

MKS INSTRUMENTS INC
Form DEF 14A
March 13, 2015

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

SCHEDULE 14A

(Rule 14A-101)

INFORMATION REQUIRED IN
PROXY STATEMENT

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

MKS Instruments, Inc.
(Name of Registrant as Specified in its Charter)

Payment of Filing Fee (Check the appropriate box):

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- 1) Amount Previously Paid:

- 2) Form, Schedule or Registration Statement No.:

- 3) Filing Party:

4) Date Filed:

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

March 13, 2015

Dear Shareholder:

You are cordially invited to attend the 2015 Annual Meeting of Shareholders of MKS Instruments, Inc. to be held on Monday, May 4, 2015 at 10:00 a.m., local time, 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 (i) to elect two Class I Directors, (ii) to approve the 162(m) Executive Cash Incentive Plan, (iii) to approve a non-binding advisory vote on executive compensation, and (iv) to ratify the selection of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2015.

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, in which case your proxy vote will be revoked.

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

Sincerely,

GERALD G. COLELLA

Chief Executive Officer and President

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

NOTICE OF 2015 ANNUAL MEETING OF SHAREHOLDERS
TO BE HELD ON MAY 4, 2015

To our Shareholders:

NOTICE IS HEREBY GIVEN that the 2015 Annual Meeting of Shareholders of MKS INSTRUMENTS, INC., a Massachusetts corporation, will be held on Monday, May 4, 2015 at 10:00 a.m., local time, 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 two Class I Directors, each for a three-year term;
2. To approve the 162(m) Executive Cash Incentive Plan;
3. To approve a non-binding advisory vote on executive compensation; and
4. To ratify the selection of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2015.

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 11, 2015 as the record date for the determination of shareholders entitled to notice of, and to vote at, the Annual Meeting and any adjournment or postponement thereof. Our stock transfer books will remain open for the purchase and sale of our Common Stock.

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 13, 2015

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.

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 2015 Annual Meeting of Shareholders to be held on May 4, 2015 at 10:00 a.m., local time, 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 2015 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 11, 2015, 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 53,289,388 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 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 held by shareholders 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. If a quorum is not present, the meeting will be adjourned until a quorum is obtained.

The affirmative vote of the holders of a plurality of the votes cast on the matter is required for the election of directors (Proposal One); provided, however, any director nominee who receives a greater number of withhold votes than affirmative votes (a Majority Withhold Vote) in an uncontested election must offer to tender to the Board of Directors his or her resignation promptly following the certification of election results. The Board of Directors must accept or reject a resignation within 90 days following the certification of election results and publicly disclose its decision. Accordingly, the nominees who receive the highest number of votes of the shares present, in person or by proxy, and entitled to vote shall be elected to the available Class I Director positions, and in the event any nominee receives a Majority Withhold Vote, the resignation policy will apply as summarized here and as set forth in Section B.4 of our Corporate Governance Guidelines which are posted on our website at <http://mksinst.com> in the Corporate Governance Section under the Investors tab. The approval of the 162(m) Executive Cash Incentive Plan (Proposal Two), the approval of the advisory vote on executive compensation (Proposal Three), and the ratification of PricewaterhouseCoopers LLP (Proposal Four) require the affirmative vote of the holders of a majority of the votes cast 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 non-routine matter, including the election of directors, the vote to approve the 162(m) Executive Cash Incentive Plan, and the advisory vote on executive compensation, will not be counted as votes in favor of, or as votes cast for, a 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. Proposal Three is a non-binding proposal. 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, 2014 ARE BEING MAILED TO SHAREHOLDERS ON OR ABOUT MARCH 17, 2015.

IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE SHAREHOLDER MEETING TO BE HELD ON MAY 4, 2015

A copy of (i) our Annual Report to Shareholders for the year ended December 31, 2014, which contains consolidated financial statements and other information of interest to shareholders, (ii) this Proxy Statement and this Notice, and (iii) information on how to obtain directions to be able to attend the meeting and vote in person can be accessed on our website at <http://investor.mksinst.com/annualproxy.cfm> or by calling (800) 227-8766.

A COPY OF OUR ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2014 AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION, OR 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.

**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 shareholder known to us to be the beneficial owner of more than 5% of the outstanding shares of Common Stock; (ii) the executive officers named in the Summary Compensation Table below; (iii) each of our current directors; and (iv) all of our directors and executive officers as a group. Unless otherwise indicated in the footnotes to the table, all equity amounts set forth in the table are as of January 1, 2015; and 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>5% shareholders</i> | | |
| Royce & Associates, LLC | 6,739,263(2) | 12.70% |
| 745 Fifth Avenue | | |
| New York, NY 10151 | | |
| Black Rock, Inc. | 4,626,208(3) | 8.70% |
| 40 East 52 nd Street | | |
| New York, NY 10022 | | |
| Dimensional Fund Advisors LP | 3,613,792(4) | 6.81% |
| Palisades West, Building One | | |
| 6300 Bee Cave Road | | |
| Austin, TX 78746 | | |
| The Vanguard Group, Inc. | 3,505,872(5) | 6.60% |
| 100 Vanguard Blvd. | | |
| Malvern, PA 19355 | | |
| <i>Named Executive Officers</i> | | |
| Gerald G. Colella | 50,563(6) | * |
| Seth H. Bagshaw | 41,493(7) | * |
| John R. Abrams | 2,868(8) | * |
| John T.C. Lee | 15,845(9) | * |
| Brian C. Quirk | 12,818(10) | * |
| <i>Non-Employee Directors</i> | | |
| Cristina H. Amon | 22,418(11) | * |

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|--|-------------|-------|
| Robert R. Anderson | 15,931(12) | * |
| Gregory R. Beecher | 28,818(13) | * |
| John R. Bertucci | 664,681(14) | 1.24% |
| Richard S. Chute | 27,418(15) | * |
| Peter R. Hanley | 1,418(16) | * |
| Elizabeth A. Mora | 5,543(17) | * |
| All directors and executive officers as a group (12 persons) | 889,816(18) | 1.65% |

* 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 SEC rules, 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 or investment power and also any shares that the individual has the right to acquire within 60 days after

January 1, 2015 subject to the vesting of restricted stock units (RSUs) or the exercise of any stock option or 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. Percentage ownership calculations are based on 53,154,666 shares of Common Stock outstanding as of January 1, 2015. Shares of Common Stock which an individual or entity has a right to acquire within the 60-day period following January 1, 2015 pursuant to the vesting of RSUs or the exercise of any stock options or other right 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) Based on information set forth in Schedule 13G/A filed by Royce & Associates, LLC on behalf of itself and its affiliates on January 13, 2015, reporting stock ownership as of December 31, 2014.
- (3) Based on information set forth in Schedule 13G/A filed by Black Rock, Inc. on January 22, 2015, reporting stock ownership as of December 31, 2014, of which Black Rock, Inc. has 4,490,308 shares with sole voting power and 4,626,208 shares with sole investment power.
- (4) Based on information set forth in Schedule 13G/A filed by Dimensional Fund Advisors LP on February 5, 2015, reporting stock ownership as of December 31, 2014, of which Dimensional Fund Advisors LP has 3,539,447 shares with sole voting power and 3,613,792 shares with sole investment power. Dimensional Fund Advisors LP disclaims beneficial ownership of such securities.
- (5) Based on information set forth in Schedule 13G/A filed by The Vanguard Group, Inc. on February 11, 2015, reporting stock ownership as of December 31, 2014, of which The Vanguard Group, Inc. has 75,210 shares with sole voting power, 3,435,362 with sole investment power and 70,510 shares with shared investment power.
- (6) Consists of 11,591 shares held directly by Mr. Colella and 38,972 shares subject to RSUs that are subject to vesting within 60 days after January 1, 2015.
- (7) Consists of 16,732 shares held directly by Mr. Bagshaw and 24,761 shares subject to RSUs that are subject to vesting within 60 days after January 1, 2015.
- (8) Consists of 0 shares held directly by Mr. Abrams and 2,868 shares subject to RSUs that are subject to vesting within 60 days after January 1, 2015.
- (9) Consists of 431 shares held directly by Dr. Lee and 15,414 shares subject to RSUs that are subject to vesting within 60 days after January 1, 2015.
- (10) Consists of 3,121 shares held directly by Mr. Quirk and 9,697 shares subject to RSUs that are subject to vesting within 60 days after January 1, 2015.

- (11) Consists of 22,418 shares held directly by Dr. Amon.
- (12) Consists of 15,931 shares held directly by Mr. Anderson.
- (13) Consists of 28,818 shares held directly by Mr. Beecher.
- (14) Consists of 358,840 shares held directly by Mr. Bertucci and 305,841 shares held directly or indirectly by Mr. Bertucci's wife.
- (15) Consists of 3,418 shares held directly by Mr. Chute and 24,000 shares subject to options that are exercisable or will become exercisable within 60 days after January 1, 2015.
- (16) Consists of 1,418 shares held directly by Dr. Hanley.
- (17) Consists of 4,918 shares held directly by Ms. Mora and 625 shares subject to RSUs that are subject to vesting within 60 days after January 1, 2015.
- (18) Consists of 773,480 shares held directly or indirectly by such persons and 116,336 shares subject to options that are exercisable or will become exercisable or RSUs that are subject to vesting within 60 days after January 1, 2015.

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.

PROPOSAL ONE

ELECTION OF DIRECTORS

Our Amended and Restated By-Laws provide for a Board of Directors that is divided into three classes. The term of the Class I Directors expires at the 2015 Annual Meeting, the term of the Class II Directors expires at the 2016 Annual Meeting and the term of the Class III Directors expires at the 2017 Annual Meeting. Gerald G. Colella and Elizabeth A. Mora are proposed for election to serve as Class I Directors for a term to expire at the 2018 Annual Meeting. Each nominee has consented to being named herein, and, if elected, to serve as a director until his or her 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 either 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 GERALD G. COLELLA AND ELIZABETH A. MORA TO SERVE AS CLASS I DIRECTORS IS IN THE BEST INTERESTS OF MKS AND OUR SHAREHOLDERS AND THEREFORE RECOMMENDS A VOTE FOR BOTH NOMINEES.

DIRECTORS

The Board of Directors, upon the recommendation of the Nominating and Corporate Governance Committee, has nominated Gerald G. Colella and Elizabeth A. Mora, to serve as Class I 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 at least the past five years, the names of other publicly held companies on which the individual currently serves, or in the past five years has served, as a director and the year each member of our Board of Directors joined our board. We have also included information about each director's specific experience, qualifications, attributes, or skills that led the Board of Directors to conclude that he or she should serve as a director of MKS. Information with respect to the number of shares of Common Stock beneficially owned by each director, directly or indirectly, as of January 1, 2015, appears in this proxy statement under the heading Security Ownership of Certain Beneficial Owners and Management.

| Name | Age | Position | Class to Which Director Currently Belongs |
|--------------------------|-----|--|---|
| John R. Bertucci | 74 | Director, Chairman | III |
| Cristina H. Amon(2)(3) | 58 | Director | II |
| Robert R. Anderson(1)(3) | 77 | Director | III |
| Gregory R. Beecher(1) | 57 | Director | III |
| Richard S. Chute(2) | 76 | Director, Secretary | II |
| *Gerald G. Colella | 58 | Director, Chief Executive Officer and President | I |
| Peter R. Hanley(2)(3) | 75 | Director | II |
| *Elizabeth A. Mora(1) | 54 | 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 1970, and has been Chairman of the Board of Directors since November 1995. Mr. Bertucci served as Executive Chairman from July 2005 until December 2006. 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 has served as a member of the Board of Trustees of Carnegie Mellon University since May 2002. He has also served as a member of the Executive Board of The Massachusetts High Technology

Council since February 1999, serving as Chairman from February 2005 to February 2007. He also serves as a member of the Board of Trustees or the Board of Directors of three non-profit organizations. Mr. Bertucci's 30-plus years of experience working for MKS, including a combined 28 years as our President, gives him a unique insight into the challenges and strategies relevant to the semiconductor industry as a whole, and to our Company in particular.

Cristina H. Amon

Dr. 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 Professor in the Department of Mechanical and Industrial Engineering at the University of Toronto since July 2006. Prior to that, Dr. 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. In her roles at the University of Toronto and Carnegie Mellon, Dr. Amon has led research in micro-fabrication, sustainable energy, thermal management of electronics and nano-scale transport in silicon thin films. Dr. Amon holds a Diploma Engineering Degree from Universidad Simon Bolivar, and both an M.S. and a Sc.D. from the Massachusetts Institute of Technology, all in Mechanical Engineering. Dr. Amon has served as Executive Board Member of the Global Engineering Deans Council since 2007 and as Chair from 2008 through 2009. She has also served as an Executive Board Member of the American Society of Mechanical Engineers (ASME), Electronic and Photonic Packaging division since 2001, on the Board of Visitors for the Department of Mechanical Engineering at Stanford University since 2008, and on the Board of Visitors for the College of Engineering at the University of Illinois at Urbana-Champaign since 2009. She is a Fellow of ASEE, ASME, the American Association for the Advancement of Science, the Engineering Institute of Canada, the Institute of Electrical and Electronic Engineers, the National Academy of Engineering, the Royal Society of Canada and the Canadian Academy of Engineering. Dr. Amon's extensive engineering background, particularly in micro-fabrication, thermal management and silicon thin-films, provides the Board of Directors with a technical perspective and insight into the challenges and opportunities we face.

Robert R. Anderson

Mr. Anderson has served as our director since January 2001. Mr. Anderson is a private investor. From October 1998 to April 2000, Mr. Anderson served as Chief Executive Officer of Yield Dynamics, Inc., a private semiconductor control software company, which MKS acquired in 2007 and later sold in 2010. Mr. Anderson served as Chief Executive Officer 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 was co-founder and served as Chief Financial Officer, Chief Operating Officer and Chairman of KLA Instruments, a supplier of process control and yield management solutions for the semiconductor and related nanoelectronics industries, from 1975 through 1994. He was Chief Financial Officer of Computervision from 1970 through 1975. Mr. Anderson has served as the President and a director of a private family foundation since September 2000. He has also served as a director of Aehr Test Systems, Inc., a publicly traded manufacturer of semiconductor test and burn-in equipment, since October 2000, and currently serves on Aehr's Audit and Compensation committees. He has also served as a director of Energetiq Technology, Inc., a privately held company, since May 2005. In addition, he served as a director of Aviza Technology, Inc., a publicly traded manufacturer of semiconductor capital equipment and process technologies, from December 2005 to March 2009. Mr. Anderson is a Trustee Emeritus of Bentley University, having served as a trustee from 1992 through 2003. Mr. Anderson has served on over 18 public and private boards, and has served as Chief Financial Officer, Chief Executive Officer and Chairman of several public corporations. His extensive business experience, particularly within the semiconductor industry, provides him with insight into the challenges we face within the industry. In addition, his financial acumen is an important asset in his role as a member of our Audit and Compensation Committees.

Gregory R. Beecher

Mr. Beecher has served as our director since August 2006. Mr. Beecher has served as Chief Financial Officer of Teradyne, Inc., a semiconductor and system level test equipment provider, since 2001. Mr. Beecher was an audit partner with PricewaterhouseCoopers LLP from October 1993 to March 2001, working with numerous semiconductor equipment and instrument providers, along with other technology-related enterprises, and advising on complex accounting issues. Mr. Beecher has an M.S. in Accounting from Northeastern University. Mr. Beecher served as a director of Hittite Microwave, a publicly traded developer of high performance integrated circuits, modules and subsystems, from June 2013 to May 2014 (when it was acquired by Analog Devices, Inc.). Mr. Beecher's extensive financial background, including his previous experience at a public accounting firm, and his current role as Chief Financial Officer of a public corporation, provide valuable insights for the Board of Directors and the Audit Committee.

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, with an extensive corporate practice, and is currently an attorney in private practice. Mr. Chute has served as a director of Massachusetts Audubon Society, Inc. since October 2004, currently serving as Chairman of its Audit Committee and a member of its Administration and Finance Committee, the Committee on the Board and its Diversity Committee. Mr. Chute has also served as a director and member of the Nominating Committee of Manomet, Inc., a non-profit organization, since November 1993. He has served on over 15 other non-profit and private company boards. Mr. Chute's extensive legal experience provides him with a unique perspective, which is particularly valuable in Mr. Chute's current roles as Secretary of the Company and as Chair of the Nominating and Corporate Governance Committee.

Gerald G. Colella

Mr. Colella has served as our director and as our Chief Executive Officer, in addition to his role as President, since January 2014. From February 2013 until December 2013, Mr. Colella served as our President and Chief Operating Officer. He served as Vice President and Chief Operating Officer from January 2010 until February 2013 and served as our Vice President and Chief Business Officer from April 2005 until January 2010. In addition, Mr. Colella also served as Acting Group Vice President, PRG Products from July 2007 to March 2010. From October 1997 to April 2005, he served as our Vice President, Global Business and Service Operations, from March 1996 to October 1997, he served as our Director of Materials Planning and Logistics and from 1994 to 1996, he served as our Materials Planning and Logistics Manager. Mr. Colella joined MKS in 1983. He holds a B.A. in Secondary Education from the University of Massachusetts and an M.B.A. from Southern New Hampshire University. Mr. Colella's over 30 years of experience within the Company gives him particularly deep insight into the organization.

Peter R. Hanley

Dr. Hanley has served as our director since March 2008. From December 2009 until November 2010, Dr. Hanley served as an occasional consultant to Novellus Systems, Inc. (now Lam Research Corporation), a leading developer of semiconductor manufacturing equipment. From January 2004 until December 2007, Dr. Hanley served as a part-time employee of Novellus, engaged primarily in executive training. Dr. Hanley served as President of Novellus 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. Prior to joining Novellus, Dr. Hanley served from 1985 to 1992 at Applied Materials, Inc., a leader in the semiconductor capital equipment industry, most recently as Group Vice President of Worldwide Sales and Service and previously as Vice President and General Manager of their Etch Products Division. Before joining Applied Materials, Inc., Dr. Hanley served from 1978 to 1984 at Varian Associates, a leader in the semiconductor capital equipment industry, most recently as Vice President of Technology and previously as Vice President and General Manager of their Extrinsic Ion Implantation Division. Dr. Hanley has served as a member of the Advisory Board of Orbotech Ltd., a publicly traded provider of yield-enhancing and production solutions, since 2014. Dr. Hanley holds a Bachelor of Science degree in Mechanical Engineering from Northeastern University and a PhD in Applied Physics from Cornell University. Dr. Hanley's substantial background in the semiconductor industry for more than 25 years, including senior management roles at Novellus and Applied Materials, two of MKS' largest customers, provides the Board of Directors with insights into the industry's sales and marketing challenges and opportunities.

Elizabeth A. Mora

Ms. Mora has served as our director since May 2012. Ms. Mora has served since 2008 as the Chief Financial Officer of The Charles Stark Draper Laboratory, Inc., a non-profit engineering research and development laboratory serving the national interest in applied research, engineering development, advanced technical education, and technology transfer. From 1997 until 2008, she worked for Harvard University, ultimately serving as Chief Financial Officer and

Vice President for Finance at the University, and previously serving as Associate

Vice President, Research Administration and the Director of the Office of Sponsored Research. Prior to joining Harvard, Ms. Mora worked for Coopers and Lybrand (now PricewaterhouseCoopers LLP) from 1989 to 1997 and was one of the founding members of its National Regulatory Consulting Practice. Ms. Mora is a Certified Public Accountant and has an M.B.A. from the Simmons College Graduate School of Management. She also serves as a member of the Audit Committee of the Olin College of Engineering. Ms. Mora's extensive financial background, including her current role as Chief Financial Officer of a research and development organization, provides valuable insights for the Board of Directors and the Audit Committee.

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 Amended and Restated By-Laws, our Restated 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 of Directors, 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. Colella, are independent as defined under the rules of the NASDAQ Stock Market (NASDAQ).

Board Leadership Structure

Since 2005, we have separated the roles of Chief Executive Officer and Chairman of the Board of Directors in recognition of the differences between the two roles. The Chief Executive Officer is responsible for setting the strategic direction for the Company and the day-to-day leadership and performance of the Company, while the Chairman of the Board of Directors provides guidance to the Chief Executive Officer, sets the agenda for Board meetings and presides over meetings of the full Board of Directors.

In addition, the Board of Directors has established the position of Lead Director. Our Corporate Governance Guidelines provide that during any period in which the Chair of the Board of Directors is not an independent director, a Lead Director shall be elected by and from the independent directors. While we are not obligated under our Corporate Governance Guidelines to have a Lead Director, as our Chairman of the Board of Directors is independent, we have currently elected to continue to do so.

The primary role of the Lead Director is to serve as a liaison between the independent directors and the Chairman of the Board of Directors and/or the Chief Executive Officer and to represent the interest of the independent directors, as appropriate. Gregory R. Beecher has served as Lead Director since 2012. Pursuant to our Corporate Governance Guidelines, which are posted on our website at www.mksinst.com in the Corporate Governance Section under the Investors tab; the Lead Director shall, among other matters:

Have the authority to call meetings of the independent directors.

Preside at all meetings of the Board of Directors at which the Chairman of the Board of Directors is not present.

Assure that at least two meetings per year of only the independent directors are held and chair any such meetings of the independent directors.

Facilitate communications and serve as a liaison between the independent directors and the Chairman of the Board of Directors and/or the Chief Executive Officer, provided that any director is free to communicate directly with the Chairman of the Board of Directors and with the Chief Executive Officer.

Work with the Chairman of the Board of Directors and the Chief Executive Officer in the preparation of the agenda for each Board of Directors meeting and approve each such agenda.

If a meeting is held between a major shareholder and a representative of the independent directors, the Lead Director shall serve, subject to availability, as such representative of the independent directors.

Otherwise consult with the Chairman of the Board of Directors and the Chief Executive Officer on matters relating to corporate governance and performance of the Board of Directors.

Our Board of Directors believes that its leadership structure is appropriate at this time for our Company because it strikes an effective balance between management and independent leadership participation in the Board of Directors process.

Board's Role in Risk Oversight

Management is responsible for the day-to-day management of risks the Company faces, while the Board of Directors, as a whole and through its committees, has the ultimate responsibility for the oversight of risk management. Senior management attends quarterly meetings of the Board of Directors, provides presentations on operations including significant risks, and is available to address any questions or concerns raised by the Board of Directors. Additionally, our three board committees assist the Board of Directors in fulfilling its oversight responsibilities in certain areas of risk. Pursuant to its charter, the Audit Committee coordinates the Board of Directors' oversight of the Company's internal controls over financial reporting, disclosure controls and procedures, and code of conduct. The Audit Committee also is responsible for discussing the Company's policies with respect to financial risk assessment and financial risk management. Management regularly reports to the Audit Committee on these areas. The Compensation Committee assists the Board of Directors in fulfilling its oversight responsibilities with respect to the management of risks arising from our compensation policies and programs as well as succession planning as it relates to our Chief Executive Officer. The Nominating and Corporate Governance Committee assists the Board of Directors in fulfilling its oversight responsibilities with respect to the management of risks associated with board organization, membership and structure, succession planning for our directors and corporate governance. In addition, from time to time, the Board of Directors may constitute a special committee to focus on a particular matter or risk. When any of the committees receives a report related to material risk oversight, the Chair of the relevant committee reports on the discussion to the full Board of Directors.

Board of Director Meetings and Committees of the Board of Directors

The Board of Directors held six meetings in 2014. During 2014, 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 our Annual Meeting of Shareholders. All of the directors then serving on the Board of Directors attended the 2014 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 tab on our website, www.mksinst.com, under the heading Corporate Governance.

Audit Committee

The Audit Committee consists of Messrs. Anderson and Beecher (Chair) and Ms. Mora. The Audit Committee's responsibilities include:

appointing, approving the fees of, assessing the independence of, evaluating, retaining and, when necessary, terminating the engagement 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 controls over financial reporting, disclosure controls and procedures, and code of business conduct and ethics;

overseeing our internal audit function;

discussing the Company's policies with respect to financial risk assessment and financial risk management;

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

discussing 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;

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

reviewing the Company's procedures for reviewing related person transactions, recommending any changes to these procedures and reviewing any related person transactions; and

preparing the Audit Committee report required to be included in the annual proxy statement.

The Audit Committee held five meetings in 2014.

Compensation Committee

The Compensation Committee consists of Dr. Amon, Mr. Anderson (Chair) and Dr. Hanley. The Compensation Committee's responsibilities include:

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

overseeing the evaluation of our executive officers;

Chief Executive Officer and other executive officer succession planning;

periodically reviewing and approving our management incentive bonus plan;

overseeing the risks associated with the Company's compensation policies and practices and annually reviewing whether such policies and practices are reasonably likely to have a material adverse effect on the Company;

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

preparing the annual Compensation Committee Report required to be included in the annual proxy statement;

overseeing and administering our equity incentive plans;

overseeing the Company's policies on structuring compensation programs compliant with Section 162(m) of the Internal Revenue Code;

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

appointing, compensating, assessing the independence of, and overseeing the work of any compensation consultant.

The Compensation Committee held four meetings in 2014. See the section below entitled *Executive Compensation Compensation Discussion and Analysis* for further information about the role of the Compensation Committee and the scope of its activities.

Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee consists of Dr. Amon, Mr. Chute (Chair) and Dr. Hanley. The Nominating and Corporate Governance Committee's responsibilities include:

identifying individuals qualified to become members of the Board of Directors, consistent with criteria approved by the Board of Directors;

recommending to the Board of Directors the persons to be nominated for election as directors, Lead Director (if any) and to each of the committees of the Board of Directors;

reviewing each director's continuation on the Board of Directors at least once every three years;

developing and recommending corporate governance guidelines to the Board of Directors;

retaining and terminating any search firm to be used to identify director nominees;

periodically reviewing the Board of Directors' leadership structure to assess whether it is appropriate;

overseeing the annual self-evaluations of the Board of Directors and each of the committees of the Board of Directors; and

monitoring communications from shareholders and other interested parties.

The Nominating and Corporate Governance Committee held two meetings in 2014.

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 current members of the Audit Committee is an audit committee financial expert as defined in applicable SEC regulations.

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 the members of the Nominating and Corporate Governance 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 Company's Corporate Governance Guidelines. These criteria include the candidate's integrity, business acumen, knowledge of our business and industry, age, tenure, experience, diligence, conflicts of interest and the ability to act in the interests of all shareholders. The Nominating and Corporate Governance Committee does not assign specific weights to particular criteria and no particular criterion is a prerequisite for each prospective nominee. Nominees shall not be discriminated against on the basis of race, religion, national origin, sex, sexual orientation, disability or any other basis proscribed by law. In considering director candidates, the Nominating and Corporate Governance Committee takes into account the value of diversity on the Board of Directors. While the Nominating and Corporate Governance Committee does not have a formal policy with

respect to diversity, the Board of Directors and the Nominating and Corporate Governance Committee believe that it is essential that the members of the Board of Directors represent diverse viewpoints. In considering candidates for the Board of Directors, the Nominating and Corporate Governance Committee considers the entirety of each candidate's credentials in the context of these standards. 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 at least \$2,000 in market value or 1% of our Common Stock, whichever is less, 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., Vice President and 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 Amended and Restated 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 2015 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 Chair 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 Chair 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., Vice President and General Counsel, MKS Instruments, Inc., 2 Tech Drive, Suite 201, Andover, MA 01810.

Code of Ethics

We have adopted a code of business conduct and ethics that applies to all of our directors, officers and employees (including the principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions), which is posted under the Investors tab on our website, www.mksinst.com under the heading Corporate Governance. We intend to disclose on our website any amendments to, or waivers for our executive officers or directors from, our code of business conduct and ethics.

Compensation Risk Assessment

We conducted a risk-assessment of our compensation programs and practices to understand if any risks exist that are reasonably likely to have a material adverse effect on our Company, and the results were reviewed by our Compensation Committee. Based on this assessment, our Compensation Committee concluded that our compensation programs and practices, as a whole, are appropriately structured and do not pose a material risk to our Company. Our compensation programs are intended to reward our executive officers and other employees for

strong performance over the long-term, with consideration to short-term actions and results that strengthen and grow our Company. We believe our compensation programs provide the appropriate balance between short-term and long-term incentives, focusing on sustainable and profitable growth for our Company.

Compensation Committee Interlocks and Insider Participation

In 2014, the Compensation Committee was comprised of Dr. Amon, Mr. Anderson and Dr. Hanley. None of the members of the Compensation Committee during 2014 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. 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. Colella, whose background is described under the heading *Directors* above:

Seth H. Bagshaw, Vice President, Chief Financial Officer and Treasurer, Age 55

Mr. Bagshaw has served as our Vice President and Chief Financial Officer since January 2010 and as Treasurer since March 2011. From March 2006 until January 2010, Mr. Bagshaw served as our Vice President and Corporate Controller. Prior to joining MKS, Mr. Bagshaw served as Vice President and Chief Financial Officer of Vette Corp., an integrated global supplier of thermal management systems from 2004 until 2006. From 1999 until 2004, Mr. Bagshaw served as Vice President and Corporate Controller of Varian Semiconductor Equipment Associates, Inc., a leading producer of ion implantation equipment used in the semiconductor manufacturing industry, and from 1998 until 1999, he served as Vice President and Chief Financial Officer of Palo Alto Products International, Inc., an industrial design, engineering and manufacturing company, until its acquisition by Flextronics International, Ltd. Prior to that, Mr. Bagshaw held several senior financial management positions at Waters Corporation, a developer of innovative analytical science solutions, most recently as Vice President and Chief Financial Officer of its Asia-Pacific region, and was a Senior Manager at PricewaterhouseCoopers LLP. Mr. Bagshaw has been a member of the Board of Directors of Associated Industries of Massachusetts, a non-profit state-wide employer advocacy and service organization, since 2010 and on its Audit Committee since 2014. Mr. Bagshaw is a Certified Public Accountant and has a B.S. in Business Administration from Boston University and an M.B.A. from Cornell University.

John R. Abrams, Senior Vice President of Global Sales, Age 62

Mr. Abrams has served as our Senior Vice President of Global Sales since January 2014. From October 2011 until December 2013, Mr. Abrams served as our Vice President of U.S. Sales. Prior to joining MKS, Mr. Abrams served as a business development consultant to AIRxpert Systems, Inc., an environmental information technology company, from October 2010 to October 2011. From February 2009 until September 2010, Mr. Abrams served as a Senior Marketing Manager for Varian, Inc., a maker of scientific equipment which was acquired by Agilent Technologies, Inc., a maker of measurement tools, in May 2010. From March 1997 until November 2008, Mr. Abrams served in several roles, most recently as Vice President of Global Sales, at Brooks Automation, Inc., a provider of automation vacuum and instrumentation solutions. Mr. Abrams received a B.S. in Biological Sciences from Lowell Technological Institute and an M.B.A. from Boston University.

John T.C. Lee, Senior Vice President of Business Units, Age 52

Dr. Lee has served as our Senior Vice President of Business Units since January 2014. From November 2012 until December 2013, Dr. Lee served as our Senior Vice President, Controls, HPS and PFMC. From January 2011 to November 2012, Dr. Lee served as Senior Vice President, Controls and PFMC. From

October 2007 to January 2011, Dr. Lee served as our Group Vice President, CIT Products. Prior to joining MKS, Dr. Lee served as the Managing Director of Factory Technology and Projects within the Solar Business Group at Applied Materials, Inc., a global leader in nanomanufacturing and technology solutions, 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, Dr. Lee served from 1997 until 2002 as the Research Director of the Silicon Fabrication Research Department at Lucent Technologies, Inc., a voice, data and video communications provider, and from 1991 until 1997 as a Member of the Technical Staff in the Plasma Processing Research Group within Bell Labs. Dr. Lee holds a B.S. from Princeton University and both an M.S.C.E.P. and Ph.D. from the Massachusetts Institute of Technology, all in Chemical Engineering.

Brian C. Quirk, Senior Vice President of Global Operations, Age 56

Mr. Quirk has served as our Senior Vice President of Global Operations since January 2014. From May 2006 until December 2013, Mr. Quirk served as our Vice President of Global Operations. Prior to joining MKS, Mr. Quirk served as Vice President of Global Operations and Supply Chain at Brooks Automation, Inc., a provider of automation vacuum and instrumentation solutions. Prior to that, Mr. Quirk held executive leadership roles in global operations at Teradyne, Inc., a semiconductor and system level equipment provider, GenRad, Inc. (acquired by Teradyne, Inc.) and Stratus Computer, Inc. (now known as Stratus Technologies, Inc.), a producer of fault tolerant computer servers. Mr. Quirk has a B.S. in Business Management from Bentley University and an M.B.A. from Suffolk 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

Introduction

The purpose of this section of our proxy statement is to provide an overview of our executive compensation program, our compensation philosophy and objectives, and the material decisions we made with respect to each element of our executive compensation program. Throughout this proxy statement, we refer to the following Named Executive Officers:

| Name | Title |
|-------------------|---|
| Gerald G. Colella | Chief Executive Office and President |
| Seth H. Bagshaw | Vice President, Chief Financial Officer and Treasurer |
| John R. Abrams | Senior Vice President of Global Sales |
| John T.C. Lee | Senior Vice President of Business Units |
| Brian C. Quirk | Senior Vice President of Global Operations |

Following this Compensation Discussion and Analysis, you will find a series of tables containing specific information about the compensation earned or paid in 2014 to our Named Executive Officers. All of our executive officers are also our Named Executive Officers.

Executive Summary

Founded in 1961, we are a global provider of instruments, subsystems and process control solutions that measure, control, power, monitor and analyze critical parameters of advanced manufacturing processes to improve process performance and productivity. We also provide services relating to the maintenance and repair of our products, software, service and maintenance, installation services and training.

Among our strategic goals is the achievement of sustainable and profitable growth and in 2014 we made excellent progress toward this goal as evidenced by our strong financial and operational performance. Revenue for 2014 increased 17% compared to 2013 and non-GAAP (generally accepted accounting principles in the U.S.) net earnings more than doubled. In addition, we deployed over \$140 million in capital during 2014 for the acquisition of Granville-Phillips in May 2014, the repurchase of our Common Stock and the payment of shareholder dividends.

Under our performance-based executive compensation program, our 2014 performance-based variable cash and equity compensation for our Named Executive Officers were tied to our Company's non-GAAP operating income and non-GAAP cash flow from operations, respectively. We believe these financial performance metrics are important to our shareholders because each is an indicator of how well we manage the operations of our Company. As a result of our strong financial results in 2014, our executive officers received 124% of their target variable cash compensation and 150% of their target performance-based restricted stock units.

Our executive compensation program is designed to reward our executive officers for performance and to align their interests with those of our shareholders. In 2014, long-term equity incentive compensation comprised 54% of total target compensation for our Chief Executive Officer and 41% of total target compensation, on average, for our other Named Executive Officers. Total target compensation is defined as the sum of base salary, target annual cash incentive compensation and target long-term equity incentive compensation. By making equity a substantial component of executive officer compensation, we align our executive officers' long-term interests with those of our shareholders. Fifty percent of each Named Executive Officer's target long-term equity incentive compensation is based

on Company performance as measured by annual adjusted cash flow from operations for the year of grant.

Our annual cash incentive plan is designed to complement our long-term equity incentive plan by focusing on our Company's annual financial performance as measured by adjusted operating income. In 2014, our target annual cash incentive compensation comprised 23% of total target compensation for our Chief Executive Officer and 24% of total target compensation, on average, for our other Named Executive Officers.

In 2014, base salary accounted for 23% of total target compensation for our Chief Executive Officer and 35% of total target compensation, on average, for our other Named Executive Officers. This means that our Chief Executive Officer had 77% of his total target compensation opportunity tied to annual and long-term incentive compensation and our other Named Executive Officers, on average, had 65% of their total target compensation opportunity tied to annual and long-term incentive compensation.

The following charts show the components of total target compensation and total actual compensation for our Chief Executive Officer and our other Named Executive Officers as a group for calendar year 2014.

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. This section summarizes our compensation philosophy and objectives relating to our Named Executive Officers.

At our 2014 Annual Meeting of Shareholders, held on May 5, 2014 (the 2014 Annual Meeting), we submitted to our shareholders an advisory vote on executive compensation. Although this annual advisory say-on-pay vote is non-binding, the Compensation Committee has considered, and will continue to consider, the outcome of this vote each year when making compensation decisions for our Named Executive Officers. At the 2014 Annual Meeting, our shareholders overwhelmingly approved the compensation of our Named Executive Officers, with approximately 95.9% of the votes cast voting in favor of the say-on-pay proposal.

The Compensation Committee considered the results of the 2014 say-on-pay vote, and based upon the strong shareholder support, does not believe that our executive compensation program requires material changes. The Compensation Committee will continue to consider the views of our shareholders in connection with our

executive compensation program and will consider changes based upon evolving best practices, market compensation information and changing regulatory requirements. The Compensation Committee believes that the 2014 shareholder vote was an endorsement of our compensation and the pay decisions made in relation to our performance.

Our executive compensation program is guided by the following principles:

Offer compensation programs that are competitive, on a position-by-position basis, when benchmarked against programs at companies of similar size and in a similar industry.

Reward individual contributions to our financial, operational and strategic objectives.

Reward seniority, experience and potential with the Company.

Provide short-term annual performance incentives for management to meet or exceed our performance expectations.

Provide long-term performance-based equity incentive compensation to encourage management to focus on operating performance and shareholder returns while also factoring in previous grant history and the dilutive impact of equity grants.

Emphasize our pay-for-performance philosophy.

Align our executives' interests with those of our shareholders.

What We Do

Pay for performance.

Have a clawback policy for incentive-based compensation.

Provide change-in-control benefits only upon a qualified termination of employment (i.e. double-trigger).

Provide modest perquisites with sound business rationale.

What We Don't Do

No repricing of underwater options without stockholder approval.

No dividend or dividend equivalents on restricted stock units.

No excise tax gross-ups upon a change-in-control other than a limited tax gross-up for our Chief Executive Officer as described below.

Review tally sheets when making executive compensation decisions.

Have stock ownership guidelines.

Prohibit hedging and pledging of Company shares.

Utilize an independent compensation consultant.

Elements of Compensation

The following summarizes the compensation elements for our Named Executive Officers. We target each of the various compensation elements, including salary, annual cash incentive compensation, and long-term equity incentive compensation, to be in the range of the competitive median levels for the individual position in the market. However, this is merely one factor that the Compensation Committee considers and we do not set any specific element or total compensation exactly to the median. In considering the compensation of an executive officer relative to the market, we also look qualitatively at the individual's overall performance, tenure and potential with MKS. Currently, all of our Named Executive Officers are paid within the competitive range of our peer group.

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. Because of the highly cyclical nature of our business, we have from

time to time imposed temporary salary reductions. For 2014, our Compensation Committee approved a salary increase of 20% for our Chief Executive Officer and a salary increase of 14% for each of our other Named Executive Officers who were also executive officers in 2013. The 20% salary increase for our Chief Executive Officer reflects his promotion to his new role in January 2014 and his actual job performance, as well as relevant benchmarking data provided by our independent compensation consultant.

Annual Cash Incentive Plan

Our annual cash incentive plan provides a short-term incentive to reward management for reaching our annual earnings goal and to reinforce our pay-for-performance philosophy. We believe that our plan provides significant incentive for our executive officers to exceed our financial goals. Under our plan, each executive officer, other than Mr. Abrams who is paid pursuant to a commission plan described below, is eligible to receive a performance bonus based on a specified percentage of eligible earnings, which is defined as eligible W-2 earnings received during the plan period (i.e., base salary, including regular, holiday, vacation and sick pay, but excluding bonus payments). Bonus payouts are based entirely on a corporate financial performance objective, which we believe eliminates complexity, fosters cooperative effort and closely aligns the interests of all our executive officers with those of our shareholders. In 2014, each executive officer was eligible to receive 60% of his target bonus if the minimum threshold was achieved. If we had achieved our target results, each executive officer would have been eligible to receive 100% of his target bonus, up to a maximum of 200% for achievement in excess of the target results, with incremental payouts for performance between these levels. In the event the minimum threshold for the corporate financial performance objective was not met, but would have been met but for the payment of the bonuses under the annual cash incentive plan, then in such case a pro rata portion of the bonus would be paid to each executive officer, but only to the extent that the corporate financial performance objective after such payment was no less than the minimum corporate financial performance objective.

While our plan reflects our typical strategy with respect to annual cash incentive bonuses, we do, from time to time, customize our plan to take into account special circumstances. We expect any such variations to the plan to occur only in unusual circumstances and we did not customize it in 2014.

The average bonus payout for all Named Executive Officers in the past ten years through 2014 was approximately 96% of target bonus levels. While the Company endeavors to set reasonable but challenging targets for the plan each year, consistent achievement is particularly challenging in the semiconductor industry, which is subject to wide and often unpredictable demand shifts.

In 2014, payouts under the annual cash incentive plan were calculated by multiplying a Named Executive Officer's Target Bonus Amount by the Corporate Performance Multiplier, each as discussed below. Target Bonus Amount is the amount determined by multiplying each Named Executive Officer's eligible earnings in 2014 by the Target Bonus Percentages listed below.

| Named Executive Officer | Target Bonus Percentage |
|--------------------------------|--------------------------------|
| Gerald G. Colella | 100% |
| Seth H. Bagshaw | 75% |
| John T.C. Lee | 70% |
| Brian C. Quirk | 55% |

In 2014, the Corporate Performance Multiplier, which is a percentage, was based upon our achievement of adjusted operating income after bonus and excluding special items. Participants would not receive any portion of their Target Bonus Amount if such adjusted operating income was less than the minimum threshold of \$68.7 million. The Corporate Performance Multiplier would be 60% of a Participant's Target Bonus Amount if such adjusted operating

income was \$68.7 million, and would be the maximum 200% if such adjusted operating income was \$229.2 million or more, with incremental payments for achievement in between. In 2014, because our adjusted operating income after bonus and excluding special items was \$142 million, participants received 124% of their Target Bonus Amounts.

Mr. Abrams Cash Incentive Compensation

Mr. Abrams, our Senior Vice President of Global Sales, does not participate in our annual cash incentive plan. Instead, our Compensation Committee ties Mr. Abrams' annual cash incentive compensation to sales commissions based on bookings. Our Compensation Committee believes this will incentivize Mr. Abrams to drive corporate sales team objectives more directly than our annual cash incentive plan. For 2014, Mr. Abrams' commission-based cash incentive target was set at 70% of his base salary based on a bookings goal of \$758.3 million. Mr. Abrams achieved 110% of his commission target based on bookings of \$782.1 million. For details regarding the amount paid to Mr. Abrams as sales commissions, see Footnote 2 to the Summary Compensation Table for 2014.

Long-Term Equity Incentive Compensation

We provide our executive officers with long-term equity incentive compensation in the form of restricted stock units, or RSUs, half of which are performance-based, in order to:

align our executives' interests with those of our shareholders and to reward for operating performance;

balance the short-term focus of annual cash incentive compensation with creating long-term shareholder value; and

retain executives by providing equity-based compensation that vests over a three-year period.

With respect to performance-based RSUs, our goal is to select a corporate financial performance metric that best aligns with our corporate objectives. For example, in 2009, due to the unusual economic conditions at that time, our corporate financial performance metric was the achievement of an annual corporate cash break-even level to motivate executives to control costs during the downturn. More typically, and in 2014, our corporate financial performance metric for performance-based RSUs was adjusted cash flow from operations (net income plus depreciation, amortization and non-cash stock-based compensation and excluding special items) set at varying revenue levels. We believe this financial metric is an accurate indicator of how well we manage the operations of our Company.

We use RSUs as our form of equity incentive compensation because we believe RSUs help ensure our executive officers' interests are aligned with our shareholders in both a rising and a 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 officer, and preferable to restricted stock, which gives the executive officer voting and dividend rights prior to full vesting. Because RSUs are worth more than options on the date of grant, we are able to grant fewer of them than options, resulting in less dilution to shareholders' holdings.

In 2014, Named Executive Officers would have forfeited all of their performance-based RSUs if our adjusted cash flow from operations was less than \$62.0 million at a revenue level of \$650 million, or if such cash flow was less than \$160.4 million at a revenue level of \$1.0 billion (with intermediate adjusted cash flow minimum thresholds at different revenue levels in between). However, if we did achieve these adjusted operating cash flow threshold levels at the respective revenue levels identified, Named Executive Officers would receive 50% of their target performance-based RSUs. If our adjusted cash flow from operations was \$83.7 million or more at a revenue level of \$650 million, or was greater than \$216.6 million at a revenue level of \$1.0 billion (with incremental thresholds in between), then Named Executive Officers would receive the maximum of 150% of their target performance-based RSUs. Incremental payments would be made for adjusted cash flow achievements between the minimum and maximum levels. In 2014, because our adjusted cash flow was \$125.8 million at a revenue level of \$765 million, after

removing the impact of acquisitions, Named Executive Officers received 150% of their target performance-based RSUs. These performance-based RSUs along with the time-based RSUs granted to Named Executive Officers vest in equal annual installments over three years from the original date of grant.

It is our practice to make an initial equity-based grant to all executive officers at the time they commence employment, in an amount that is consistent with amounts 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 executive officers 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.

Supplemental Retirement Benefits

We provide supplemental retirement benefits, including supplemental lifetime retiree medical benefits, to our current Chief Executive Officer and President, Mr. Colella, or, in the event of his death, to his spouse. These supplemental retirement benefits were designed to reward Mr. Colella's long service with us and to serve as a significant incentive for Mr. Colella to remain with us because these benefits are contingent upon him maintaining his employment with us until age 62, with specified exceptions. Mr. Colella, who first joined the Company in 1983 as our Materials Planning and Logistics Manager, served in numerous capacities over the course of the next thirty plus years to ultimately become our Chief Executive Officer, in addition to his role as President, on January 1, 2014.

Since 2011, it has been our policy not to offer these types of retirement benefits to other executive officers in the future. While these benefits were attractive elements to retain certain of our most senior executive officers historically, the elimination of these benefits more closely meets our objective to align executive compensation with Company financial performance.

Perquisites

We offer certain perquisites to our Named Executive Officers to allow executives to focus on corporate strategy and enhancing shareholder value and to provide competitive pay packages. Examples of these perquisites are car payments, health cost reimbursements and golf club memberships. We believe offering these benefits is important to maintaining a competitive position in attracting and retaining key personnel and these benefits are consistent with market practices.

Severance and Change-in-Control Provisions

Each of our Named Executive Officers is entitled to certain payments and benefits in the event his employment terminates under specified circumstances. In exchange for these payments and benefits, each Named Executive Officer is restricted from competing with the Company during and following the termination of employment for a certain period of time. In addition, RSU agreements with our Named Executive Officers provide for acceleration of vesting in the event the executive's employment is terminated without cause or the executive resigns for good reason within 24 months after a change-in-control. The severance and change-in-control provisions are designed to be competitive in the marketplace, to provide security for our Named Executive Officers in the event that we are acquired and his respective position is impacted and to provide an incentive for the Named Executive Officer to stay with us through such a change-in-control event. These provisions are also intended to protect us from competitive harm, by compensating our Named Executive Officers for agreeing to substantial non-compete provisions after employment termination. See *Executive Compensation - Potential Payments Upon Termination or Change in Control* for more information about these agreements.

Compensation of our Chief Executive Officer

Mr. Colella was promoted to Chief Executive Officer, in addition to his role as President, effective January 1, 2014. In connection with Mr. Colella's promotion, MKS entered into a new employment agreement with him, also effective as of January 1, 2014. The terms of Mr. Colella's new employment agreement reflect his new role as the leader of our Company and the experience he brings to the position having served more than 32 years at MKS. We believe the terms of Mr. Colella's new employment agreement reflect the Company's compensation philosophy and are consistent with the terms of the employment agreement we had entered into with our previous Chief Executive Officer. For a

detailed discussion of the material terms of Mr. Colella's new employment agreement, please see the summary of the agreement in the section of the proxy statement entitled "Executive Compensation - Potential Payments Upon Termination or Change in Control."

Compensation of our Other Named Executive Officers

We have entered into employment agreements with each of our other Named Executive Officers. For a detailed discussion of the material terms of these executive employment agreements, please see the summary of the agreements in the section of the proxy statement entitled "Executive Compensation Potential Payments Upon Termination or Change in Control."

Compensation Consultant; Market Comparison

We periodically engage a compensation consultant to serve as an independent advisor to the Compensation Committee regarding compensation for our directors and our executive officers. The Compensation Committee utilizes the compensation consultant in the following ways:

to provide the Compensation Committee and the Company with occasional consultation regarding compensation strategies and programs;

to review our peer group to determine the appropriateness of its composition;

to conduct, from time to time, formal competitive compensation analysis for the Compensation Committee regarding our directors and each executive officer, on a position-by-position basis, in comparison to similarly situated executive officers in our peer group using benchmarking data; and

to periodically assist with the Company's conducting of a risk assessment of the Company's compensation policies and practices.

From 2007 to October 2014, the Compensation Committee engaged Radford, an Aon Hewitt Company ("Radford"), as its compensation consultant. The Compensation Committee determined that the engagement of Radford as a compensation consultant did not raise any conflicts of interest with MKS. In the fall of 2014, our Compensation Committee sought proposals from other compensation consultants and, in October 2014, selected Meridian Compensation Partners, LLC as its new compensation consultant, to provide executive officer compensation advice beginning in 2015.

When determining executive compensation for 2014, the Compensation Committee, with the assistance of Radford, reviewed size and industry-appropriate broad survey data from The 2013 Radford Global Technology Compensation Survey, as well as publicly available compensation data from the following comparable peer companies:

Advanced Energy Industries, Inc.
Brooks Automation, Inc.
Coherent, Inc.
Daktronics, Inc.
Entegris, Inc.
ESCO Technologies, Inc.
FEI Company
FLIR System, Inc.

JDS Uniphase Corporation
Kulicke & Soffa Industries, Inc.
MTS Systems Corporation
Newport Corporation
Photronics, Inc.
Plantronics, Inc.
Teradyne, Inc.
Veeco Instruments, Inc.

GT Advanced Technologies, Inc.

These peer companies were selected because they compete in the semiconductor industry and are similar to MKS in terms of revenues and market capitalization.

In October 2013, the Compensation Committee engaged Radford to prepare a competitive compensation analysis for each of our executives on a position-by-position basis for the purposes of determining executive compensation for 2014. This 2014 peer group differed from our 2013 peer group as follows: Cymer, Inc. and Varian Medical Systems, Inc. were removed because Cymer, Inc. was acquired by ASML Holding NV in May 2013 and Varian Medical Systems, Inc. s revenues and market capitalization no longer fit within the desired range for our peer group. Additionally, Daktronics, Inc. was added because of its similar size in terms of revenues and market capitalization.

Role of our Chief Executive Officer

Our Chief Executive Officer reviews with the Compensation Committee the performance of all other executive officers and makes recommendations relating to compensation of such executive officers. Management develops proposed corporate financial goals for review and approval by the Compensation Committee for the annual cash incentive plan and long-term performance-based equity incentive compensation, develops proposals relating to potential changes in compensation programs for review and approval by the Compensation Committee and provides the Compensation Committee and its advisors with information necessary to evaluate and implement compensation proposals and programs.

Governance Policies

Stock Ownership Guidelines

Our Stock Ownership Guidelines, which are applicable to members of the Board of Directors, the Chief Executive Officer and any other person who is or was a Named Executive Officer while the guidelines are effective, provide that:

Members of the Board of Directors shall own an amount of stock of the Company with a value equal to at least three times the annual retainer for Board service (exclusive of any compensation for committee service, meeting fees, leadership roles and the like).

The Chief Executive Officer shall own an amount of stock of the Company with a value equal to at least three times his or her annual base salary (excluding any bonus, award or special compensation).

Other Named Executive Officers shall own an amount of stock of the Company with a value equal to at least two times his or her annual base salary (excluding any bonus, award or special compensation).

These guidelines are based, in each case, on values in effect as of December 31 of the applicable year.

We adopted the Stock Ownership Guidelines in 2013 and they provide for a phase-in period over five years to achieve the respective ownership goals.

Clawback Policy

Our Clawback Policy, which is applicable to incentive-based compensation (specifically our cash incentive plan and our performance-based RSUs) that is awarded to executive officers, provides that in the event we are required to prepare an accounting restatement due to material noncompliance with financial reporting requirements, we will use reasonable efforts to recover any amount in excess of what would have been paid to such executive officers (or such former executive officers) under the accounting restatement for any such incentive-based compensation during the three-year period preceding the restatement.

Prohibition on Hedging and Pledging

Our Insider Trading Policy prohibits any of our directors or employees from engaging in transactions involving financial instruments that are designed to hedge or offset any decrease in the market value of our securities (including pre-paid variable forward contracts, equity swaps, collars and exchange funds), and prohibits such individuals from

purchasing our securities on margin or pledging such securities as collateral for a loan.

Impact of Accounting and Tax on Executive Compensation

Impact of Code Section 162(m)

Section 162(m) of the Internal Revenue Code of 1986, as amended, generally disallows a tax deduction to public companies for compensation in excess of \$1 million per person paid to a company's chief executive officer and the next three most highly-paid executive officers other than the chief financial officer. 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. On May 5, 2014, we received shareholder approval for the 2014 Stock Incentive Plan which permits the grant of Section 162(m) qualified performance-based RSUs and restricted stock. At the 2015 Annual Meeting, we are seeking shareholder approval of our 162(m) Executive Cash Incentive Plan so that cash awards under such plan will qualify as performance-based compensation under Section 162(m). The Compensation Committee reserves the right to use its judgment to authorize compensation payments which are not qualified as performance-based compensation under Section 162(m) and which may be in excess of the Section 162(m) limit when the Compensation 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 our shareholders.

Impact of ASC 718

We account for stock-based compensation in accordance with the requirements of Financial Accounting Standards Board Accounting Standards Codification 718 (ASC 718). The Compensation Committee considers the impact of ASC 718 on our use of equity incentives as a key retention tool. The Compensation Committee regularly reviews its choice of equity instruments taking into account both tax and accounting considerations.

COMPENSATION COMMITTEE REPORT

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.

Respectfully submitted,

Robert R. Anderson, Chair

Cristina H. Amon

Peter R. Hanley

Summary Compensation Table for 2014

The following table sets forth the aggregate amounts of compensation earned by our Named Executive Officers in the years ended December 31, 2014, 2013 and 2012.

| Name and Principal Position | Year | Salary (\$) | Stock Awards (\$)(1) | Non-Equity Incentive Plan Compensation (\$)(2) | Change in Pension Value and Non-qualified Deferred Compensation (\$)(3) | All Other Compensation (\$)(4) | Total (\$) |
|---|------|----------------|-------------------------|--|--|---|--------------|
| | | | | | | | |
| Gerald G. Colella, Chief Executive Officer & President (principal executive officer) | 2014 | \$ 597,308 | \$ 1,400,000 | \$ 746,635 | \$ 1,591,840 | \$ 63,604 | \$ 4,399,387 |
| | 2013 | \$ 498,454 | \$ 800,000 | \$ 527,115 | - | \$ 49,870 | \$ 1,875,439 |
| | 2012 | \$ 431,673 | \$ 550,000 | \$ 236,341 | \$ 1,142,227 | \$ 52,880 | \$ 2,413,121 |
| Seth H. Bagshaw, Vice President, Chief Financial Officer and Treasurer (principal financial officer) | 2014 | \$ 398,654 | \$ 750,000 | \$ 373,738 | N/A | \$ 68,449 | \$ 1,590,841 |
| | 2013 | \$ 349,423 | \$ 600,000 | \$ 344,881 | N/A | \$ 58,301 | \$ 1,352,605 |
| | 2012 | \$ 324,519 | \$ 400,000 | \$ 142,139 | N/A | \$ 55,311 | \$ 921,969 |
| John R. Abrams,(5) Sr. Vice President of Global Sales | 2014 | \$ 273,436 | \$ 200,000 | \$ 210,546 | N/A | \$ 44,743 | \$ 728,725 |
| John T.C. Lee, Sr. Vice President of Business Units | 2014 | \$ 398,654 | \$ 500,000 | \$ 348,822 | | \$ 67,220 | \$ 1,314,696 |
| | 2013 | \$ 349,654 | \$ 340,000 | \$ 295,807 | N/A | \$ 61,438 | \$ 1,046,899 |
| | 2012 | \$ 334,712 | \$ 250,000 | \$ 146,604 | N/A | \$ 60,125 | \$ 791,441 |
| Brian C. Quirk,(5) Sr. Vice President of Global Operations | 2014 | \$ 323,923 | \$ 350,000 | \$ 222,697 | N/A | \$ 60,796 | \$ 957,416 |

- (1) Represents the grant date fair value for each RSU granted to the executive officer during the covered year, calculated in accordance with ASC 718. The assumptions used in determining the grant date fair values of awards are set forth in Note 18 to our consolidated financial statements, which are included in our Annual Report on Form 10-K filed with the SEC on February 25, 2015. Fifty percent of the values listed under Stock Awards represent performance-based RSUs which are valued at the grant date based upon the probable outcome of the

performance metrics. Therefore, the amounts under the Stock Awards column do not reflect the amount of compensation actually received by the Named Executive Officer during the fiscal year. The maximum value of the performance-based RSUs, assuming the highest level of performance is achieved, was as follows for 2014, 2013 and 2012, respectively, or 2014 in the case of Messrs Abrams and Quirk: Mr. Colella: \$1,750,000, \$1,000,000 and \$687,500; Mr. Bagshaw: \$937,500, \$750,000 and \$500,000; Mr. Abrams: \$250,000; Dr. Lee: \$625,000, \$425,000 and \$312,500; and Mr. Quirk: \$437,500. Based on the achievement against the performance metric, the actual value of the performance-based RSUs awarded in 2014 were as follows: Mr. Colella: \$1,750,000; Mr. Bagshaw: \$937,500; Mr. Abrams: \$250,000; Dr. Lee: \$625,000 and Mr. Quirk: \$437,500. Based on the achievement against the performance metric, the actual value of the performance-based RSUs awarded in 2013 were as follows: Mr. Colella: \$944,000; Mr. Bagshaw: \$708,000 and Dr. Lee: \$401,200. Based on the achievement against the performance metric, the actual values of the performance-based RSUs awarded in 2012 were as follows: Mr. Colella: \$679,250; Mr. Bagshaw: \$494,000 and Dr. Lee: \$308,750.

- (2) Except with respect to Mr. Abrams, amounts shown reflect compensation under the annual cash incentive plan earned for the year indicated which was paid in the following year. For 2014, 2013 and 2012, each executive was eligible for an annual performance bonus equal to a specified target percentage of eligible earnings for the relevant plan year, called a Target Bonus Amount. The maximum bonus payout possible was 200% of this Target Bonus Amount and the minimum payout was zero, with incremental payouts for performance between these levels. Annual performance bonuses were paid out upon achievement of specific pro forma pre-tax operating income goals. In 2014, the Target Bonus Amount for each of the Named Executive Officers was equal to that Named Executive Officer's eligible earnings for 2014 multiplied by the

following percentages: Mr. Colella 100%, Mr. Bagshaw 75%, Dr. Lee 70% and Mr. Quirk 55%. In 2013, the percentages for the Named Executive Officers were: Mr. Colella 75%, Mr. Bagshaw 70% and Dr. Lee 60%. In 2012, the percentages for the Named Executive Officers were: Mr. Colella 75%, Mr. Bagshaw 60% and Dr. Lee 60%. For 2014, we paid a bonus of 124% of the Target Bonus Amount for each Named Executive Officer. For 2013, we paid a bonus of 141% of the Target Bonus Amount for each Named Executive Officer. For 2012, we paid a bonus of 73% of the Target Bonus Amount for each Named Executive Officer. Mr. Abrams does not participate in our annual cash incentive plan. As Senior Vice President of Global Sales his annual cash incentive compensation is tied to an annual commission plan. For 2014, his commission based cash incentive target was set at 70% of his base salary based on a bookings goal of \$758.3 million. Mr. Abrams achieved 110% of his commission target based on bookings of \$782.1 million.

- (3) The employment agreement for Mr. Colella provides for supplemental retirement benefits. For 2013, the decrease in actuarial present value from the prior fiscal year was (\$350,177). For 2014 and 2012, the amount listed represents the actuarial increase in present value from the prior fiscal year.
- (4) For Mr. Colella, with respect to 2014, this amount was comprised of \$27,594 for car related expenses, \$6,165 for golf club membership, \$22,045 for company paid health and life insurance and \$7,800 for 401(k) matching contributions. With respect to 2013, this amount was comprised of \$16,165 for car related expenses, \$6,165 for golf club membership, \$19,170 for company paid health and life insurance, \$720 for a length of service award and \$7,650 for 401(k) matching contributions. With respect to 2012, this amount was comprised of \$14,260 for car related expenses, \$5,870 for golf club membership, \$25,250 for company paid health and life insurance and \$7,500 for 401(k) matching contributions. For Mr. Bagshaw, with respect to 2014, this amount was comprised of \$26,027 for car related expenses, \$6,165 for golf club membership, \$28,457 for company paid health and life insurance and \$7,800 for 401(k) matching contributions. With respect to 2013, this amount was comprised of \$17,180 for car related expenses, \$6,165 for golf club membership, \$27,306 for company paid health and life insurance and \$7,650 for 401(k) matching contributions. With respect to 2012, this amount was comprised of \$13,858 for car related expenses, \$5,870 for golf club membership, \$28,083 for company paid health and life insurance and \$7,500 for 401(k) matching contributions. For Mr. Abrams, with respect to 2014, this amount was comprised of \$16,589 for car related expenses, \$20,354 for company paid health and life insurance and \$7,800 for 401(k) matching contributions. For Dr. Lee, with respect to 2014, this amount was comprised of \$23,093 for car related expenses, \$6,165 for golf club membership, \$29,312 for company paid health and life insurance, \$850 for a patent award and \$7,800 for 401(k) matching contributions. With respect to 2013, this amount was comprised of \$22,880 for car related expenses, \$6,150 for golf club membership, \$24,758 for company paid health and life insurance, and \$7,650 for 401(k) matching contributions. With respect to 2012, this amount was comprised of \$19,779 for car related expenses, \$3,779 for golf club membership, \$28,217 for company paid health and life insurance, \$850 for a patent award and \$7,500 for 401(k) matching contributions. For Mr. Quirk, with respect to 2014, this amount was comprised of \$30,543 for car related expenses, \$6,165 for golf membership, \$16,288 for company paid health and life insurance and \$7,800 for 401(k) matching contributions.
- (5) Messrs. Abrams and Quirk were not Named Executive Officers in 2013 or 2012.

Grants of Plan-Based Awards in Fiscal Year 2014

| Name | Grant Date(1) | Estimated Future Payouts Under Non-Equity Incentive Plan Awards(2) | | | Estimated Future Payouts Under Equity Incentive Plan Awards(3) | | | All Other Stock Awards: Number of Shares or Units(4) | Grant Date Fair Value of Stock Awards(5) |
|-------------------|---------------|--|-------------|--------------|--|------------|-------------|--|--|
| | | Threshold (\$) | Target (\$) | Maximum (\$) | Threshold (#) | Target (#) | Maximum (#) | | |
| Gerald G. Colella | 2/10/2014 | \$ 0 | \$ 600,000 | \$ 1,200,000 | 12,052 | 24,104 | 36,157 | 24,104 | \$ 1,400,000 |
| Seth H. Bagshaw | 2/10/2014 | \$ 0 | \$ 300,000 | \$ 600,000 | 6,456 | 12,913 | 19,369 | 12,913 | \$ 750,000 |
| John R. Abrams | 2/10/2014 | \$ 0 | \$ 192,500 | \$ 385,000 | 1,721 | 3,443 | 5,165 | 3,443 | \$ 200,000 |
| John T.C. Lee | 2/10/2014 | \$ 0 | \$ 280,000 | \$ 560,000 | 4,304 | 8,608 | 12,913 | 8,608 | \$ 500,000 |
| Brian C. Quirk | 2/10/2014 | \$ 0 | \$ 178,750 | \$ 357,500 | 3,013 | 6,026 | 9,039 | 6,026 | \$ 350,000 |

(1) This column shows the date of grant for all equity awards granted in 2014.

(2) Except for Mr. Abrams, represents aggregate threshold, target and maximum payout levels under the annual cash incentive plan. Mr. Abrams' annual cash incentive compensation is tied to a commission plan. The actual amount of annual cash incentive compensation earned by each Named Executive Officer in 2014 is reported under the Non-Equity Incentive Plan Compensation column in the Summary Compensation Table for 2014. See footnote 2 to the Summary Compensation Table for 2014 for details on the terms of the annual cash incentive plan and Mr. Abrams' commission plan.

(3) These RSUs vest in equal annual installments over three years, subject to achievement of performance criteria.

(4) These RSUs vest in equal annual installments over three years.

(5) Reflects the combined grant date fair value of performance-based RSUs at the target achievement level and time-based RSUs. The fair value was \$29.04 per share for RSUs awarded on February 10, 2014.

Outstanding Equity Awards at 2014 Fiscal Year-End

| Name | Number of Shares or Units of Stock | Market Value of Shares or Units of | Stock Awards(1) | |
|------|------------------------------------|------------------------------------|--|--|
| | | | Equity Incentive Plan Awards: Number of Unearned | Equity Incentive Plan Awards: Market or Payout Value |

| | That Have Not Vested (#) | Stock That Have Not Vested(2) (\$) | Shares, Units or Other Rights That Have Not Vested (#) | of Unearned Shares, Units or Other Rights That Have Not Vested(2) (\$) |
|-------------------|---|---|---|---|
| Gerald G. Colella | 7,197(3) 23,378(4) 24,104(5) | \$ 263,437 \$ 855,681 \$ 882,231 | 36,157(5) | \$ 1,323,347 |
| Seth H. Bagshaw | 5,234(3) 17,534(4) 12,913(5) | \$ 191,588 \$ 641,752 \$ 472,624 | 19,369(5) | \$ 708,936 |
| John R. Abrams | 3,005(6) 3,443(5) | \$ 110,016 \$ 126,033 | 5,165(5) | \$ 189,050 |
| John T.C. Lee | 3,272(3) 9,936(4) 8,608(5) | \$ 119,774 \$ 363,662 \$ 315,083 | 12,913(5) | \$ 472,624 |
| Brian C. Quirk | 2,469(7) 9,351(4) 6,026(5) | \$ 90,380 \$ 342,287 \$ 220,558 | 9,039(5) | \$ 330,837 |

- (1) RSUs vest in equal annual installments over three years with the first tranche vesting on the first anniversary of the grant date. RSUs listed in Equity Incentive Plan Awards column were also subject to achievement of performance criteria.
- (2) The values were calculated based on the closing price of our Common Stock on December 31, 2014 of \$36.60 per share.

(3) Grant date is February 23, 2012.

(4) Grant date is February 25, 2013.

(5) Grant date is February 10, 2014.

(6) Grant date is April 4, 2013.

(7) Grant date is April 2, 2012.

Option Exercises and Stock Vested in Fiscal Year 2014

| Name | Option Awards | | Stock Awards | |
|-------------------|---|---------------------------------|--|-----------------------------------|
| | Number of Shares Acquired on Exercise (#) | Value Realized On Exercise (\$) | Number of Shares Acquired on Vesting (#) | Value Realized on Vesting(1) (\$) |
| Gerald G. Colella | - | - | 79,820 | \$ 765,972 |
| Seth H. Bagshaw | - | - | 60,409 | \$ 579,662 |
| John R. Abrams | - | - | 7,230 | \$ 73,544 |
| John T.C. Lee | - | - | 35,714 | \$ 343,036 |
| Brian C. Quirk | - | - | 28,603 | \$ 274,130 |

(1) Value realized represents the fair market value of the shares at the time of vesting.

Pension Benefits

Pursuant to an employment agreement, we provide supplemental retirement benefits to Mr. Colella or, in the event of Mr. Colella's death, to his spouse. These supplemental retirement benefits were designed to reward Mr. Colella's long-term service with us and to serve as a significant incentive for Mr. Colella to remain with us. In addition, these benefits are designed to provide for supplemental retirement benefits that are not available under our Company-wide employee benefits due to regulatory limitations on benefit accruals.

The benefits vest upon (a) Mr. Colella reaching both (i) specified ages, and (ii) 25 years of service with us, in each case while employed with us, or (b) upon Mr. Colella's earlier death, disability, termination without cause (as defined in his employment agreement) or a qualifying termination in connection with a change in control (as defined in his employment 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 than six months after the date of termination (except in the case of death or disability). The actuarial calculations include assumptions for decreased benefit continuation for Mr. Colella's surviving spouse in the event of the Mr. Colella's death. The supplemental retirement benefits are not subject to any deduction for social security or other offset amounts. The benefit amount is based upon the final average compensation, which is equal to the average of Mr. Colella's three highest years of compensation (salary plus bonus) during the 10 years prior to Mr. Colella's year of retirement (or other qualifying termination). The benefits for Mr. Colella will vest 80%, 90% and 100% at the ages of

60, 61 and 62, respectively.

The table below sets forth the present value as of December 31, 2014 of the accumulated benefits under Mr. Colella's supplemental pension arrangement. None of our other Named Executive Officers is eligible for supplemental retirement benefits.

PENSION BENEFITS

| Name | Plan Name | Number of Years Credited Service (#)(1) | Present Value of Accumulated Benefit (\$)(2) | Payments During the Last Fiscal Year (\$) |
|-------------------|---|---|--|---|
| Gerald G. Colella | Supplemental Retirement Benefits under Employment Agreement | 25 | \$7,462,522 | \$0 |
| Seth H. Bagshaw | N/A | N/A | N/A | N/A |
| John R. Abrams | N/A | N/A | N/A | N/A |
| John T.C. Lee | N/A | N/A | N/A | N/A |
| Brian C. Quirk | 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 1.75%, a maturity value rate of 2.75% and salary increases of 4.0% per annum and the 1994 Group Annuity Reserve Mortality Table. Mr. Colella was not vested in any portion of the amount set forth above as of December 31, 2014.

Potential Payments Upon Termination or Change in Control

This section (including the following table) summarizes the estimated payments and other benefits that each Named Executive Officer would be eligible to receive if his employment had terminated on December 31, 2014, under the circumstances set forth below.

Except as otherwise set forth below, for purposes of the following description of such benefits, Cause means that the executive has refused to perform the services required of him under his employment agreement or has failed or refused to comply with any of the covenants in the employment agreement, or any of the following: (i) willful or gross neglect of his duties, (ii) material breach of his employment agreement or of any of the rules, regulations, policies or procedures of the Company, or material violation of the Company's code of conduct, (iii) commission of a felony or other act of material dishonesty, including but not limited to fraud, embezzlement, misappropriation of Company property, moral turpitude, or breach of fiduciary duty that could possibly have a material adverse effect on the Company, (iv) unlawful use of controlled substances on the Company's premises or while performing his duties and responsibilities or indictment related to the commission of any criminal act, (v) failure or refusal to reasonably cooperate with any Company investigation or government/regulator authority having jurisdiction over the executive and the Company, or (vi) engaging in willful or gross misconduct which is materially injurious to the Company,

financially or otherwise, or the Company's reputation. Good Reason means voluntary separation from service within 90 days following (i) a material diminution in positions, duties and responsibilities from those described in the executive's employment agreement, (ii) a reduction in the executive's base salary (other than as part of a general salary reduction program affecting senior executives), (iii) a material reduction in the aggregate value of the executive's pension and welfare benefits from those in effect prior to the change in control (other than as proportionate to the reductions applicable to other senior executives pursuant to a cost-saving plan that includes all senior executives), (iv) a material breach of any provision of the employment agreement by the Company, or (v) the Company's requiring the executive to be based at a location causing a one way commute in excess of 60 miles from the executive's primary residence.

Mr. Colella

On October 22, 2013, in connection with Mr. Colella's appointment as Chief Executive Officer and President, we entered into a new employment agreement with Mr. Colella, effective as of January 1, 2014, (the

Employment Agreement) which superseded his previous employment agreement dated April 25, 2005, as amended. Below is a summary of the material terms of Mr. Colella's Employment Agreement.

Under the Employment Agreement, in addition to his base salary, Mr. Colella is eligible to participate in the Company's annual cash incentive plan, with a targeted goal of 100% of base salary subject to meeting performance goals to be determined by our Compensation Committee, and long term equity incentive plan, subject to meeting vesting and/or performance goals to be determined by our Compensation Committee. Mr. Colella's employment term is month-to-month, with termination upon 30 days' notice by either party, or upon death, disability, or at the Company's election if Mr. Colella fails to perform his duties or commits any other act constituting Cause.

In the event Mr. Colella's employment is terminated by the Company without Cause, he is entitled to one year continuation of each of the following: base salary, payment of any annual cash incentive plan bonus earned for the prior calendar year but not yet paid, reimbursement for premiums he pays (if any) for continuation of life insurance if he elects the Company's group life insurance conversion feature, and payment for continuation of medical, dental or vision insurance. Payment of such benefits is conditioned upon execution of a release by Mr. Colella and his full compliance with the restrictive covenants described below.

In the event Mr. Colella's employment is terminated due to death or total disability, or Mr. Colella voluntarily terminates his employment (other than for Good Reason as defined above within two years of a change in control), we will pay his base salary accrued through the last date of employment, plus any annual cash incentive plan bonus earned for the prior calendar year but not yet paid.

In the event Mr. Colella's employment is terminated without Cause or is terminated by Mr. Colella for Good Reason, in either case upon or at any time within two years of a change in control, Mr. Colella will receive a lump sum payment equal to 36 months of base salary and 36 months of target bonus amount, payment of any annual cash incentive plan bonus earned for the prior calendar year but not yet paid, and continued participation in the Company's medical, dental, vision and life insurance plans for 36 months. In the event such payments are determined to be subject to an excise tax imposed by the Internal Revenue Code Section 4999, such payments will be payable in full or, if applicable, reduced so that no portion of the payments is subject to the excise tax, whichever of the foregoing amounts results in receipt by Mr. Colella on an after-tax basis of the greater amount, taking into account all applicable taxes, including the penalty tax. Mr. Colella is not entitled to any gross-up payment for any such excise tax due on such payments.

The Employment Agreement requires Mr. Colella to return all or a portion of any incentive pay, and any severance payments computed by reference thereto, for the performance period(s) in which his termination of employment occurs and any performance period ending within the 36 month period prior to his termination of employment, if it is later determined that these awards were calculated on the basis of inaccurate information that results in a restatement of our financial statements, or for other required reasons.

The Employment Agreement provides that Mr. Colella may not, during the term of his employment and for the period of one year after termination of employment (or two years in the event Mr. Colella terminates his employment other than for Good Reason, (i) engage in any competitive business or activity, (ii) work for any person who was our executive, officer or agent, or establish any business or partnership with such person that is competitive to the Company, (iii) give, sell or lease any competitive services or goods to any of our customers; or (iv) have any material financial interest in or be a director, officer, partner, executive or consultant to or exceed specified shareholding limitations in, any of the Company's competitors.

Mr. Colella is also subject to non-solicitation restrictions. During the term of employment and for a period of two years after termination, Mr. Colella may not solicit any customer to become a customer, distributor or supplier of any other person or entity or to cease doing business with the Company; or solicit or hire any of our executives, officers or

agents to terminate such person's employment or engagement with the Company or to work for a third party.

In addition, the Employment Agreement continues to provide Mr. Colella with the same supplemental retirement benefits as were provided under his original employment agreement. The benefits vest (a) upon Mr. Colella reaching both (i) specified ages, and (ii) 25 years of service with the Company, in each case while

employed with the Company, or (b) upon his earlier death, disability, termination without cause (defined as conviction for the commission of a felony, material breach of any employment or other agreements between the executive and the Company, or willful failure by the executive to perform his material responsibilities to the Company) or a qualifying termination for good reason within three years of a change in control (as defined in the agreement), and are forfeited in the event of termination prior to vesting as described above, termination for cause or upon violation of the noncompetition, nondisclosure, or nonsolicitation provisions contained in the Employment Agreement. When vested, subject to his execution of and compliance with a customary release, the supplemental retirement benefit provides for a lump sum payment to Mr. Colella (or in the event of his death, his spouse) of an aggregate amount calculated based upon actuarial assumptions, payable not sooner than six months after the date of termination (except in the case of death). The benefit amount is determined based upon the actuarial equivalent value of an annuity equal to 50% of Mr. Colella's final average compensation, which is equal to the average of his three highest years of compensation (salary plus bonus) during the 10 calendar years prior to the year of retirement (or other qualifying termination). The actuarial calculations include assumptions for decreased benefit continuation (determined as a 50% survivor annuity) for Mr. Colella's surviving spouse in the event of Mr. Colella's death. The benefits for Mr. Colella will vest 80%, 90% and 100% in the event of Mr. Colella's voluntary retirement at the ages of 60, 61 and 62, respectively. In the event that any payment under the supplemental retirement benefit would subject Mr. Colella to any excise tax, interest or penalties imposed under Internal Revenue Code Section 4999, we have agreed to make Mr. Colella gross-up payments for such amounts.

The Employment Agreement also continues to provide Mr. Colella and his spouse with the same retiree medical benefits as were provided under his original employment agreement. Accordingly, subject to his execution of and compliance with a customary release, Mr. Colella will receive retiree medical benefits for life, in the event he (i) retires by at least age 62, (ii) is terminated without Cause or terminates his employment for Good Reason, in each case within three years after a change in control, or (iii) terminates employment due to death or disability. Mr. Colella (or his surviving spouse) would pay an annual contribution of \$1,500, and, in the event of his retirement before age 65, would pay a decreasing percentage of the costs of the benefit (from 30% to 10%) until he reaches age 65. The retiree medical benefit is coordinated with any continuation of medical benefits described above to avoid duplication of benefits.

Mr. Colella's RSU agreements provide for full acceleration of vesting of all shares (or, in the case of a performance-based RSU that is still subject to performance criteria, the target number of RSUs) if he is terminated without Cause or resigns with Good Reason within two years following a change in control, as defined in the applicable agreements, and also provides for full acceleration of vesting of all shares (or, in the case of a performance-based RSU that is still subject to performance criteria, the actual number of RSUs to vest based upon satisfaction of performance criteria) upon retirement, death or disability. Retirement, in this context, means a voluntary termination of employment by the executive after he is at least age 60 and has a combination of years of age plus years of service (full years of employment since the executive's original hire date with the Company or one of its subsidiaries) with us equal to 70 or more. Cause under this agreement means conviction for the commission of a felony, willful failure by the executive to perform his responsibilities to the Company, or willful misconduct by the executive.

Other Named Executive Officers

We entered into new employment agreements with Messrs. Bagshaw, Abrams, Lee and Quirk, each dated as of February 24, 2014. All of these employment agreements provide for terms that are month-to-month, with termination upon death, disability, or at our election if the employee fails to perform his duties or commits any other act constituting Cause. Each executive officer is entitled to six months continuation of his base salary in the event that his employment is terminated by us without Cause. Assuming Messrs. Bagshaw, Abrams, Lee and Quirk employment were terminated on December 31, 2014, under the new employment agreements, they would have been entitled to receive \$200,000, \$137,500, \$200,000 and \$162,500, respectively.

In addition to the amounts payable above, each executive officer is entitled to six months continuation of his base salary in the event that his employment is terminated without Cause, or is terminated by the executive

officer for Good Reason within six months after a change in control. In the event such payments are determined to be subject to an excise tax imposed by the Internal Revenue Code Section 4999, such payments will be payable in full or, if applicable, reduced so that no portion of the payments is subject to the excise tax, whichever of the foregoing amounts results in receipt by Messrs. Bagshaw, Abrams, Lee and Quirk, as the case may be, on an after-tax basis of the greater amount, taking into account all applicable taxes, including the penalty tax. Messrs. Bagshaw, Abrams, Lee and Quirk are not entitled to any gross-up payment for any such excise tax due. Assuming the executive officer's employment were terminated by us without Cause or by the executive officer for Good Reason within six months after a change in control that occurred on December 31, 2014, Messrs. Bagshaw, Abrams, Lee and Quirk would each be entitled to receive an additional payment of \$200,000, \$137,500, \$200,000 and \$162,500, respectively.

The employment agreements of Messrs. Bagshaw, Abrams, Lee and Quirk contain non-competition provisions that provide that each executive officer may not, during the term of his employment and for one year after termination of employment, engage in any competitive business or activity. In addition, each of these executive officers may not, during the term of employment and for two years after the termination of employment, solicit any customer to become a customer, distributor or supplier of any other person or entity or to cease doing business with MKS; or solicit or hire any of our executives, officers, employees or agents to terminate such person's employment or engagement with the Company or to work for a third party.

Each executive officer's RSUs provide for full acceleration of vesting of all shares (or, in the case of a performance-based RSU that is still subject to performance criteria, the target number of RSUs) if the executive officer is terminated without cause or resigns with Good Reason within two years following a change-in-control (as defined in the agreements). Cause under this agreement means conviction for the commission of a felony, willful failure by the executive to perform his responsibilities to the Company, or willful misconduct by the executive. The RSUs also provide for full acceleration of vesting of all shares (or, in the case of a performance-based RSU that is still subject to performance criteria, the actual number of RSUs to vest based upon satisfaction of performance criteria) upon retirement, death or disability. Retirement, in this context, means a voluntary termination of employment by the executive officer after he is at least age 60 and has a combination of years of age plus years of service (full years of employment since the executive officer's original hire date with the Company or one of its subsidiaries) with us equal to 70 or more. RSUs granted to executive officers typically vest in three equal annual installments, and half of the target annual equity grant value is subject to performance criteria. Assuming Messrs. Bagshaw, Abrams, Lee and Quirk employment were terminated on December 31, 2014 without Cause or each resigned for Good Reason and such date fell within 24 months after a change in control, the value of his accelerated unvested equity on December 31, 2014 for each executive officer would have been as follows: Mr. Bagshaw \$1,778,587; Mr. Abrams \$362,082; Dr. Lee \$1,113,601; and Mr. Quirk \$873,783. Assuming Messrs. Bagshaw, Abrams, Lee and Quirk retired (as defined above), died or became disabled on December 31, 2014, and assuming the maximum number of performance-based RSUs vested, the value of his accelerated unvested equity on December 31, 2014 for each Named Executive Officer would have been as follows: Mr. Bagshaw \$2,014,899; Mr. Abrams \$425,098; Dr. Lee \$1,271,143; and Mr. Quirk \$984,062.

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

The following table sets forth the estimated benefits that Mr. Colella would have been entitled to receive upon termination of his employment effective December 31, 2014.

| Termination Circumstance | Cash Severance | | Value of Accelerated Unvested Equity | Benefits Continuation | Acceleration of Pension Benefits(1) | Gross up of I.R.C. Golden Parachute Excise Tax Resulting from Change in Control(2) | Total |
|---|----------------|--------------|--|--------------------------|---|---|---------------|
| | Base Salary | Bonus | | | | | |
| Involuntary Without Cause Termination | \$600,000 | N/A | N/A | \$16,928(3) | \$ 9,315,790 | N/A | \$ 9,932,718 |
| Retirement(4) | N/A | N/A | \$0 | \$0 | N/A | N/A | \$0 |
| Death(4) | N/A | N/A | \$ 3,324,697 | \$ 274,029(5) | \$ 4,657,895 | N/A | \$ 8,256,621 |
| Disability(4) | N/A | N/A | \$ 3,324,697 | \$ 560,580(5) | \$ 9,315,790 | N/A | \$ 13,201,067 |
| Within 24 Months Following a Change in Control: | | | | | | | |
| Termination by the Company Without Cause(6) | \$ 1,800,000 | \$ 1,800,000 | \$ 3,324,697 | \$ 573,900(7) | \$ 9,315,790 | \$ 1,506,429 | \$ 18,320,816 |
| Executive Resignation with Good Reason(6) | \$ 1,800,000 | \$ 1,800,000 | \$ 3,324,697 | \$ 573,900(7) | \$ 9,315,790 | \$ 1,506,429 | \$ 18,320,816 |
| Between 24 Months and 36 Months Following a Change in Control: | | | | | | | |
| Termination by the Company Without Cause | \$600,000 | N/A | N/A | \$ 565,020(8) | \$ 9,315,790 | \$0 | \$ 10,480,810 |
| Executive Resignation for Good Reason | N/A | N/A | N/A | \$ 560,580(5) | \$ 9,315,790 | \$0 | \$ 9,876,370 |

- (1) This amount represents the present value of the accelerated amount of the accumulated benefit under the Supplemental Retirement Benefits. See also the description under Pension Benefits above.
- (2) For purposes of assessing whether Mr. Colella would be liable for an excise tax under Section 4999 of the Internal Revenue Code on parachute payments (and in turn entitled to a gross-up payment), the calculations assume that if Mr. Colella was terminated within 24 months following a change in control, the vesting of the target number of his unvested performance-based RSUs and all of his unvested time-based RSUs would be accelerated. Upon a change in control, we agreed to reimburse Mr. Colella for excise taxes under Section 4999 solely with respect to his pension benefits.
- (3) Reflects our cost for continuation of life insurance, medical, dental and vision coverage for 12 months following involuntary without cause termination assuming the termination occurred on December 31, 2014.
- (4) Upon retirement (as defined in the RSU agreements), death or disability, RSUs fully vest, subject to achievement of any remaining performance criteria. Because he was not 60 as of December 31, 2014, Mr. Colella did not qualify for retirement at that time. The stated value assumes the death or disability occurred on December 31, 2014.
- (5) This amount represents the estimated present value of retiree health benefits, in each case assuming the termination occurred on December 31, 2014.
- (6) The unvested time-based RSUs fully vest and the target number of the unvested performance-based RSUs vest.
- (7) This amount represents the estimated present value of retiree health benefits, \$560,580, plus our cost for continuation of life insurance for 36 months following termination of employment, \$13,320, assuming the termination occurred on December 31, 2014.
- (8) This amount represents the estimated present value of retiree health benefits, \$560,580, plus our cost for continuation of life insurance for 12 months following termination of employment, \$4,440, assuming the termination occurred on December 31, 2014.

Equity Compensation Plan Information

The following table provides information about the securities authorized for issuance under our equity compensation plans as of December 31, 2014:

| Plan Category | Number of securities to be issued upon exercise of outstanding options, warrants and rights (a) | Weighted-average exercise price of outstanding options, warrants and rights(1) (b) | Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c) |
|--|--|--|--|
| Equity compensation plans approved by security holders | 746,938 | \$19.67 | 20,293,753(2) |
| Equity compensation plans not approved by security holders | - | - | - |
| Total | 746,938 | \$19.67 | 20,293,753(2) |

(1) The weighted average exercise price is calculated based solely on the exercise prices of the outstanding options and does not reflect 716,714 shares that will be issued upon the vesting of outstanding RSUs, which have no exercise price.

(2) This number includes 17,876,234 shares available for issuance under our 2014 Stock Incentive Plan and 2,417,519 shares reserved for issuance under our 2014 Employee Stock Purchase Plan. Shares issued under our 2014 Stock Incentive Plan in respect of restricted stock units, restricted stock or other stock based awards with a per share price lower than 100% of fair market value on the date of grant count against the shares available for grant under the plan as 2.4 shares for every share granted.

DIRECTOR COMPENSATION

Cash Compensation

The following table summarizes cash compensation payable by us to non-employee directors.

| | Annual Retainer |
|---|------------------------|
| Base Retainer for All Non-Employee Board Members | \$ 52,000 |
| <i>Additional Retainers for Services:</i> | |
| Chairman | \$ 43,000 |
| Lead Director | \$ 18,000 |
| Audit Committee Chair | \$ 20,000 |
| Other Audit Committee Members | \$ 10,000 |
| Compensation Committee Chair | \$ 15,000 |
| Other Compensation Committee Members | \$ 7,500 |
| Nominating and Corporate Governance Committee Chair | \$ 10,000 |
| Other Nominating and Corporate Governance Committee Members | \$ 5,000 |

In addition, from time to time the Board of Directors may establish special committees related to specific matters and may include a retainer for service on such special committees in its discretion.

Equity Compensation

Non-employee directors are eligible for awards under our 2014 Stock Incentive Plan, which is administered by the Compensation Committee. In 2014, under our director compensation program, non-employee directors received automatic grants of RSUs on the date of the Annual Meeting of Shareholders, with a grant date value of \$120,000, which RSUs shall vest in full 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). In February 2015, the Board of Directors, upon the recommendation of the Compensation Committee, increased the value of the annual RSU grant to \$140,000 per non-employee director, effective on the date of the 2015 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 of Directors. Pursuant to the terms of his employment agreement, Mr. Bertucci receives retiree medical benefits for life for himself and his spouse, which had a net present value of \$317,265 as of December 31, 2014. The agreement requires that he make an annual contribution towards the retiree benefits of \$1,500. Mr. Bertucci also receives a car allowance for life, which had a net present value of \$176,388 as of December 31, 2014. Mr. Bertucci receives no other retirement benefits.

The following table summarizes compensation paid to non-employee directors in 2014. Mr. Colella is excluded from the table because he is an executive officer, and his compensation is set forth in the Executive Compensation section above, under the heading *Executive Compensation* Summary Compensation Table for 2014.

Director Compensation Table for 2014

| Name | Fees Earned or Paid in Cash (\$) | Stock Awards \$(1) | All Other Compensation (\$) | Total (\$) |
|--------------------|---|-----------------------------------|--|-----------------------|
| Cristina H. Amon | \$ 64,500 | \$ 120,000 | \$ 0 | \$ 184,500 |
| Robert R. Anderson | \$ 77,000 | \$ 120,000 | \$ 0 | \$ 197,000 |
| Gregory R. Beecher | \$ 93,000(2) | \$ 120,000 | \$ 0 | \$ 213,000 |
| John R. Bertucci | \$ 98,000(2) | \$ 120,000 | \$ 34,105(3) | \$ 252,105 |
| Richard S. Chute | \$ 62,000 | \$ 120,000 | \$ 0 | \$ 182,000 |
| Peter R. Hanley | \$ 67,500(2) | \$ 120,000 | \$ 0 | \$ 187,500 |
| Elizabeth A. Mora | \$ 62,000 | \$ 120,000 | \$ 0 | \$ 182,000 |

- (1) Represents the grant date fair value for each RSU granted during the year, calculated in accordance with ASC 718. The assumptions used in determining the grant date fair values of these awards are set forth in Note 18 to our consolidated financial statements, which are included in our Annual Report on Form 10-K filed with the SEC on February 25, 2015.
- (2) Includes \$3,000 in consideration for services on a special committee of the Board of Directors, which was a flat fee for up to five meetings.
- (3) In connection with his retirement and pursuant to the terms of his previous employment agreement, Mr. Bertucci receives retiree medical benefits and a car allowance. The retiree medical benefits consist of benefits for life for himself and his spouse, towards which Mr. Bertucci makes an annual contribution of \$1,500. We paid \$14,241 for this benefit in 2014. We paid \$19,864 for Mr. Bertucci's car allowance in 2014.

Transactions with Related Persons

Our 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 of business conduct and ethics 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 our interests. The code of business conduct and ethics 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, our written Related Person Transaction Procedures set forth the procedures for reviewing transactions that could be deemed to be related person transactions (defined as transactions required to be disclosed pursuant to Item 404 of Regulation S-K of applicable SEC regulations). In accordance with these procedures, directors and executive officers are required to submit annual certifications regarding interests and affiliations held by them and

certain of their family members. We then review our records to determine whether we have engaged in any transaction with such affiliated persons and entities since the beginning of our prior fiscal year, and provides a summary to the Audit Committee of any such material transaction in which the related person has a direct or indirect interest. In accordance with the procedures, the Audit Committee reviews any such transactions (including, but not limited to, transactions constituting related person transactions). In reviewing any related person transaction, the Audit Committee reviews and considers, among other things, the related person's interest in the transaction, the approximate dollar value of the transaction, whether the transaction was undertaken in the ordinary course of business, whether the terms of the transaction were at arm's length, the purpose and potential benefits to the Company of the transaction, and whether the transaction is in the best interests of the Company. The Audit Committee may, in its sole discretion, impose such conditions as it deems appropriate in connection with any related person transaction. In accordance with the Audit Committee charter, the Audit Committee reviews the Related Person Transaction Procedures from time to time.

REPORT OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

The Audit Committee of our Board of Directors has reviewed our audited financial statements for the year ended December 31, 2014 and discussed them with our management.

The Audit Committee has also received from and discussed with PricewaterhouseCoopers LLP, our independent registered public accounting firm, various communications that our registered public accounting firm is required to provide to the Audit Committee, including the matters required to be discussed by the Auditing Standard No. 16, *Communications with Audit Committee*.

The Audit Committee has received the written disclosures and the letter from our registered public accounting firm required by Independence Standards Board Standard No. 1 (Independence Standards Board Standard No. 1, *Independence Discussions with Audit Committees*), as adopted by the Public Company Accounting Oversight Board in Rule 3600T, and has discussed with our registered public accounting firm their independence.

Based on the review and discussions referred to above, the Audit Committee recommended to our Board of Directors that the audited financial statements be included in our Annual Report on Form 10-K for the year ended December 31, 2014.

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

Gregory R. Beecher, Chair

Robert R. Anderson

Elizabeth A. Mora

SECTION 16(a) BENEFICIAL

OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires executive officers, directors and shareholders who beneficially own more than 10% of our Common 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 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, and amendments thereto, 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 our executive officers, directors and greater than 10% shareholders were complied with, except as follows: (i) due to an administrative error a late Form 4 was filed on behalf of Dr. Hanley on May 21, 2014 reporting a sale of 1,000 shares on May 16, 2014 and on behalf of Mr. Colella on August 20, 2014 reporting a sale of 3,000 shares on August 15, 2014 and (ii) due to a system error at our stock plan administrator, a late Form 4 was filed on February 27, 2014 on behalf of Messrs. Bagshaw, Colella and Lee reporting the annual vesting and related forfeitures of 18,559, 25,034 and 10,921 shares, respectively, on February 24, 2014 and on behalf of Dr. Hanley reporting the sale of 1,000 shares on February 24, 2014.

PROPOSAL TWO

APPROVAL OF THE 162(m) EXECUTIVE CASH INCENTIVE PLAN

On February 9, 2015, upon the recommendation of the Compensation Committee, our Board of Directors adopted, subject to shareholder approval, the MKS Instruments, Inc. 162(m) Executive Cash Incentive Plan (the "162(m) Cash Incentive Plan"). The 162(m) Cash Incentive Plan will become effective on the date the 162(m) Cash Incentive Plan is approved by our Company's shareholders.

The 162(m) Cash Incentive Plan is designed to ensure that payments of incentive compensation paid pursuant to the terms of the plan to certain of our executives will be eligible to be fully deductible by the Company despite deduction limitations that might otherwise apply to such payments under Section 162(m) of the Internal Revenue Code ("Section 162(m)"). Section 162(m) generally disallows a tax deduction to public companies for compensation in excess of \$1 million per person paid to a company's chief executive officer and the next three most highly-paid executive officers other than the chief financial officer. Certain compensation, including qualified performance-based compensation, will not be subject to the deduction limit if certain requirements are met. Among the requirements for qualified performance-based compensation is that the material terms of the compensation — including the employees eligible to participate in the plan, the business criteria upon which the performance goals may be based and the maximum amount of compensation that can be paid to any participant in the plan — be approved by the company's shareholders. We are seeking shareholder approval of the 162(m) Cash Incentive Plan in order to satisfy this requirement. Shareholder approval of the 162(m) Cash Incentive Plan will result in our annual incentive compensation payments, which may not otherwise be deductible as a result of Section 162(m), becoming eligible for deduction.

Our Board of Directors believes that our future success depends, in large part, upon our ability to maintain a competitive position in attracting, retaining and motivating key personnel. Cash incentive compensation is a critical part of the compensation program we offer to attract and retain key personnel. Cash incentive compensation also aligns employee and shareholder interests because it links employee compensation with company performance.

The adoption of the 162(m) Cash Incentive Plan is not intended to reflect a material change in our philosophy for the cash incentive compensation of our executive officers. See the section entitled "Executive Compensation" Compensation

Discussion and Analysis for a discussion of that philosophy.

Description of the 162(m) Cash Incentive Plan

The 162(m) Cash Incentive Plan provides for the payment of annual cash incentive awards (Cash Awards) to eligible participants. The 162(m) Cash Incentive Plan provides performance periods consisting of a plan year that coincides with our fiscal year. The following summary of the 162(m) Cash Incentive Plan is qualified in its entirety by reference to the full text of the 162(m) Cash Incentive Plan, a copy of which is attached as Appendix A to this proxy statement.

Eligibility.

Only executive officers are eligible to participate in the 162(m) Cash Incentive Plan. Participation in the 162(m) Cash Incentive Plan in one year is not a guarantee of future participation. The Compensation Committee shall have the authority to determine the extent to which an executive officer who is hired or promoted after the first day of any plan year is entitled to participate in the 162(m) Cash Incentive Plan for such plan year.

Administration.

The 162(m) Cash Incentive Plan will be administered by the Compensation Committee, which is currently composed exclusively of outside directors as defined by Section 162(m). If at any time any member of the Compensation Committee is not an outside director as defined by Section 162(m), then to the extent required by Section 162(m) determinations with respect to the 162(m) Cash Incentive Plan will be made by a subcommittee of the Compensation Committee composed only of the members who are outside directors as so defined.

The Compensation Committee will have the authority to select the employees who are eligible to receive Cash Awards (Participants), to determine the performance criteria upon which each Participant's Cash Award will be based, and to determine the final amount of each Participant's Cash Award, in each case pursuant to and subject to the terms of the 162(m) Cash Incentive Plan. The Compensation Committee will also have the authority to adopt, amend and repeal such administrative rules, guidelines and practices relating to the 162(m) Cash Incentive Plan as it shall deem advisable, to construe and interpret the terms of the 162(m) Cash Incentive Plan and any award agreements entered into under the 162(m) Cash Incentive Plan, and to correct any defect, supply any omission or reconcile any inconsistency in the 162(m) Cash Incentive Plan or any award agreement in the manner and to the extent it shall deem expedient. All decisions by the Compensation Committee shall be made in the Compensation Committee's sole discretion and shall be final and binding on all persons having or claiming any interest in the 162(m) Cash Incentive Plan or in any award agreement.

Establishment of Target Awards

Within the first 90 days of each plan year (or such other period as may be required by Section 162(m)), the Compensation Committee will select the Participants in the 162(m) Cash Incentive Plan for the plan year, and establish the amount of a Cash Award that will be paid to each Participant if MKS achieves performance goals to be specified by the Compensation Committee (the Target Cash Award), subject to the Compensation Committee's authority to reduce the amount of any Cash Award as described below.

The Compensation Committee may use any one or more of following performance criteria in the determination of performance goals applicable to the Target Cash Awards for Participants in a plan year: (a) net income, (b) earnings before or after discontinued operations, interest, taxes, depreciation and/or amortization, (c) earnings per share, (d) earnings per share before or after discontinued operations, interest, taxes, depreciation and/or amortization, (e) bookings, (f) bookings growth, (g) revenue, (h) revenue growth, (i) operating profit before or after discontinued operations and/or taxes, (j) operating expenses, (k) gross margin, (l) operating margin, (m) profit margin, (n) cost savings, (o) inventory management, (p) working capital, (q) customer satisfaction, (r) product quality, (s) manufacturing objectives, (t) completion of strategic acquisitions/dispositions, (u) receipt of regulatory approvals,

(v) cash position, (w) earnings growth, (x) cash flow or cash position, (y) stock price, (z) market share, (aa) return on sales, assets, equity or investment (bb) improvement of financial ratings, or (cc) achievement of balance sheet, income statement or cash flow objectives, or (dd) total shareholder return.

Such performance goals may reflect absolute entity or business unit performance or a relative comparison to the performance of a peer group of entities or other external measure of the selected performance criteria and may be absolute in their terms or measured against or in relationship to other companies comparably, similarly or otherwise situated. In addition, such goals may vary by Participant and may be different each plan year; and may be particular to a Participant or the department, branch, line of business, subsidiary or other unit in which the Participant works and may cover such period as may be specified by the Compensation Committee.

In establishing the performance goals, the Compensation Committee may specify that such performance criteria shall be adjusted to exclude any one or more of: (a) extraordinary, non-recurring charges or other events, (b) gains or losses on the dispositions of discontinued operations, (c) other non-standard gains or losses, (d) the cumulative effects of changes in accounting principles, (e) the writedown of any asset, (f) fluctuation in foreign currency exchange rates, (g) amortization of acquired intangible assets, (h) acquisition and divestiture related charges or credits (including the impact of any such acquisition or divestiture), (i) litigation or claim judgments or settlements, (j) gain on sale of assets, (k) excess and obsolete inventory adjustments, (l) tax effects of adjustments, (m) the effect of changes in tax laws or other laws affecting reported results and (n) charges for restructuring and reorganization programs. However, in all events, the Target Cash Awards shall be based solely upon the Company's achievement of such performance goals, which shall not be substantially certain of being achieved at the time they are determined, and shall be established on such terms that a third party with knowledge of all relevant facts could calculate the amount of each Participant's Target Cash Award based upon the extent to which the performance goals are met.

In no event shall any Participant's Target Cash Award for any plan year exceed \$5,000,000.

Determination and Payment of Final Cash Award

At the end of each plan year, the Compensation Committee will determine and certify the extent to which the applicable performance goals for the plan year have been met, and the amount, if any, of the Cash Award to which each Participant is entitled based upon the achievement of the performance goals. The Compensation Committee will then determine the actual amount of each Participant's Cash Award, which may be less than, but in no event will be greater than, the Cash Award to which the Participant is eligible to receive based on the level of achievement of the performance goals. In determining the actual amount of each Participant's Cash Award, the Compensation Committee will apply such additional objective or subjective criteria as it determines to be appropriate.

The amount of each Participant's Cash Award, if any, will be paid not later than March 15 of the year following the end of the plan year, net of any required withholding. A Participant must be employed on the date of payment to receive a Cash Award, unless otherwise determined by the Compensation Committee.

Term Amendment and Termination

The 162(m) Cash Incentive Plan will take effect upon its approval by our shareholders. Target Cash Awards for the 2015 plan year were approved by the Compensation Committee on February 9, 2015, but if the 162(m) Cash Incentive Plan is not approved by our shareholders, no awards will be made under this Plan.

The Board may amend, suspend or terminate the 162(m) Cash Incentive Plan or any portion thereof at any time, provided that no amendment that would require shareholder approval under the rules of NASDAQ may be made effective unless and until our shareholders approve such amendment. The 162(m) Cash Incentive Plan shall remain in effect until terminated, but no Cash Awards will be paid after the fifth year following the year in which the 162(m) Cash Incentive Plan is approved by shareholders, until the material terms of the plan are re-approved by our shareholders.

Tax Consequences to MKS

There will be no tax consequences to MKS with respect to the 162(m) Cash Incentive Plan except that MKS will be entitled to a deduction when a Participant has compensation income, subject to any limitations applicable to deductibility of compensation generally.

New Plan Benefits

In February 2015, our Compensation Committee identified our Named Executive Officers, Gerald G. Colella, Seth H. Bagshaw, John R. Abrams, John T.C. Lee, and Brian C. Quirk, as eligible to participate in our 162(m) Cash Incentive Plan. Awards under our 162(m) Cash Incentive Plan are based on our future performance and are not currently determinable. However, the maximum annual incentive we may pay under our 162(m) Cash Incentive Plan to any participant for any year is \$5,000,000. In the event our shareholders do not approve the 162(m) Cash Incentive Plan, the 2015 awards to Messrs. Colella, Bagshaw, Abrams, Lee and Quirk will be cancelled. Information about awards granted in fiscal year 2014 to our Named Executive Officers under our annual cash incentive plan can be found in the table under the heading *Grants of Plan-Based Awards in Fiscal Year 2014* in this Proxy Statement.

THE BOARD OF DIRECTORS BELIEVES THAT THE PROPOSED 162(m) EXECUTIVE CASH INCENTIVE PLAN IS IN THE BEST INTERESTS OF MKS AND OUR SHAREHOLDERS AND THEREFORE RECOMMENDS A VOTE FOR THIS PROPOSAL.

PROPOSAL THREE

ADVISORY VOTE ON EXECUTIVE COMPENSATION

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, or the Dodd-Frank Act, which added Section 14A to the Exchange Act, enables our shareholders to vote to approve, on a non-binding, advisory basis, the compensation of our Named Executive Officers as disclosed in this proxy statement under the heading *Executive Compensation* including *Compensation Discussion and Analysis*, the tabular disclosure regarding such compensation, and the accompanying narrative disclosure. This vote is not intended to address any specific item of compensation, but rather the overall compensation of our Named Executive Officers and the philosophy, policies and practices of executive compensation described in this proxy statement. The advisory vote is not a vote on our compensation practices for non-executive employees or our Board of Directors. The Dodd-Frank Act requires the Company to hold the advisory vote on executive compensation at least once every three years, but we have elected to submit the advisory vote to shareholders annually.

As described in detail under the heading *Executive Compensation* *Compensation Discussion and Analysis*, our executive compensation programs are designed to attract, motivate, and retain our Named Executive Officers, who are critical to our success. Under these programs, our Named Executive Officers are rewarded for the achievement of specific short-term and long-term goals. Please see the *Compensation Discussion and Analysis* above for additional details about our executive compensation philosophy and programs, including information about the fiscal year 2014 compensation of our Named Executive Officers.

The Compensation Committee continually reviews the compensation programs for our Named Executive Officers to ensure they achieve the desired goals of aligning our executive compensation structure with our shareholders' interests and current market practices.

Our Board of Directors is asking shareholders to approve a non-binding advisory vote on the following resolution:

RESOLVED, that the compensation paid to the Company's Named Executive Officers, as disclosed pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the *Compensation Discussion and Analysis*, the compensation tables and any related material disclosed in this proxy statement, is hereby approved.

This vote on the compensation of our Named Executive Officers is advisory, and therefore not binding on the Company, the Compensation Committee or our Board of Directors. Our Board of Directors and our Compensation Committee value the opinions of our shareholders and to the extent there is any significant vote against the Named

Executive Officers compensation as disclosed in this proxy statement, we will consider our shareholders' concerns and the Compensation Committee will evaluate whether any actions are necessary to address those concerns.

THE BOARD OF DIRECTORS BELIEVES THAT THE PROPOSAL TO APPROVE, ON A NON-BINDING, ADVISORY BASIS, THE EXECUTIVE COMPENSATION CONTAINED IN THIS PROXY STATEMENT IS IN THE BEST INTERESTS OF MKS AND OUR SHAREHOLDERS AND THEREFORE RECOMMENDS A VOTE FOR THIS PROPOSAL.

PROPOSAL FOUR

RATIFICATION OF APPOINTMENT OF INDEPENDENT

REGISTERED PUBLIC ACCOUNTING FIRM

On January 27, 2015, the Audit Committee appointed PricewaterhouseCoopers LLP, or PwC, as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2015. PwC was our independent registered public accounting firm for the fiscal year ended December 31, 2014.

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, 2015 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.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

For the years ended December 31, 2014 and 2013, aggregate fees for professional services rendered by our independent registered public accounting firm, PwC, in the following categories were as follows:

| | 2014 | 2013 |
|--------------------|--------------|--------------|
| Audit Fees | \$ 1,989,228 | \$ 2,130,951 |
| Audit-Related Fees | 0 | 11,038 |
| Tax Fees | 400,000 | 361,000 |
| All Other Fees | 1,800 | 1,800 |

| | | |
|-------|--------------|--------------|
| Total | \$ 2,391,028 | \$ 2,504,789 |
|-------|--------------|--------------|

Audit Fees

Audit Fees for the years ended December 31, 2014 and 2013 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.

Audit-Related Fees

Audit related fees were for assistance with SEC correspondence and foreign statutory audit compliance advice.

Tax Fees

Tax Fees for the year ended December 31, 2014 were for services related to tax compliance, including the preparation of tax returns; and tax planning and tax advice, including assistance with foreign operations and foreign tax audits. Tax fees for the year ended December 31, 2013 were for services related to tax compliance, including preparation of tax returns; and tax planning advice, including assistance with foreign operations.

All Other Fees

All Other Fees for the year ended December 31, 2014 and 2013 were for accounting research software.

In 2014 and 2013, all Audit Fees, Audit-Related Fees, Tax Fees and All Other Fees were pre-approved pursuant to the Audit Committee pre-approval requirements, described below.

Pre-Approval Policy and Procedures

The Audit Committee's charter sets forth the Audit Committee's 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 2014, the Audit Committee approved that with respect to services performed or to be performed by PwC in connection with the Company's fiscal year 2014, the annual fees for non-audit services in such year shall not exceed one half of the aggregate fees payable to PwC for such year, without the prior express approval of 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 Chair 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 Chair 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.

DEADLINE FOR SUBMISSION OF SHAREHOLDER PROPOSALS

FOR THE 2016 ANNUAL MEETING

Proposals of shareholders intended to be presented at the 2016 Annual Meeting of Shareholders must be received by us at our principal office in Andover, Massachusetts not later than November 18, 2015, for inclusion in the proxy statement for that meeting.

In addition, our Amended and Restated 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 our proxy statement in accordance with Rule 14a-8 of the Securities Exchange Act of 1934, as amended). The required written notice must be delivered to our Secretary at our principal offices at least 90 days but no more than 120 days prior to the first anniversary of the preceding year's annual meeting or it will be considered untimely. However, in the event that the date of the Annual Meeting is advanced by more than 20 days, or delayed by more than 60 days, from the first anniversary of the preceding year's annual meeting, a shareholder's notice must be received no earlier than the 120th day prior to the Annual Meeting and not later than the close of business on the later of (i) the 90th day prior to the Annual Meeting and (ii) the seventh day following the day on which notice of the date of the Annual Meeting was mailed or public disclosure of the date of Annual Meeting was made, whichever occurs first. The advance notice provisions of our Amended and Restated 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 Securities Exchange Act of 1934, as amended.

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, Attn: Investor Relations or (800) 227-8766**. You may also access our proxy statement and related materials at <http://investor.mksinst.com/annualproxy.cfm>. 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 13, 2015

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.**162(m) Executive Cash Incentive Plan****(as approved by the Board of Directors on February 9, 2015)****1. Purpose:**

The 162(m) Executive Cash Incentive Plan (the Plan) provides executive officers of MKS Instruments, Inc. (MKS or the Company) with the opportunity to benefit financially for improving MKS overall business performance by the receipt of annual cash incentive payments (Incentives). Eligible employees (the Participants) are those who work in positions that influence how well MKS performs. The Plan is intended to comply with the requirements of Section 162(m)(4)(C) of the Internal Revenue Code of 1986 (IRC), as amended, and the related income tax regulations issued thereunder.

The Plan is intended to encourage Participants to make prudent choices about how operations are conducted. The growth of MKS is dependent upon decision making that constantly focuses on achieving customer satisfaction while maintaining sound fiscal control. While one person alone cannot change the direction of any company, the combined decisions made by the Participants in the Plan play an important part in influencing MKS overall business performance. The Plan shall be effective upon its approval by the shareholders of the Company, and although the Compensation Committee of the Board of Directors (the Committee) may establish the terms for Target Incentives (defined below) prior to the date of such approval, no awards shall be paid hereunder unless and until the shareholders have approved the Plan.

2. Participation:

Participation for a calendar year (or portion of such calendar year) (Plan Year) requires approval by the Committee. Participation in the Plan is reviewed on an annual basis. Past participation in this Plan is not a guarantee of future participation or target levels.

3. Determination of a Participant's Incentive Amount:

Not later than ninety (90) days after the beginning of each Plan Year, the Committee shall determine the amount of the incentive (the Target Incentive) to which each Participant will be entitled if the Company achieves performance goals determined by the Committee based upon one or more of the performance criteria set forth in Exhibit A. The methodology used to calculate each Participant's Target Incentive for each Plan Year shall be determined by the Committee in its sole discretion, and may be different for different Participants, provided that (i) the amount of each Participant's Target Incentive shall be based solely upon the Company's achievement of such performance goals, which shall not be substantially certain of being achieved at the time they are determined and shall not be changed after the end of such ninety-day period except as permitted by IRS Section 162(m), (ii) a third party with knowledge of all relevant facts could calculate the amount of each Participant's Target Incentive based upon the extent to which the performance goals are met, and (iii) in no event shall any Participant's Target Incentive for any Plan Year exceed \$5,000,000.00.

After the close of each Plan Year, the Committee shall determine and certify the amount of each Participant's Target Incentive based upon the extent to which the applicable performance goals were met. The Committee shall then, in its discretion, determine the amount of each Participant's actual Incentive payment, which may be less than but shall not exceed his or her Target Incentive, based upon such criteria as the Committee may in its sole discretion determine.

Incentives, if any, shall be paid not later than March 15 of the year following the Plan Year to Participants who are employed on the date of payment.

The Committee shall have the authority to determine the extent to which employees who are employed or promoted after the first day of a Plan Year shall be eligible for an Incentive for such Plan Year, the circumstances under which a Participant whose employment is terminated prior to payment of Incentives may be entitled to all

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or part of the Incentive to which he or she would otherwise have been entitled, the extent to which Incentives may be subject to recoupment or clawback , and such other terms and conditions regarding Incentives as it may determine to be appropriate. The Committee may provide for the terms governing Incentive awards to be set forth in award agreements, containing such terms as the Committee shall deem appropriate.

4. Administration:

The Plan will be administered by the Committee. The Committee shall have authority to adopt, amend and repeal such administrative rules, guidelines and practices relating to the Plan as it shall deem advisable. The Committee may construe and interpret the terms of the Plan and any award agreements entered into under the Plan. The Committee may correct any defect, supply any omission or reconcile any inconsistency in the Plan or any award agreement in the manner and to the extent it shall deem expedient and it shall be the sole and final judge of such expediency. All decisions by the Committee shall be made in the Committee's sole discretion and shall be final and binding on all persons having or claiming any interest in the Plan or in any award agreement.

If at any time any member of the Committee is not an outside director as defined in IRC Section 162(m), the selection of the performance criteria, the determination of the method by which Target Incentives are calculated based upon the achievement of performance criteria, and the certification of the extent to which the performance criteria have been achieved, shall all be performed by a subcommittee consisting only of members of the Committee who are outside directors, which shall constitute the Committee for all purposes of the Plan.

5. Amendment and Termination:

The Board may amend, suspend or terminate the Plan or any portion thereof at any time, provided that no amendment that would require shareholder approval under the rules of NASDAQ may be made effective unless and until the Company's shareholders approve such amendment. The Plan shall remain in effect until terminated, but no Incentives will be paid after the fifth year following the year in which the Plan is approved by shareholders, until the applicable performance criteria are re-approved by the shareholders.

6. Miscellaneous:

a. No Right to Employment:

In no way does participation in the Plan create a contract or a right of employment.

b. Tax Withholding:

The Company shall have the right to deduct from all payments under the Plan any federal, state or local taxes required by law to be withheld with respect to such payments.

c. 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, excluding choice-of-law principles of the law of such state that would require the application of the laws of a jurisdiction other than the Commonwealth of Massachusetts.

d. Limitations on Liability:

Notwithstanding any other provisions of the Plan, no individual acting as a director, officer, employee or agent of the Company will be liable to any Participant, former Participant, spouse, beneficiary, or any other person for any claim,

loss, liability, or expense incurred in connection with the Plan, nor will such individual be personally liable with respect to the Plan because of any contract or other instrument he or she executes in his or her capacity as a director, officer, employee or agent of the Company. The Company will indemnify and hold harmless each director, officer, employee or agent of the Company to whom any duty or power relating to the

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administration or interpretation of the Plan has been or will be delegated, against any cost or expense (including attorneys' fees) or liability (including any sum paid in settlement of a claim with the Board's approval) arising out of any act or omission to act concerning the Plan unless arising out of such person's own fraud or bad faith.

e. Participants are Unsecured Creditors:

Participants and their heirs, successors and assigns shall have no legal or equitable rights, interest or claims in any property or assets of the Company by virtue of participation in the Plan. The Company's obligation under the Plan shall be that of an unfunded and unsecured promise of the Company to pay money in the future.

f. IRC Section 409A:

The Plan and all award agreements are intended to either be exempt from, or to comply with, all provisions of IRC Section 409A and to the maximum extent possible shall be so interpreted and administered. Without limiting the generality of the foregoing, to the extent that any amount that becomes payable to any Participant by reason of such Participant's separation from service, as defined in the IRC Section 409A, is subject to IRC Section 409A, and that such Participant is a "specified employee" as defined in IRC Section 409A at the time of such separation from service, such amount shall not be paid until the earlier of the first day of the seventh month following the month that includes the separation from service or the date of the Participant's death. Notwithstanding the foregoing, in no event shall the Company be liable to any Participant for any tax or penalty imposed upon the Participant pursuant to IRC Section 409A or otherwise.

Exhibit A

Company Performance Criteria

The Committee may use the following performance measures in the determination of the Target Incentives for Participants in this Plan:

net income,

earnings before or after discontinued operations, interest, taxes, depreciation and/or amortization,

earnings per share,

earnings per share before or after discontinued operations, interest, taxes, depreciation and/or amortization,

bookings,

bookings growth,

revenue,

revenue growth,

operating profit before or after discontinued operations and/or taxes,

operating expenses,

gross margin,

operating margin,

profit margin,

cost savings,

inventory management,

working capital,

customer satisfaction,

product quality,

manufacturing objectives,

completion of strategic acquisitions/dispositions,

receipt of regulatory approvals,

cash position,

earnings growth,

cash flow or cash position,

stock price,

market share,

return on sales, assets, equity or investment,

improvement of financial ratings,

achievement of balance sheet, income statement or cash flow objectives, or

total shareholder return.

Such goals may reflect absolute entity or business unit performance or a relative comparison to the performance of a peer group of entities or other external measure of the selected performance criteria and may be absolute in their terms or measured against or in relationship to other companies comparably, similarly or otherwise situated.

In establishing the performance criteria, the Committee may specify that such performance measures shall be adjusted to exclude any one or more of:

extraordinary, non-recurring charges or other events,

gains or losses on the dispositions of discontinued operations,

other non-standard gains or losses,

the cumulative effects of changes in accounting principles,

the writedown of any asset,

fluctuation in foreign currency exchange rates,

amortization of acquired intangible assets,

acquisition and divestiture related charges or credits (including the impact of any such acquisition and divestiture),

litigation or claim judgments or settlements,

gain on sale of assets,

excess and obsolete inventory adjustments,

tax effects of adjustments,

the effect of changes in tax laws or other laws affecting reported results, and

charges for restructuring and reorganization programs.

Such performance measures: (i) may vary by Participant and may be different each Plan Year; (ii) may be particular to a Participant or the department, branch, line of business, subsidiary or other unit in which the Participant works and may cover such period as may be specified by the Committee; and (iii) shall be set by the Committee within the time period prescribed by, and shall otherwise comply with the requirements of, IRC Section 162(m).

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ANNUAL MEETING OF SHAREHOLDERS OF

MKS INSTRUMENTS, INC.

MAY 4, 2015

Please detach and mail in the envelope provided.

Important Notice Regarding the Availability of Proxy Materials for the 2015 Annual Meeting: The Annual Report, Notice & Proxy Statement are available at www.proxyvote.com.

MKS INSTRUMENTS, INC.

2015 Annual Meeting of Shareholders

May 4, 2015 10:00 AM

This proxy is solicited by 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 13, 2015, and hereby appoints Gerald G. Colella, Richard S. Chute and Kathleen F. Burke, 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 2015 Annual Meeting of Shareholders of the Company to be held on May 4, 2015 at 10:00 a.m., local time, at the Wyndham Boston Andover Hotel, 123 Old River Road, Andover, MA 01810, and at any adjournment or postponement 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 direction is indicated, will be voted FOR the election of each of the two (2) nominees listed on the reverse side as Class I Directors of the Company, and FOR proposals 2, 3 and 4 and as said proxies deem advisable, in their discretion, on such other 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 reverse side

Address changes/comments:

(If you noted any address changes and/or comments above, please mark corresponding box on the reverse side.)

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

VOTE BY INTERNET www.proxyvote.com

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 P.M. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you access the website and follow the instructions to obtain your records and to create an electronic voting instruction form.

Electronic Delivery of Future PROXY MATERIALS

If you would like to reduce the costs incurred by our Company in mailing proxy materials, you can consent to receiving all future proxy statements, proxy cards and annual reports electronically via e-mail or the Internet. To sign up for electronic delivery, please follow the instructions above to vote using the Internet and, when prompted, indicate that you agree to receive or access proxy materials electronically in future years.

VOTE BY PHONE 1-800-690-6903

Use any touch-tone telephone to transmit your voting instruction up until 11:59 P.M. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you call and then following the instructions.

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 Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

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

DETACH AND RETURN THIS PORTION ONLY
THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

The Board of Directors recommends you vote FOR Proposals 1, 2, 3 and 4.

1. To elect all of the nominees listed below as Class I Directors to serve for three-year terms:

Nominees:

01 Gerald G. Colella 02 Elizabeth A. Mora

“ 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.

2. To approve the 162(m) Executive Cash Incentive Plan.

For Against Abstain
..

3. To approve a non-binding advisory vote on executive compensation.

For Against Abstain
..

4. To ratify the selection of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2015.

For Against Abstain
..

For address changes and/or comments, please check this box and write them on the reverse side where indicated. ”

Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign full corporate or partnership name, by authorized officer.

Signature [PLEASE SIGN WITHIN BOX]

Date

Signature (Joint Owners)

Date