in Euros, at the discretion of the Board or the Committee if such employee is employed in a country which maintains a fixed exchange rate between its local currency and the Euro (Repayment in Euros), and thereby withdraw from participation in an Offering. Partial withdrawals are not permitted. The employee may not begin participation again during the remainder of the Plan Period. The employee may participate in any subsequent Offering in accordance with terms and conditions established by the Board or the Committee.

9. Purchase of Shares. On the Offering Commencement Date of each Plan Period, the Company will grant to each eligible employee who is then a participant in the Plan an option (Option) to purchase on the last business day of such Plan Period (the Exercise Date), at the Option Price hereinafter provided for, the largest number of shares (fractional or whole) of Common Stock of the Company as does not exceed the number of shares determined by multiplying \$2,083 by the number of full months in the Offering Period and dividing the results by the closing price (as defined below) on the Offering Commencement Date of such Plan Period.

The purchase price for each share purchased will be 85% of the Fair Market Value of the Common Stock on (i) the first business day of such Plan Period or (ii) the Exercise Date, whichever Fair Market Value shall be less. Such Fair Market Value shall be (a) the closing price on any national securities exchange on which the Common Stock is listed, (b) the closing price of the Common Stock on the Nasdaq National Market or (c) the average of the closing bid price and asked price in the over-the-counter-market, whichever is applicable, as published in The Wall Street Journal. If no sales of Common Stock were made on such a day, the price of the Common Stock for purposes of clauses (a) and (b) above shall be based on the reported price for the next preceding day on which sales were made.

Each employee who continues to be a participant in the Plan on the Exercise Date shall be deemed to have exercised his Option at the Option Price on such date and shall be deemed to have purchased from the Company the number of shares of Common Stock (including fractional shares) reserved for the purpose of the Plan that his accumulated payroll deductions on such date

Table of Contents

will pay for, in United State currency as of that date, but not in excess of the maximum number determined in the manner set forth above. The Board or the Committee may, in its discretion, limit the purchase to only whole shares and not fractional shares.

Any balance remaining in an employee's payroll deduction account at the end of a Plan Period will be automatically refunded to the employee in the local currency or at the discretion of the Committee or the Board there may be Repayment in Euros, except that any balance which is less than the purchase price of one share of Common Stock will be carried forward into the employee's payroll deduction account for the following Offering, unless the employee elects not to participate in the following Offering under the Plan, in which case the balance shall be refunded.

10. Issuance of Certificates. Certificates representing shares of Common Stock purchased under the Plan may be issued only in the name of the employee, in the name of the employee and another person of legal age as joint tenants with rights of survivorship, or (in the Company's sole discretion) in the name of a brokerage firm, bank or other nominee holder designated by the employee. The Company may, in its sole discretion and in compliance with applicable laws, authorize the use of book entry registration of shares in lieu of issuing stock certificates.

11. Rights on Retirement Death or Termination of Employment. In the event of a participating employee's termination of employment prior to the last business day of a Plan Period, no payroll deduction shall be taken from any pay due and owing to an employee and the balance in the employee's account shall be paid to the employee or, in the event of the employee's death, and subject to the terms of applicable law, (a) to a beneficiary previously designated in a revocable notice signed by the employee (with any spousal consent required under local law) or (b) in the absence of such a designated beneficiary, to the personal representative of the employee's estate or (c) if no such personal representative has been appointed to the knowledge of the Company, to such other person(s) as the Company may, in its discretion, designate. If, prior to the last business day of the Plan Period, the designated Subsidiary by which an employee is employed shall cease to be a subsidiary of the Company, or if the employee is transferred to a subsidiary of the Company that is not a Subsidiary under the Plan, the employee shall be deemed to have terminated employment for the purposes of this Plan.

12. Optionees Not Stockholders. Neither the granting of an Option to an employee nor the deductions from his pay shall constitute such employee a stockholder of the shares of Common Stock covered by an Option under this Plan until such shares have been purchased by and issued to him or to an account for his benefit. Notwithstanding the foregoing, in the event the Company effects a split of the Common Stock by means of a stock dividend (and the exercise price of and the number of shares subject to such Option are adjusted as of the date of the distribution of the dividend rather than as of the record date for such dividend), then an optionee who is deemed to have exercised an Option between the record date and the distribution date for such stock dividend shall be entitled to receive, on the distribution date, the stock dividend with respect to the shares of Common Stock.

Table of Contents

13. Rights Not Transferable. Rights under this Plan are not transferable by a participating employee other than by will or the laws of descent and distribution, and are exercisable during the employee's lifetime only by the employee.

14. Application of Funds. To the extent consistent with applicable law, all funds received or held by the Company or any Subsidiary under this Plan may be combined with other corporate funds and may be used for any corporate purpose and transferred outside the country in which they are deducted from payroll.

15. Adjustment in Case of Changes Affecting Common Stock. In the event of a subdivision of outstanding shares of Common Stock, or the payment of a dividend in Common Stock, the number of shares approved for this Plan, and the share limitation set forth in Section 9, shall be increased proportionately, and such other adjustment shall be made as may be deemed equitable by the Board or the Committee. In the event of any other change affecting the Common Stock, such adjustment shall be made as may be deemed equitable by the Board or the Committee to give proper effect to such event.

16. Merger. If the Company shall at any time merge or consolidate with another corporation and the holders of the capital stock of the Company immediately prior to such merger or consolidation continue to hold at least 80% by voting power of the capital stock of the surviving corporation (Continuity of Control), the holder of each Option then outstanding will thereafter be entitled to receive at the next Exercise Date upon the exercise of such Option for each share as to which such Option shall be exercised the securities or property which a holder of one share of the Common Stock was entitled to upon and at the time of such merger or consolidation, and the Board or the Committee shall take such steps in connection with such merger or consolidation as the Board or the Committee shall deem necessary to assure that the provisions of Section 15 shall thereafter be applicable, as nearly as reasonably may be, in relation to the said securities or property as to which such holder of such Option might thereafter be entitled to receive thereunder.

In the event of a merger or consolidation of the Company with or into another corporation which does not involve Continuity of Control, or of a sale of all or substantially all of the assets of the Company while unexercised Options remain outstanding under the Plan, all outstanding Options shall be cancelled by the Board or the Committee as of the effective date of any such transaction, provided that notice of such cancellation shall be given to each holder of an Option, and each holder of an Option shall have the right to exercise such Option in full based on payroll deductions then credited to his account as of a date determined by the Board or the Committee, which date shall not be less than ten (10) days preceding the effective date of such transaction.

17. Amendment of the Plan. The Board may at any time, and from time to time, amend this Plan in any respect.

18. Insufficient Shares. In the event that the total number of shares of Common Stock specified in elections to be purchased under any Offering plus the number of shares purchased under previous Offerings under this Plan exceeds the maximum number of shares issuable under this Plan, the Board or the Committee will allot the shares then available on a pro rata basis.

Table of Contents

19. Termination of the Plan. This Plan may be terminated at any time by the Board. Upon termination of this Plan all amounts in the accounts of participating employees shall be promptly refunded in local currency or at the discretion of the Committee or the Board there may be Repayment in Euros.

20. Governmental Regulations. The Company's obligation to sell and deliver Common Stock under this Plan is subject to listing on a U.S. national stock exchange or quotation on the Nasdaq National Market and the approval of all applicable governmental authorities required in connection with the authorization, issuance or sale of such stock.

21. Governing Law. The Plan shall be governed by Massachusetts law except to the extent that such law is preempted by U.S. federal law or other applicable law.

22. Issuance of Shares. Shares may be issued upon exercise of an Option from authorized but unissued Common Stock, from shares held in the treasury of the Company, or from any other proper source.

23. Notification upon Sale of Shares. Each employee agrees, by entering the Plan, to promptly give the Company notice of any disposition of shares purchased under the Plan.

24. Withholding. Each employee shall, no later than the date of the event creating the tax liability, make provision satisfactory to the Board for payment of any taxes required by law to be withheld in connection with any transaction related to Options granted to or shares acquired by such employee pursuant to the Plan. The Company may, to the extent permitted by law, deduct any such taxes from any payment of any kind otherwise due to an employee.

25. Effective Date. The Plan shall take effect on March 1, 2000.

26. Additional Conditions. The Committee or the Board may establish additional conditions or provisions for the participation of eligible employees in the Plan in order to comply with the tax, securities and other laws and regulation of the countries in which such employees reside, even if such conditions or provisions increase the benefits accruing to such employees under the Plan.

Adopted by the Board of Directors on
February 18, 2000; Amended and
Restated by the Board of Directors on
August 1, 2002; Amended by the Board of
Directors on March 4, 2004, and by the
stockholders on May 14, 2004; Amended
by the Board of Directors on February 9,
2009, subject to stockholder approval.

C-6

Table of Contents

Appendix D

Form of Proxy Card
ANNUAL MEETING OF SHAREHOLDERS OF
MKS INSTRUMENTS, INC.
MAY 4, 2009

Please detach and mail in the envelope provided.

Important Notice Regarding Internet Availability of Annual Meeting Materials for the Annual Meeting:
The Notice and Proxy Statement and Annual Report are available at
www.mksinstruments.com/AnnualMeetingMaterials

MKS INSTRUMENTS, INC.
2009 ANNUAL MEETING OF SHAREHOLDERS
MAY 4, 2009

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

The undersigned shareholder of MKS Instruments, Inc., a Massachusetts corporation (the Company), hereby acknowledges receipt of the Notice of Annual Meeting of Shareholders and Proxy Statement, each dated March 23, 2009, and hereby appoints Leo Berlinghieri, Richard S. Chute and Ronald C. Weigner, and each of them acting singly, proxies and attorneys-in-fact, with full power to each of substitution, on behalf and in the name of the undersigned, to represent the undersigned at the 2009 Annual Meeting of Shareholders of the Company to be held on May 4, 2009, at 10:00 a.m. at the Wyndham Boston Andover Hotel, 123 Old River Road, Andover, MA 01810, and at any adjournment(s) thereof, and to vote all shares of Common Stock which the undersigned would be entitled to vote if then and there personally present, on the matters set forth on the reverse side, and, in their discretion, upon any other matters which may properly come before the meeting.

This proxy, when properly executed, will be voted as directed on the reverse side, or, if no contrary direction is indicated, will be voted FOR the election of three (3) nominees listed on the reverse side as Class I Directors of the Company, FOR proposals 2, 3, 4 and 5 and as said proxies deem advisable on such matters as may properly come before the meeting.

PLEASE DATE, SIGN AND MAIL YOUR PROXY CARD IN THE ENVELOPE PROVIDED AS SOON AS POSSIBLE.

(CONTINUED AND TO BE SIGNED ON THE REVERSE SIDE)

Table of Contents

[MKS Logo]
MKS Instruments, Inc.
2 TECH DRIVE
SUITE 201
ANDOVER, MA 01810

VOTE BY MAIL
Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to MKS Instruments, Inc., c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS: MKSTR1 KEEP THIS PORTION FOR YOUR RECORDS

DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

MKS INSTRUMENTS, INC.
THE BOARD OF DIRECTORS RECOMMENDS A VOTE FOR THE ELECTION OF DIRECTORS AND FOR PROPOSALS 2, 3, 4 and 5.

Vote on Directors

1. To elect three (3) Class I Directors for a term of three (3) years.

Nominees:

- 01) Leo Berlinghieri
- 02) Hans-Jochen Kahl
- 03) Louis P. Valente
- FOR ALL
- WITHHOLD ALL
- FOR ALL EXCEPT

To withhold authority to vote for any individual nominee(s), mark For All Except and write the number(s) of the nominee(s) on the line below.

Vote on Proposals

2. To amend the 2004 Stock Incentive Plan to allow for a one-time option exchange program.

FOR	AGAINST	ABSTAIN
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. To amend the Third Restated Employee Stock Purchase Plan to increase the number of shares available thereunder from 1,250,000 to 1,950,000 shares.

FOR	AGAINST	ABSTAIN
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. To amend the Second Amended and Restated International Employee Stock Purchase Plan to increase the number of shares available thereunder from 250,000 to 400,000 shares.

FOR	AGAINST	ABSTAIN
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Table of Contents

5. To ratify the selection of PricewaterhouseCoopers LLP as the Company's independent auditors for the year ending December 31, 2009.

FOR AGAINST ABSTAIN
o o o

TO ENSURE YOUR REPRESENTATION AT THE ANNUAL MEETING, PLEASE MARK, SIGN AND DATE THIS PROXY AND RETURN IT AS PROMPTLY AS POSSIBLE.

NOTE: Please sign exactly as your name or names appear(s) on this Proxy. When shares are held jointly, each holder should sign. When signing as executor, administrator, attorney, trustee or guardian, please give full title as such. If the signer is a corporation, please sign full corporate name by duly authorized officer, giving full title as such. If signer is a partnership, please sign in partnership name by authorized person.

Signature [PLEASE SIGN
WITHIN BOX]

Date:

Signature (Joint Owners)

Date: